Board Meeting

Thu 17 December 2020, 09:30 - 11:00

MS Teams

Agenda

1. Welcome & Introductions

Charles Janczewski

2. Apologies for Absence

Charles Janczewski

3. Declarations of Interest

Charles Janczewski

4. Minutes of the Board Meeting held on 26th November 2020

Charles Janczewski

4. Unconfirmed Board Minutes Nov 2020.pdf (17 pages)

5. Action Log – 26th November 2020

Charles Janczewski

5. Action Log - 26.11.20.pdf (2 pages)

6. Standing Items

6.1. Chair's Report & Chair's Action taken since last meeting

Charles Janczewski

6.1 - Chair's Board Report December 2020 (002).pdf (2 pages)

6.2. Chief Executive Report

Len Richards

6.2 - Board Chief Executive Report - Dec 2020.pdf (3 pages)

6.3. Corona Virus Report including:

- Quality & Safety - Ruth Walker /Stuart Walker
- Workforce - Martin Driscoll
- Governance - Nicola Foreman
- Operations - Steve Curry
- Public Health - Fiona Kinghorn

6.3 - Corona Virus Update Covering Report.pdf (2 pages)
6.3 Appendix 1 COVID 19 Update Report.pdf (5 pages)
6.3 QSE Headline achievements.pdf (6 pages)

7. Items for Review and Assurance

7.1. Covid 19 Discovery Report

Martin Driscoll

7.1 - COVID_LEARNING_REPORT.pdf (61 pages)

7.2. Review of the meeting

Charles Janczewski

8. Date and time of next meeting:

Thursday, 28th January 2021 at 1.00pm Nant Fawr 1, 2 & 3 Woodland House

Unconfirmed Minutes of the Board Meeting
Held on Thursday, 26th November 2020 at 13:00pm – 16:30pm
Via MS Teams Live Event

Present:		
Charles Janczewski	CJ	UHB Chair
Len Richards	LR	Chief Executive Officer
Chris Lewis	CR	Interim Director of Finance
Steve Curry	SC	Chief Operating Officer
Susan Elsmore	SE	Independent Member – Local Authority
Akmal Hanuk	AH	Independent Member - Community
Abigail Harris	AH	Executive Director of Strategic Planning
Michael Imperato	MI	Interim Vice Chair & Independent Member - Legal
Professor Gary Baxter	GB	Independent Member - University
Eileen Brandreth	EB	Independent Member - ICT
Fiona Jenkins	FJ	Executive Director of Therapies & Health Sciences
Fiona Kinghorn	FK	Executive Director of Public Health
Sara Moseley	SM	Independent Member – Third Sector
Stuart Walker	SW	Executive Medical Director
Ruth Walker	RW	Executive Nurse Director
Nicola Foreman	NF	Director of Corporate Governance
Dawn Ward	DW	Independent Member – Trade Union
Rhian Thomas	RT	Independent Member – Capital and Estates
In Attendance:		
Stephen Allen	SA	Chief Executive Officer - South Glamorgan Community Health Council
Victoria Legrys	VL	Programme Director SOFCS
Navroz Masani	NM	Associate Medical Director For Clinical Strategy
Secretariat		
Raj Khan	RK	Corporate Governance Officer
Observers:		
Bryn Harris	BH	IT Project Manager, IM&T
Apologies:		
Allan Wardhaugh	AW	Chief Clinical Information Officer
John Union	JU	Independent Member - Finance
Martin Driscoll	MD	Deputy Chief Executive Officer / Executive Director of Workforce and Organisational Development
Lance Carver	LC	Director of Social Services, Vale of Glamorgan Council

UHB 20/11/001	**Patient Story** The patient story was told by Lee, a cancer patient in C&V and demonstrated his rehabilitation programme and in particular Physiotherapy support. The Chair commented that this was a fabulous story and showed how the Health Board was still able to deliver Cancer services during the pandemic and to support patients and rehabilitate them to a degree where they could resume normal life. The Executive Nurse Director (END) commented that the story continued the rehabilitation theme discussed at previous Board meetings and highlighted the importance of that not only for Covid but also other patients. She highlighted that at one point Lee was unable to speak and stated how grateful she was to him for providing a verbal story for the Board having gone through so much. The Executive Director Therapies and Health Sciences (EDTHS) commented that she would seek out the Physiotherapist mentioned in the video to thank them. She also referred to the start of the Prehabilitation service to get patients as optimised as possible for surgery and make a good recovery afterwards.	
UHB 20/11/002	**Welcome & Introductions** The Chair proceeded with the remainder of the meeting as per the scheduled agenda and formally welcomed all to the meeting.	
UHB 20/11/003	**Apologies for Absence** Apologies for absence were noted.	
UHB 20/11/004	**Declarations of Interest** The Chair invited Board Members to declare any interests in relation to items on the agenda. • The EDTHS declared that she was the interim EDTHS at Cwm Taf Morgannwg UHB. • The Independent Member - ICT (IM-ICT) declared an interest in the Genomics paper due to her commitments with the University.	
UHB 20/11/005	**Minutes of the Board Meeting held on 24th September 2020** The Board reviewed the Minutes of the meeting held on 24th September 2020. **The Board resolved that:** (a) The minutes of the meeting held on 24th September 2020 be approved as a true and accurate record.	
UHB 20/11/006	**Board Action Log following the Meeting held on 24th September 2020** The Director of Corporate Governance (DCG) reviewed the action log	

	from the Meeting held on the 24th September 2020. **The Board Resolved that:** (a) the Action Log and updates be received and noted.	
UHB 20/11/007	**Chair's Report & Chair's Action taken since last meeting** The Chair's Report now included themes to highlight things happening within the Health Board in areas that were not normally discussed in great detail at the Board meetings. This month's theme was in relation to Primary Care and Mental Health in Primary Care where very inspirational work was taking place. The Chair also referred to the UHB's new intervention status with Welsh Government and reported that the UHB had maintained its status with routine arrangements. **The Board resolved that:** (a) The Chair's report be noted (b) The Chair's Actions and the signing of legal documents undertaken by the Board Governance Group be approved.	
UHB 20/11/008	**Chief Executive Report** The CEO highlighted the following: • The appointment of a new Executive Director of Finance who would join the Health Board by the end of March; • The appointment of the Executive Director of Workforce and Organisational Development (EDWOD) to Welsh Water and the appointments process for his replacement; • The winning of another award by the procurement team for their impact and support to C&V and the NHS in Wales during the Covid Period. **The Board resolved that:** (a) The CEO Report be noted.	
UHB 20/11/009	**Corona Virus Update Report** The CEO advised that the report was produced several weeks prior. The Board were advised that the CEO and Chair attended a weekly ledership meeting where an Incident Management Team report provided a Public Health summary and pressures within the system were highlighted. As a result of lockdown, the rate of infection within C&V had significantly decreased to 150 cases per 100,000 population, there was a point when this was 350 cases per 100,00. The CEO added that from the organisation's perspective, demand was driven by the rate of infection on the over 60s population which had been quite stable since the lockdown. This should continue but as the rate increased in the general population we would see a lag time and the over 60s rate of infection increase.	

	The CEO referred to pressures within the organisation and that there were 100 confirmed cases and the number of patients within the critical care department had ranged from 6-10 saying that it was quite a stable position. He added that there were quite significant pressures in regards to Covid, Winter plans, and maintaining/increase of scheduled work around specialist, children, cardiac and other specialist services as a way to resolve the significant waiting times. The CEO advised that there were key differences in the management of the second wave as the UHB was now managing the whole agenda of scheduled/unscheduled care/winter demands, as well as Covid demands, as opposed to the first wave where certain services were reduced to give capacity to focus on Covid. The CEO confirmed that this report would be brought to all Board meetings. **The Board resolved that:** (a) The Corona Virus Update Report be noted.	
UHB 20/11/010	**Board Assurance Framework (BAF)** The DCG stated that as at the last Board meeting there were 10 risks on the BAF. The risks in relation to Brexit had been reviewed separately by the Strategy and Delivery Committee to provide further assurance to the Board on this issue. The DCG highlighted that this month the risks within the BAF had been aligned to the UHB's strategic objectives to show the main risks impacting on those objectives. The risk in relation to Finance had reduced from 20 to 15 and was reflected in the main risk within the BAF. The CEO praised how the report clarified the significant strategic risks. He queried the workforce score which was now at 10 and whether it should be reconsidered. **The Board resolved that:** a) The 9 risks to the delivery of Strategic Objectives detailed on the attached BAF were approved. b) The progress made in relation to the roll out and delivery of effective risk management systems and processes at the UHB be noted.	**NF**
UHB 20/11/011	**Patient Safety, Quality & Experience Report** The Executive Nurse Director (END) sought to highlight some areas of the report and provide a further update in relation to others which were live events. The Board was advised of the following:	

- There were under 18s still in Hafn Y Coed but the END was pleased that the working arrangements with WHSSC, Local Authorities and other Health Boards were growing so this was now also being seen as an urgent agenda item for them;
- In relation to hospital acquired Covid; patients entered the hospital environment often symptomatic but their tests would come out negative and later become positive; this resulted in further problems when they were in a variety of areas. The END provided the example of 9 patients in a 9 bedded bay and one of the patients becoming positive, although the infected patient would be removed, the remaining 8 patients would remain contacts and therefore could not be moved around the system until discharge.
- Of the 13 wards, 9 had an outbreak (more than 2 patients) and 4 incidents (less than one patient).
- Outbreak and incidents position was affecting 38 inpatients with an accumulation of 89 patients affected in total.
- Accumulatively 57 staff were isolating or coming to the end of an isolation period leading to 63 beds being closed.
- 11 patients with hospital acquired Covid had passed away, all these deaths were being reviewed.

The END wanted the Board to be clear, and the public to understand, the UHB journey with in regards to Covid:

- Patient experience remained fairly good but not as high as normal; this was to be expected as the UHB stretched its staff as well as factoring in the impact of patients not being to have relatives visit.
- Response to concerns remains at 84%.
- Negotiation with relatives and patients around visiting continued whether it be virtual or actual.

The Executive Medical Director (EMD) highlighted that the team was working on the initial outputs of the workshop. Two new groups had been set up as part of the Quality and Safety structure:

- Clinical Effectiveness Committee which had a remit associated with Clinical Audit, National Clinical Audit, NICE Guidance, and Peer Reviews. These components would be led by Dr Raj Krishnan with the first meeting in December.
- Learning from Deaths Group which would integrate with the Medical Examiner system which was being piloted in Wales but not yet in Cardiff.

The IM-ICT commented in relation to adolescence within Hafn Y Coed, that she was encouraged to hear about the work with WHSSC and Local Authority colleagues.

The IM-LA commended the work of the END and EMD in relation to their leadership, the special QSE Committee meeting held in October was a joy to attend and provided evidence of the levels of assurance needed.

	The Board resolved that: a) The content of this report be noted b) The areas of current concern be noted and agreed that the current actions being taken were sufficient.	

UHB 20/11/012	**Performance Report** The Chief Operating Officer (COO) highlighted that the unscheduled care position remained challenging in terms of demand, complexity and IP&C. In terms of planned care, essential services were maintained and the UHB was attempting to reinstate as many services as possible. At the last meeting up to 63% of Pre-Covid activity was reached and this had remained the same. The aim was for 75-80% of Pre-Covid activity for planned care this year. Plans for Q3/4 had been submitted to Welsh Government and the UHB was working to these currently. Next year was best considered in 3 stages accounting for there being a number of uncertainties. **Stage 1** Intention to grow activity and recover to 100%. There were efficiency problems due to operating in Covid but the hope was to benefit from the vaccine roll out. The first task was to avoid disruption, second to recover as much activity as possible and third to improve the efficiency. **Stage 2** Given the scale of the task and backlog faced, as much capacity as possible would need to be secured and opportunities to expand this would be sought whilst having discussions with Welsh Government as to how this would be possible. Collaboration with the independent sector on a longer term basis was hoped for. **Stage 3** Discussions in the region and with Welsh Government were taking place about regional opportunities and collaborations across other Health Boards to access further activity. The COO highlighted the deterioration of part 1A Mental Health Measure which was driven by two issues; the expected increase in Mental Health referrals following the first wave of the pandemic and the system design changes to cope with the first wave for example putting in a single point of referral for PMHSS and counselling. Although the 28 day target had not been met at this stage, the vast majority of patients were being assessed within 30 days. He added that the redesign previously mentioned was fully supported by Welsh Government and the UHB was working closely with them in relation to future service design and change.	

	The Board was advised that there had been a deterioration in the cancer 62 day performance. This should be viewed in conjunction with the backlog of Cancer treatments. There was a significant drop in cancer referrals and treatments during the first wave. Referrals were now back to back to pre-Covid levels and Cancer treatments were also back to pre-Covid levels and had exceeded in the last month. **Finance** The Interim Executive Director of Finance (IEDF) stated that there was major movement and significant improvement in the financial position of the UHB. At the September meeting, the year to date position at month 5 showed a deficit of £28 Million and a full year forecast deficit of £98 Million. As noted in the previous meeting, the revenue position, capital position, and underlying deficit were all dependent upon funding decisions by Welsh Government and the IEDF was pleased to report that as part of the Q3/4 plans submitted to Welsh Government, the available resources were now clearly set out. At month 7, the UHB was now reporting underspend of £362k, assuming sufficient income to cover net Covid costs of £88.478B for the first 7 months and a small operational surplus of £362k. A break even operational position was assumed. All NHS organisations following receipt of funding were now expected to deliver as per their original plans and the plan for the UHB was to deliver break even position before the year end which it was now on track to do so. With regards to underlying deficit, all money received by the UHB for Covid was non recurrent, in the order of £25M, an eye would be kept on this position for the rest of the year and to monitor what the budget settlement would be from Welsh Government on 21st December. In regards to the risks reported previously, Welsh Government had now confirmed funding of spend to maintain essential services which the UHB was at risk of for £2.5M. This would be based upon receipts/invoices received by the Health Board. The CEO acknowledged the positive financial relationship with Welsh Government around Covid. **The Board resolved that:** (a) The current position against specific performance indicators for 2020-21 be noted.	
UHB 20/11/013	**Intensive Learning Academy** The Director of Transformation (DT) introduced the Intensive Learning Academy as a Welsh Government investment in capacity and capability which was built on a healthier Wales. It had been a competitive process and all bids from across Wales	

	needed a University as a lead bidder. The focus within C&V was to support the bid in regards to spread and scale of innovation alongside national and international partners. The proposal would develop and deliver world class learning to equip leaders with the confidence and skills to embed innovation within our Health Care and wellbeing system. C&V were bringing together and leading the frontline collaboration with other Health boards clustering around it. There was a significant amount of money available, approximately £2.5m over 3 years. The Board commended the work that had gone into the bid. **The Board resolved that:** (a) The information in the presentation be noted.	
UHB 20/11/014	**Nurse Staffing Act – Mental Health Nurse Staffing Levels** The END introduced the item, stating that this was regularly received by the Board in line with requirements of the Nurse Staffing Act. Section 25B of the Act required recalculation of nurse staffing levels in medical and surgical wards; this had been extremely challenging due to guidance from the CNO changing the definition of Covid wards and then a further CNO letter in May asking that these wards be revisited. Section 25A provides for the overarching duty to provide staffing levels for sensitive care and patient need. The END reminded the Board that every year a sign off process was undertaken across the whole of the Health Board for all clinical environments, with the END providing final approval. She stated that almost all of these were complete with a few areas needing to be revisited i.e. Mental Health. The concluded process will come to a future Board meeting. The END updated the Board on the Minister's announcement to extend the Act into paediatrics, this was progressing well. The END requested sign off on 25B&C today. The Chair requested an update be provided to January Board. **The Board resolved that:** a) The nursing establishments in compliance with requirements of the Nurse Staffing Levels Act be approved.	**RW**
UHB 20/11/015	**Recognising and Responding to the Climate Emergency – Action Plan** The EDSP advised that this was a further update on what was presented at a previous Board development session and commented	

	that a very enthusiastic working group had looked into how we could take our responsibility in relation to climate emergency and carbon neutrality seriously. As an NHS organisation, we were a big consumer and had a large carbon footprint. In January, the Board supported the declaration of climate emergency and committed to developing our sustainability action plan. The ESDP highlighted that learning had been taken from the centre of sustainable health care in terms of the framework used and there was clear alignment to our strategies. Pages 11, 12 and 14 were highlighted which set out what the Health Board was committing to. Challenging targets had been set but these were achievable. The UHB Head of Procurement was leading on climate and sustainability in procurement for NWSSP and clinicians were responsive on how they could deliver clinical practice in a different way and reduce the carbon footprint. The EDSP mentioned the development of a charter and that sign up to this would be positive together with working in partnership with both local authorities and public board partners in terms of delivery of the targets set and the two PSB charters. The importance of working with partners and engaging patients/service users in this agenda was acknowledged. **The Board resolved that:** (a) The Sustainability Action Plan be approved, agreed to engage with our staff on it and noted that further targets would be set by Welsh Government and NHS Wales in early 2021 in order to have a glide-path towards net zero by 2030. (b) Our commitment to improving our impact on the environment was supported.	
UHB 20/11/016	**Clinical Services Plan** The EDSP informed the Board that at the end of last year, internal engagement and conversations took place with stakeholders regarding the shaping of the Clinical Services Plan going forward to provide services that were fit for the future and met the changing need of the population to gain a clear line of sight of the infrastructure and assets required to deliver. The overarching and latest version of the plan was provided which had been further developed to take stock and reflect on learning from Covid. The EDSP highlighted that the document was not the public facing document but a technical version. The Associate Medical Director For Clinical Strategy (AMD-CS) led the presentation and spoke about the development stage of both a communications and engagement document with the staff and the public and set the context around SOFW.	

The Clinical Services Plan would develop into how, where and who would deliver these services for patients; not all elements of disease prevention, population health, social wellbeing were included in its remit.

Phase 1 would be an 8 week burst to build the programme foundation. This was moving at pace and included a lot of the ground work that would help inform the program business case to Welsh Government for UHW 2, timeline for submission being February 2021.

Phase 2 would run for 12 months and be shaped by what was achieved in the first 8 weeks. Prototypes of redesigned pathways had been piloted and developed and this would continue throughout 2021 until there was an overall blueprint

Phase 3 would see the start of new models of care being implemented which would involve a number of high level business cases for various developments.

Phase 1 was being supported by a team comprised of individuals from within the organisation, Q5 and other stakeholders. The key outputs of Phase 1 would be the development of a detailed Program Initiation Document, methodology and workshop to engage with clinical and non-clinical teams and public engagement.

The three work streams were described as; shaping our future communities, shaping our future clinical services and public health / social care.

The following services would be developed:

- Emergency clinical pathways, ensuring out of hospital and in hospital acute and emergency pathways that were fit for purpose
- Planned care pathways for GPs to specialist referrals and treatments
- Surgical centre of excellence
- Regional and national pathways i.e. major trauma, neuro surgery etc.

It was confirmed that the plan would bring other projects such as E-advice, diagnostic hubs, Attend Anywhere and CAV Convention into alignment.

The planned engagement timetable was for high level engagement in January 2021 for an initial 6 week period. A range of materials, from simple slide decks to more complex documents had been developed to spell out the case for change, outline what the changes would mean in terms of staff / infrastructure / services / and the public and to gain initial high level feedback to inform phase 2.

The EDSP summarised that this was a significant programme of change and that some specific elements would require further consultation, some things would be an evolution and require a

	continuous engagement methodology and the UHB would be working with the CHC on how best to achieve this. The EDSP wanted to highlight to the Board that there was a preferred provider to work on the programme business case for UHW 2 which was going through the final stages of procurement. **The Board Resolved that:** (a) The contents of the 'Shaping our Clinical Services document' was noted. (b) The proposed engagement plan was noted, discussed and feedback provided.	
UHB 20/11/017	**Genomics OBC and FBC process** The EDSP presented the outline business case for approval to Welsh Government to obtain agreement and financial support to move to a full business case. The Board were reminded of the All Wales genomics partnerships hosted by the Health Board which provided good opportunity for state of the art facilities to enable the service to grow and develop. A range of options had been considered and the preferred option was partial refurbishment of the existing laboratories which were previously funded by Welsh Government. The CEO commented that Welsh Government produced a Genomics strategy 3 years ago which brought together collaboration on the Genomics partnership and placed four services together on the one site. It was clarified that the governance would sit under our Health Board but through a partnership board and there was a dedicated role that would oversee the partnership. **The Board Resolved that:** (a) The submission of Development of Genomics Partnership Wales Outline Business Case to Welsh Government for capital funding to proceed to develop the FBC be approved.	
UHB 20/11/018	**COVID-19 Costed Vaccination Plan** The Executive Director of Public Health (EDPH) confirmed that the UHB was now in the final stages of preparation for the detailed operational plans and highlighted that there had been significant developments since the paper had been submitted. The EDPH reminded the Board of the UHB's responsibility for health and protection of the population alongside local government and other partners. The paper outlined the proposal for delivery of the mass Covid vaccinations programme. There was a governance infrastructure around this that included a	

programme board, chaired by the EDPH, and attended by leads of each of the component parts from the Health Board. There was also a wider stakeholder group.

The EDPH highlighted the six work streams:

1. End to end journey - Pathway
2. Workforce training
3. Venues and logistics
4. Vaccine considerations
5. Digital arena
6. Communications arena

In terms of vaccine delivery, there would be mass vaccination sites in Homeview leisure centre in Barry, Pentwyn Leisure Centre and C&V Therapy Centre in Splott. There could also be mini sites to provide for certain staff as well as an outreach team to provide to care home staff and other vulnerable groups who may be unable to get to sites. There would also be a booking centre to reduce DNAs and avoid vaccine wastage, this would be based in Splott but aimed to have 50% of staff working remotely.

The plan was to deliver over a 9-12 month period which could overlap with the flu campaign. There will be around 265k people eligible for the vaccination according to first prioritised groups. There was a joint committee on vaccination and immunisation that decided which groups would benefit most from the vaccine.

The plan depended on availability of the vaccine and its characteristics i.e. ability to transport it. Some of the finer details i.e. ability to vaccinate in category 1 were still being worked on.

Delivery would be a significant undertaking and require substantial resources; cost was still being worked through but would ensure value for money.

A national digital solution delivered by NWIS via the Welsh Immunisation System should be ready for use by the end of November.

The Pfizer vaccine was currently going through the regulatory process and awaiting approval.

The CEO-CHC raised concern regarding the location of the vaccination centres and whether they were ideal transportation locations. The EDPH responded that there were challenges as there was a wide geography to cover and that multiple factors were considered including transport. She added that there had been close working with local authority colleagues and review of public transport links for the centres.

The IM-Community asked whether there was priority for members of BAME communities. The EDPH reiterated that prioritisation was decided by the IMT groups but as BAME sometimes do have higher levels it was likely they would be considered within the categories although not explicitly stated.

	The Board Resolved that: a) The contents of the report be noted.	
UHB 20/11/019	**Stakeholder Reference Group (SRG) - Nomination of Chair and New Members** The EDSP advised that that the SRG was an important advisory mechanism and one of the statutory groups that advises the Board. The EDSP informed the Board there was a gap in the role of Chair for this group and that Sam Austin had put herself forward for the role, this was supported by the members of the SRG and the EDSP was recommending her for the role. On receipt of Board approval, ministerial approval would be sought. The paper also included the addition of two new members. **The Board Resolved that:** a) The appointment of Sam Austin as Chair of the SRG and seeking of the necessary formal approval from Welsh Government be approved. b) The nomination of Cllr Charles and Siva Sivapalan to the SRG be approved. c) The interim steps taken to provide a carer perspective to the SRG be noted.	
UHB 20/11/020	**Corporate Meeting Schedule 2021-22** The DCG stated that this was for approval and wanted to highlight to members that going forward we should do our utmost to adhere to the dates set, particularly for agenda setting, using Vice Chairs and Deputies wherever possible rather than rearrange dates. The UHB Chair stressed that the use of Deputies for Executives should only be on an exceptional basis. **The Board Resolved that:** a) The attached Corporate Meeting Schedule for 2021-22 be noted and approved.	
UHB 20/11/021	**Radiotherapy Satellite Centre Outline Business Case** The EDSP advised that this was developed in partnership with Velindre and ABUHB for the establishment of the Radiopharmacy Satellite Centre in Nevil Hall Hospital. The Board were reminded that they had approved the overarching strategic outline case around the Velindre Cancer Centre which included consideration of providing Radiopharmacy provision for the whole of the population. The EDSP confirmed that this came to the UHB Board to approve as it had cost implications to the Health Board. She confirmed that it would create capacity as it took some of the ABUHB and Cwm Taff activity out of the Cardiff based Velindre Cancer Centre and would deliver that in Nevil Hall, this would benefit the C&V population as it allowed for more capacity for our local population. The EDSP stated that the costs were based on actual use of Velindre Cancer Centre so if demand did come through as projected the Health	

	Board would not have to incur the costs indicated however there were costs associated in running two sites and as a partner in transforming cancer services and a partner in getting benefit for the local population by having more capacity spare, the Health Board was asked to cover and contribute to overhead costs for the 2 centres. The EDSP highlighted that there was still further work required around demand modelling and the clinicians had queries in that area. The CEO-CHC declared an interest being involved via the CHC. It was confirmed that engagement had already taken place in terms of the model and location of the satellite unit a few years ago. The CEO-CHC confirmed that there was a detailed process whereby the two Health Boards presented their proposals which went through a robust process. **The Board Resolved that:** a) The OBC be approved in principle to proceed to Welsh Government for the consideration of investment in radiotherapy infrastructure. b) Agreed in principle to support the revenue costs associated with increased demand for radiotherapy for Cardiff and Vale residents, subject to: Further engagement to understand the underlying principles and assumptions for the radiotherapy demand modelling An agreement to the timescales to review actual demand and re-assess respective commissioner investments in fixed cost capacity An agreement of the mechanism by which the review would be conducted c) Agreed to support 'lead in' implementation costs as they were incurred for recruitment and other necessary advance service commissioning costs.	
UHB 20/11/022	**Outline Business Case Radiopharmacy** The EDSP advised that like genomics services, radiopharmacy were currently housed in places not fit for purpose. This was a regulated service and recent inspections had highlighted significant shortcomings in the estate. The unit being proposed in the business case would also support Velindre Cancer Trust as an agreement was reached that C&V would provide on behalf of both organisations. The EDSP had worked with clinicians on what the best model should be as initially there was a strong view it should be co-located at UHW (current location). The submission to Welsh Government would seek capital funding for £12m, to be located at the backend of Woodland House. **The Board Resolved that:**	

	a) The submission of Development of Radiopharmacy Services at University Hospital of Wales – Outline Business Case to Welsh Government for capital funding to proceed to develop the FBC be approved.	
UHB 20/11/023	**Proposed Changes to Governance Arrangements** The DCG highlighted that this report had been to the Audit Committee who were happy with the recommendations. She added that this had come on the back of a number of reviews around governance and financial governance. • Due Diligence Review of The Principality Stadium • Audit Wales Review – Structured Assessment • Internal Audit Review on Governance She added that the outputs of these reviews had been pulled together in these revised governance arrangements. **The Board Resolved that:** a) The proposed amendments to governance arrangements (Appendix 1) be approved. b) The changes to the Board Governance Group Terms of Reference (Appendix 2) which extends the Membership to include all Independent Members be approved; c) The Covid 19 Report Template (Appendix 3) covering the key areas of Quality and Safety, Workforce, Governance, Operational Framework, Governance and Public Health be approved; d) The first 90 minutes of future Board Development sessions be held in public demonstrating that the Board is meeting in public every month; e) The revised Governance Structure ensuring appropriate reporting to the Committees of the Board during the second wave (Appendix 4) be approved.	

UHB 20/11/024	**Committee Minutes** Committee Minutes**:** i. Audit and Assurance – 8th September 2020 ii. Finance Committee – 26th August & 23rd September iii. Strategy and Delivery Committee – 15th September 2020 iv. Mental Health Committee – 21st July 2020 v. Digital & Health Intelligence Committee – 9th July 2020 vi. Stakeholder Reference Group – 22nd July and 23rd September 2020 vii. Local Partnership Forum – 3rd August 2020 viii. WHSSC Joint Committee – 8th September and 13th October 2020 **The Board resolved that:** (a) The minutes outlined above be ratified.	
UHB 20/11/025	**Reports from Committee Chairs:**	

	i. Audit and Assurance Committee – 17th November 2020 Verbal ii. Finance Committee – 23rd September, 28th October and 25th November 2020 (Verbal) – Chris comment 247 iii. Quality Safety & Experience – 13th October 2020 iv. Strategy and Delivery Committee – 10th November 2020 v. Health & Safety Committee – 24th November 2020(Verbal) vi. Mental Health Committee – 20th October 2020 vii. Digital & Health Intelligence Committee – 8th October 2020 viii. Stakeholder Reference Group – 23rd September 2020 ix. Local Partnership Forum – 22nd October 2020 **The Board resolved that:** a) The Committee Chairs' reports outlined above be noted.	
UHB 20/11/026	**Valuing the Health Board's Relationship with the Third Sector in Cardiff and the Vale of Glamorgan** The EDSP commented that this was an important piece of work in terms of partnership working and highlighted the huge value gained working with the 3rd sector across the Health Board. **The Board resolved that** a) The updated Memorandum of Understanding between Cardiff and Vale University Health Board and the Third Sector in Cardiff and the Vale of Glamorgan be noted. b) The 18 months in review publication be noted.	
UHB 20/11/027	**Quarter 3 & 4 Plan** **The Board resolved that:** a) The Quarter 3-4 plan be formally endorsed.	
UHB 20/11/028	**Winter Plan** **The Board resolved that:** a) The content of the RPB Winter Plan be noted and the potential financial and service risks acknowledged. b) The rapid work undertaken by the RPB Partnership Team under the leadership of the Director of Integrating Health and Social Care (Cath Doman), with the RPB partners be acknowledged.	
UHB 20/11/029	**Board Effectiveness 2019-20 Self-assessment** The DCG stated that there were a number of actions that came out of the Board self-assessment which were within the action plan and followed on from the self-assessments of the Committee's for the last financial year. **The Board resolved that:** a) The results of the Self-assessment Effectiveness Review for 2019-20 be noted; b) The action plan for improvement to be progressed via Board Development sessions be noted.	

UHB 20/11/030	**Agenda for Private Meeting** i. Corporate Risk Register ii. Private Committee Minutes iii. COVID-19 Board Governance Group Minutes	
UHB 20/11/031	**Date, Time & Venue of Next Board Meeting:** **Date and time of next meeting:** Thursday, 17 December 2020 at 9.30pm Via MS Teams	

ACTION LOG
Following Board Meeting
26th November 2020

MINUTE REF	SUBJECT	AGREED ACTION	DATE	LEAD	STATUS/COMMENT
Actions Completed					
20/01/016	Recognising and Responding to the Climate Emergency	To bring back an action plan to a future meeting	**26.11.2020**	A Harris	Complete
UHB 20/09/016	COVID-19 Vaccination Plan Update	Development of a costed plan which will be brought to Management Exec and Board	**26.11.2020**	Fiona Kinghorn	Complete
UHB 20/09/015	Winter Protection Plan	CC was keen on the opportunity to review the plans before they are submitted on 31/10/2020	10.11.2020	Abigail Harris	**Complete**
UHB 20/09/009	NHS Confederations VC Report	Report for the NHS confederations which will be published soon to reflect not only on Video Consultation itself but also on its implementation in Wales	17.12.2020	Allan Wardhaugh	Allan to share the report on VC after it has been published & also to be taken to Board Development in February - item was a blog Allan was asked to write by Helen Northmore, Programme Director at Digital Health Ecosystem Wales for publication on the NHS Confederation Website as part of a series called NHS Voices. https://www.nhsconfed.org/blog/2020/10/reflections-on-vc-in-the-time-of-cv

Actions In Progress					
UHB 20/11/010	**Board Assurance Framework**	Revisit the risk score in regards to the workforce score	**28.01.20**	Nicola Foreman	To be taken to the January Meeting
UHB 20/11/014	**Nurse Staffing Act – Mental Health Nurse Staffing Levels**	She stated that almost all of those are complete with a few areas needed to be revisited i.e. Mental Health..	**TBC**	R Walker	The END said that she will bring this to a future Board meeting but felt it was important to note that these are not concluded at the moment
Actions referred to Committees of the Board/Board Development					
UHB 20/09/010	Brexit Continuity Plan	CC queried that we may have a lack of visibility on the Brexit continuity plan to the Board and the sub committees	10.11.2020	Abigail Harris	Brexit Continuity Plan to be brought to Strategy and Delivery Committee
20/07/010	Patient Safety, Quality & Experience Report	A 'Learning Committee' would be discussed and considered with operational colleagues.	17.12.2020	R Walker / S Walker	Workshop scheduled for 17/09/2020 Learning Committee will be considered formal output of the workshops would be brought back to the Board Development & to Board in January
UHB 20/11/012	**Performance Report**	UHB Chair queried in regards to elective access, he felt the growing concern as a board of the number of patients waiting now and asked if there is any benefit on delivering to Strategy and Delivery on a more detailed look on this position.	TBC	Steve Curry	To be taken to a future meeting

Report Title:	**Chair's Report to the Board**						
Meeting:	Public Board Meeting				**Meeting Date:**	17th December 2020	
Status:	**For Discussion**		**For Assurance**		**For Approval**	**x**	**For Information**	**x**
Lead Executive:	Chair of the Board						
Report Author	Executive Assistant to Director of Corporate Governance						

a. Fixing the Common Seal/Chair's Action and other signed documents

This section details the action that the Chair has taken on behalf of the Board since the last meeting. The Board is requested to ratify these decisions in accordance with Standing Orders.

Chair's Action was taken in relation to:

Chair's Actions						
Date Received	Chair's Action Details	Background Recommendation Approved	Date Approved	IM Approval		Queries Raised by IMs
				IM 1	IM 2	
12.11.20	Charitable Funds Bid Application – Faxitron Breast Centre Equipment	Approval sought for a bid totaling: £105,000 plus VAT for Equipment at The Breast Centre	16.11.20	John Union 14.11.20	Akmal Hanuk 16.11.20	No queries raised
19.11.20	Hand Towels and Tissue	Approval sought for a 2 year contract. Amount £787.613.10	01.12.20	Michael Imperato 01.12.20	Rhian Thomas 01.12.20	No queries raised

Assessment and Risk Implications (Safety, Financial, Legal, Reputational etc:)

The COVID-19 Board Governance Group was set up to ensure robust, effective decision making could take place at pace. This has ensured that due process has continued to be followed.

Recommendation:

The Board is recommended to:

- **NOTE** the report

- **APPROVE** the Chair's Actions undertaken.

Shaping our Future Wellbeing Strategic Objectives *This report should relate to at least one of the UHB's objectives, so please tick the box of the relevant objective(s) for this report*			
1. Reduce health inequalities	x	6. Have a planned care system where demand and capacity are in balance	x
2. Deliver outcomes that matter to people	x	7. Be a great place to work and learn	x
3. All take responsibility for improving our health and wellbeing	x	8. Work better together with partners to deliver care and support across care sectors, making best use of our people and technology	x
4. Offer services that deliver the population health our citizens are entitled to expect	x	9. Reduce harm, waste and variation sustainably making best use of the resources available to us	x
5. Have an unplanned (emergency) care system that provides the right care, in the right place, first time	x	10. Excel at teaching, research, innovation and improvement and provide an environment where innovation thrives	x

Five Ways of Working (Sustainable Development Principles) considered *Please tick as relevant, click here for more information*									
Prevention		Long term	x	Integration	x	Collaboration	x	Involvement	x

Equality and Health Impact Assessment Completed:	Not Applicable

Report Title:	**CHIEF EXECUTIVE'S REPORT**								
Meeting:	CARDIFF AND VALE UHB BOARD MEETING					**Meeting Date:**	17.12.2020		
Status:	**For Discussion**		**For Assurance**		**For Approval**		**For Information**	✓	
Lead Executive:	**CHIEF EXECUTIVE**								
Report Author (Title):	**EXECUTIVE ASSISTANT TO THE CHIEF EXECUTIVE**								

Background and current situation:

This is the seventeenth written report being presented and, where appropriate, has been informed by updates provided by members of the Executive Team.

At each public Board meeting, the Chief Executive presents a report on key issues which have arisen since its last meeting. The purpose of this Chief Executive report is to keep the Board up to date with important matters which may affect the organisation.

A number of issues raised within this report may also feature in more detail in Executive Directors' reports as part of the Board's business.

Executive Director Opinion /Key Issues to bring to the attention of the Board/ Committee:

UHW Lakeside Wing
The first 166 beds are now available to accept patients at the UHW Lakeside Wing, a temporary surge facility based at the University Hospital of Wales site.

On Friday 3 December, 166 beds that make up the 'Northern Wing' of the UHW Lakeside Wing are available to accept patients who need rehabilitation and are recovering from a long period of acute illness. The UHW Lakeside Wing will be adopting a multi-disciplinary model of care, ensuring staff such as physiotherapists, occupational therapists, dieticians, pharmacists, healthcare support workers and registered nurses will be collaboratively working to provide patient care under one roof.

Bevan Exemplar Showcase
Since the launch of the Bevan Exemplar programme, Cardiff and Vale UHB has been fortunate to have a number of innovative and inspirational members of staff be part of it every year. Despite the fact that this year's showcase was online, this remains the case as we had a number of fascinating projects being presented:

- Get Up and Dance led by Marianne Seabright in partnership with Rubicon Dance. The project, aimed at dementia patients, used weekly dance classes and music to lift the mood, promote wellbeing and get people moving in hospital to aid recovery.
- Grow Well, led by Isla Horton, Grow Cardiff and Dr Karen Pardy, Director SW Cardiff Primary Care Cluster, Cardiff and Vale UHB.This innovative work to encourage patients in Riverside, Cardiff to attend weekly community gardening sessions to improve health and wellbeing quickly adapted to the restriction of the Covid 19 pandemic to encourage grow your own at home by providing plants and kits.

- Needle in a Haystack: Finding glaucoma patients that are going blind led by Wai Siene Ng.

COVID-19 vaccine Delivery
On Tuesday 8 December the COVID-19 vaccination campaign with many staff members of Cardiff and Vale UHB and local care home staff among the first in the UK, and the world, to have received the vaccine. The start of the vaccination programme comes just days after the Medicines and Healthcare Products Regulatory Agency (MHRA) approved the first COVID-19 vaccine for use in the UK, confirming its safety and effectiveness for mass vaccination centre use, based on a detailed independent expert review of the results of largescale clinical trials. Our staff involved in delivering the vaccine, led by our Executive Director of Public Health, Fiona Kinghorn, have worked at an incredible pace to ensure that everything was ready and in place for the first vaccines to be delivered early this morning. Taking into account the very specific storage and preparation challenges posed by the vaccine itself, this is no small feat and I would like to thank Fiona and her team for pulling together, working with local, national and UK partners to coordinate the delivery.

Primary Care Optometry nominated for Healthcare Awards
Cardiff and Vale University Health Board has been shortlisted as Finalist for the upcoming Healthcare awards for our novel services established in primary care Optometry practices. The project, entitles, 'Transformation of eye care services (glaucoma and unscheduled eye care) and the use of a digitised patient record enabling shared care between optometry and ophthalmology', is a finalist in a number of awards namely, the Health Service Journal (HSJ) awards 2020, Building Better Healthcare Awards 2020, and the Health Business awards 2020.

Assessment and Risk Implications (Safety, Financial, Legal, Reputational etc:)

The Executive Team contributed to the development of information contained in this report.

Recommendation:

The Board is asked to **NOTE** the report**.**

Shaping our Future Wellbeing Strategic Objectives
This report should relate to at least one of the UHB's objectives, so please tick the box of the relevant objective(s) for this report

1.	Reduce health inequalities	✓	6.	Have a planned care system where demand and capacity are in balance	✓
2.	Deliver outcomes that matter to people	✓	7.	Be a great place to work and learn	✓
3.	All take responsibility for improving our health and wellbeing	✓	8.	Work better together with partners to deliver care and support across care sectors, making best use of our people and technology	✓
4.	Offer services that deliver the population health our citizens are entitled to expect	✓	9.	Reduce harm, waste and variation sustainably making best use of the resources available to us	✓

5. Have an unplanned (emergency) care system that provides the right care, in the right place, first time	✓	10. Excel at teaching, research, innovation and improvement and provide an environment where innovation thrives	✓

Five Ways of Working (Sustainable Development Principles) considered *Please tick as relevant, click here for more information*									
Prevention	✓	Long term	✓	Integration	✓	Collaboration	✓	Involvement	✓

Equality and Health Impact Assessment Completed:	Not Applicable

Report Title:	**Corona Virus Update Report**								
Meeting:	Board						**Meeting Date:**	17.12.20	
Status:	**For Discussion**		**For Assurance**	**x**	**For Approval**		**For Information**		**x**
Lead Executive:	**Director of Corporate Governance**								
Report Author (Title):	**Head of Corporate Governance**								

Background and current situation:

The COVID-19 Update Report was approved by Board in November 2020 as part of the proposed changes to Governance arrangements.

Executive Director Opinion/Key Issues to bring to the attention of the Board/Committee:

The attached COVID-19 Report (Appendix 1) provides the second update of this type to the Board regarding the pandemic, and covers key activities in the areas of Quality and Safety, Workforce, Governance, Operations and Public Health.

Assessment and Risk Implications (Safety, Financial, Legal, Reputational etc.):

Provision of this report as a standing agenda item for Board ensures transparency of reporting around COVID-19 and ensures robust governance during the second wave of the pandemic.

Recommendation:

The Board is asked to:

- Note the attached COVID-19 Update Report.

Shaping our Future Wellbeing Strategic Objectives
This report should relate to at least one of the UHB's objectives, so please tick the box of the relevant objective(s) for this report

1.	Reduce health inequalities	x	6.	Have a planned care system where demand and capacity are in balance	x
2.	Deliver outcomes that matter to people	x	7.	Be a great place to work and learn	x
3.	All take responsibility for improving our health and wellbeing	x	8.	Work better together with partners to deliver care and support across care sectors, making best use of our people and technology	x
4.	Offer services that deliver the population health our citizens are entitled to expect	x	9.	Reduce harm, waste and variation sustainably making best use of the resources available to us	x
5.	Have an unplanned (emergency) care system that provides the right	x	10.	Excel at teaching, research, innovation and improvement and	x

care, in the right place, first time				provide an environment where innovation thrives					
Five Ways of Working (Sustainable Development Principles) considered *Please tick as relevant, click here for more information*									
Prevention	x	Long term		Integration		Collaboration		Involvement	
Equality and Health Impact Assessment Completed:	Not Applicable								

COVID 19 – Update Report covering key activities in relation to • Quality and Safety • Workforce • Governance • Operations • Public Health	Month: December 2020
Quality and Safety	Executive Nurse Director/Executive Medical Director

Covid-19 outbreaks - At the time of writing, there are 11 wards across the UHB where there are outbreaks of covid-19. There is robust monitoring of the situation with daily operational meetings chaired by the Executive Nurse Director and outbreak procedures in place for all affected areas. Daily sitreps reporting is in place in line with current WG guidance issued by the Deputy Chief Medical Officer on November 25th 2020.

Investigation of hospital acquired covid (HAC) - Work continues to review the care of all patients with HAC as well as the deaths of all patients with HAC who have died with a diagnosis of covid 19 on the death certificate. Reviews are being undertaken in line with the All Wales investigation toolkit and are being undertaken by a small team of staff under the guidance of and reporting to the Patient Safety team. A local patient rapid review tool (based on the All Wales toolkit) has been developed by the Patient Safety team and will be approved at the December QSE Committee. This will enable the swift and timely review of the care of patients with hospital acquired covid and will help determine whether a more in-depth review is required.

Covid e-notification – The QSE Committee received a report in June 2020 providing assurance in relation to the reporting of covid deaths in line with All Wales policy. The UHB was instrumental in working with PHW to establish an electronic reporting system and the Assistant Medical Director for Patient Safety and quality continues to sit on the All Wales COVID-19 mortality surveillance assurance group overseeing this. Recently, a document to support Doctors with accurate recording of the cause of deaths for patients with Coronavirus has been developed by one of the UHB Consultant Histo-pathologists and circulated widely to medical staff across the UHB.

Thematic review of covid related incidents - The UHB has been working with Cardiff University Patient Safety Research group (PISA) to undertake a thematic review of covid related incidents. The results have now been presented to the Medical Leadership Group and to the Management Executive. They will be used to identify learning opportunities. Breakdowns in communication, inadequate delivery of care due to the pandemic and inappropriate or preventable exposure to the virus were the most commonly described incident. The top four contributory factors were:

- **Infection control protocol** for preventing the incidence and spread of infection within healthcare environment
- **Failure to follow protocol** - failure to adhere to procedures or regulation.
- **Lack of stock** (referring to either **beds** or **equipment** e.g. PPE)
- **Insufficient staffing**

The main findings were that:

1. Most incidents occurred due to **failure to follow infection control protocols:**
   - Encompasses inadequate knowledge (new protocols), oversight/mistakes (rarely deliberate violations)
2. **Staff felt unsafe** due to understaffing, and in certain cases were at risk due to working in **unsafe environments.**

3. Issues involving **communication** between healthcare professionals were frequent and **impacted patient care.**

In depth analysis of incidents in this way has provided us with richer data so that we can take the necessary actions to address root causes. The work will continue with prospective analysis of all reported incidents during the 3 next months (GP trainee will be working with the patient safety team) to ensure rapid learning as necessary.

Staffing is challenging and is exacerbated by the number of staff who have tested positive with covid-19 and the knock on effect on colleagues who have to self- isolate – this is covered in more detail in the workforce section.

Patient experience - The UHB has continued to collate Patient experience feedback scores and the current scores are 88% UHW, 89% UHL and 78% St Davids. Themes from complaints indicate that communication with wards is problematic for relatives. Support is being put in place and workforce team have been asked to place receptionists in ward areas to ensure calls from families are answered in a timely way.

Workforce	Deputy CEO and Executive Director of Workforce and OD

- Workforce Hubs are established for Nursing, Medical, AHP, Facilities and Primary Care brought together through a Workforce Steering Group chaired by Director of Workforce & OD.
- Lakeside Wing Workforce model developed to support phases - 25 beds then increasing by 50 beds to a total of 400 beds.
  - Managers are currently recruiting and identifying staff to deploy to the Lakeside Wing for a potential opening date of 4 January 2021.
  - The supply and demand of staff however is changing on a daily basis due to a number of different factors including opening additional surge capacity, Covid outbreaks on ward areas where large numbers of staff have to self-isolate for 14 days and staff sickness.
  - We are also working with St Johns Ambulance who have indicated they can provide volunteer HCSWs per day for 12 hour shifts. Waiting further confirmation for this plan.
  - List of Non ward nurses available for deployment was on the LCC agenda on 8/12/20 with the intention of finalising the potential supply of registrants.
- Increasing temporary recruitment – 400 temporary workers being recruited. (This includes 150 Covid Immunisers).
- 105 Temporary Facilities Staff interviewed. Facilities Bank created. Engaged with Agency to provide further Plan B back-up.
- Mass Immunisation & Vaccination Programme - Recruitment Plan and support in place (276 wte in plan). Recruitment phases are on track.
- Further commission of 75 international nurses confirmed. 29 appointments made last week.
- 6 Physician Associates appointed to support Medicine and Surgery Clinical Boards.

- Staff-wellbeing being prioritised with a comprehensive full range of initiatives and support in place as well as a new initiative with Remploy to support staff with Long Covid.
- Temporary enhanced overtime pay incentive scheme for Substantive Registered Nursing staff has been launched.
- A COVID-19 Learning Report has been produced – see item 7.1

Governance	Director of Corporate Governance

- A Welsh Government Gateway Critical Friend Review has been completed on the Lakeside Wing surge facility, focusing on procurement and governance. The review provided amber assurance and an action plan is being completed to address the recommendations. The review and action plan will be reported to the Audit Committee.

- An Internal Audit review is also underway in relation to the Lakeside Wing surge facility; the resultant report will also feed into the Audit Committee. The review will determine the adequacy of, and operational compliance with, the systems and procedures of the UHB and includes the following:

- assurance that appropriate internal / external approval mechanisms are applied as the project progresses through key junctures;
- assurance that planning approval requirements are monitored/delivered;
- assurance that adequate governance arrangements exist including management ownership, defined roles and responsibilities, and clearly designed accountability and delegation arrangements;
- assurance that generally accepted project management techniques are applied and reported;
- assurance that the process to appoint the preferred contractor and advisers accords with local and national requirements;
- assurance that appropriate contractual arrangements have been put in place;
- assurance that appropriate Health and Safety standards are applied (recognising the modular build nature of the facility).

Operations including Operational Framework	Chief Operating Officer

The revised Covid-19 operating framework previously presented to Board and set out in the Health Board's IMTP remains in place. The key components of the revised operating framework continue to guide operations in the second wave of the pandemic. The first principle of remaining 'covid ready' remains, along with a number of key operating principles which include using a 4-6 week planning horizon, a service 'gearing' approach in response to covid demand, Protected Elective Surgery Units (PESU) or 'green zones' and an increased emphasis on site-based management and leadership through Local Co-ordinating Centres (LCC's).

The update provided at last month's Board remains valid and all of the actions described within that report remain in place. Developments since the last Board include:

Essential services – urgent and emergency essential services continue to be maintained in all areas including cancer treatments, urgent and emergency surgery and in unscheduled care.

Unscheduled care – there has been a significant increase in pressure across the unscheduled care pathway, which reflects difficulties seen in other parts of Wales. The difficulties continue to be driven by Covid admissions and non-covid USC demand, but have been compounded by significant hospital bed capacity losses due to nosocomial infections. The Health Board continues to deploy its covid and winter plans although our ability to be responsive is being significantly constrained by the ability to staff capacity. The first phase of field hospital beds in the new 'Lakeside wing' at UHW has been delivered on time. 166 beds have been handed over to the Health Board with the remaining 234 becoming available in the first week of February.

Planned care – despite increased pressure within the unscheduled care system and the continued impact of covid, the Health Board's delivery of additional planned treatments continues against the Q3/4 trajectory provided to Welsh Government. This is despite significant reductions in access to the independent sector hospitals following the planned changes to access from Q3 onward.

Cancer care – cancer care continues to be provided as an essential service, with cancer referrals now returning to pre-covid levels and cancer treatments having recovered to more than 100% of that prior to covid.

Mental Health (MH) services – Pressure on MH services has continued to grow. The increase in demand for PMHSS along with ongoing staff absence due to pressures in the system mean that 28 day access for primary mental health assessment has deteriorated. The vast majority of patients continue to be assessed within 30 days however.

Primary care services remain resilient despite the ongoing pressures with significant use of digital and virtual appointments. One practice has had to cease operating for a short period due to staff needing to isolate, however pre-prepared contingency plans for mutual support were enacted and that practice has now reopened. Patients continued to have access to a GP throughout the period.

Public Health	Executive Director of Public Health

The last four weeks saw cases in Cardiff and the Vale of Glamorgan peak at the end of October/early November, but then fall in response to the nationwide firebreak. However rates in both areas began increasing on 12th November as a result of the lifting of restrictions, and that increase has accelerated rapidly in recent days, particularly in Cardiff. As of 9/12/20, the new case rate in Cardiff is 432.0 per 100k over 7 days and 268.7 per 100k over 7 days in the Vale (Wales rate 380.0 per 100k); rates now exceed peak pre-

firebreak rates in both areas. Test positivity in both areas has also increased after a period of decline, currently at 17.8% in Cardiff and 13.7% in the Vale. The rate among those aged 60 had been relatively stable, but is now increasing significantly too, which is of concern given the age related risk of more serious outcomes.

What is now clear is that infection is embedded in local communities, with cases in different ages, sectors and workplaces; there no single pattern of infection. The disease activity does not seem to be driven by school-age cases, but rather we are seeing high cases among working-age adults. Clusters and outbreaks are being managed in a range of locations and settings, including healthcare, care homes, schools and workplaces. The most significant outbreak within the region is associated with the Prison, which remains a concern. We also have some concerns about rates in Grangetown and the broader BAME community, and so a walk-in mobile testing unit opened at Channel View on 9 December to ensure accessibility to local community.

Since the end of the firebreak, we have seen a shift in the general pattern of the epidemic in our area as people seem to be returning to their lives and behaviours from before the first lockdown – shopping, meeting friends for coffee, giving lifts in the car, staying overnight, social gatherings. We continue to see clusters associated with all types of workplaces where common features are non-adherence to social distancing at break times, car sharing and socialising after work, rather than risks within the workplace itself where mitigation measures are usually in place.

With the approaching festive period and the positive news about vaccination, it is more important than ever that we continue to push strong messages about following Covid safe practices and rules. There is a real risk of Covid no longer being viewed as a threat, and the consequent change in behaviour fuelling a further explosive rise in cases. This, coupled with the effects of seasonal flu, could have significant consequences for health and social care services and our population's health. The partnership TTP Communications team is working with local communities and Welsh Government to deliver this approach across the region. The Regional IMT meets twice weekly to review local risks and provide recommendations for action based on this, to Welsh Government.

This week saw the first doses of COVID-19 vaccine arrive and the start of the mass vaccination programme in Cardiff and the Vale. The Pfizer/Courageous vaccine was approved on 2 December and Splott Mass Vaccination Centre (MVC) opened on Tues 8 December; two further MVCs are planned to open in January 2021. The MVC operates 7 days a week from 8:30am until 7:30PM. 225 people were vaccinated on the first day. In the first week of the programme, 225 vaccination slots will be available each day and this will increase as the number of vaccinations administered per hour and workforce capacity increases. All appointments for vaccination at the MVC will be organised via the booking centre, which is open 7 days a week between 8am and 8pm and opened on 2 December. The Welsh Immunisation System (developed by NWIS) is a new digital system which manages appointments, citizen vaccination data and reporting. The focus in first few weeks is on immunising healthcare workers and care home staff; prioritisation has taken place within these groups to manage demand, sequenced in line with vaccine and workforce availability. Vaccination is by invitation only. Mobile teams are due to commence visits to Care Homes from 21 December pending advice on vaccine stability and logistics associated with the Pfizer vaccine.

Quality, Safety and Experience in 2020

Headline achievements

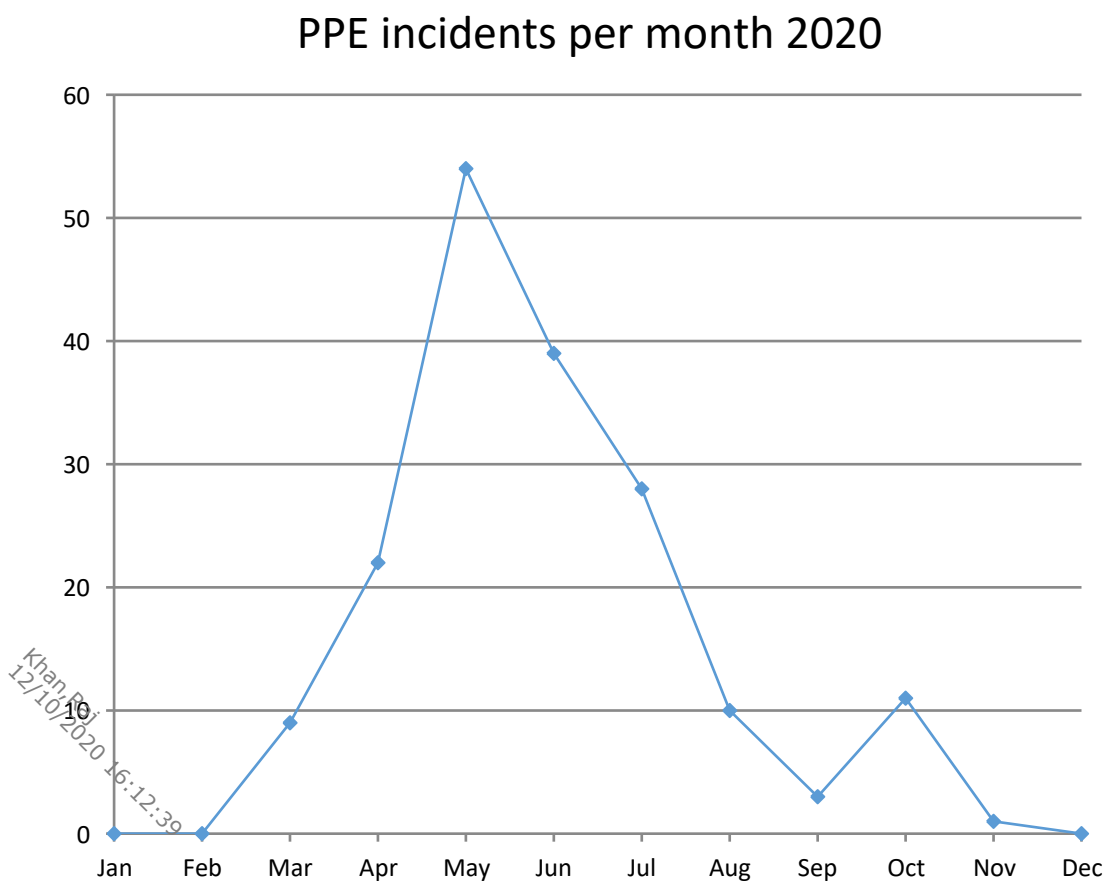
Quality and Safety

- Perfect Ward/Ward accreditation scheme
- Investment in IP&C infrastructure
- Covid outbreak management
- PPE governance group - successful MDT approach – significant reduction in the number of incidents reported by staff and increase in positive feedback form staff when surveyed
- Patient Safety Solution Compliance ↑ 98%
- **Advancing Applied Analytics** Health foundation programme completed – roll out across the UHB in 2021
- QSE workshop Sept 17th – great engagement from clinical and senior leaders
- Mortality Group established/covid e-notification scheme
- Work underway to implement Once for Wales Concerns Management System
- Investigations of hospital acquired covid and patient deaths
- Annual Quality Statement published in Sept 2020

Patient Experience

- Enquiry/ visiting/ concerns line – 7 day service
- Current complaints 30 working day response time is 84%
- Virtual visiting
- Message from loved one,
- Chatter line-To combat loneliness
- Young Carers in Schools Support
- Carers accrediation
- Bereavement follow up calls
- Drop off and collect property service
- Management of deceased property
- Chaplaincy- Held a multi faith day of prayer, virtual services of remembrance
- The UHB has continued to collate Patient experience feedback scores and the current scores are 88% UHW, 89% UHL and 78% St Davids.
- The team is involved in Patient Experience evaluation of some of the key programs of work across the UHB such as CAV 24/7, Mass Vaccinations, Perfect ward accreditation and several bespoke studies.
- Work underway to implement Once for Wales Service User Experience System

Personal Protective Equipment



- MDT PPE Cell established- chaired by END
- Repeat PPE Survey July -
  - when asked if they were being provided with adequate PPE in their field of work as per the government public heath guidance, staff reported an **increase** in agreement from 52% to 81%
  - There was an **increase** from 55% to 77% in staff agreeing that they had received formal PPE training including donning/doffing and fit testing where applicable.
  - Staff felt much less worried about contracting Covid-19 in spite of wearing PPE (**decrease** from 87% to 48%).
  - Staff felt less anxious about transmitting the disease to family or friends by coming to work (a **decrease** from 82% to 58%).

Infection prevention and control

Chart 2. Cardiff and Vale UHB monthly rates of C. difficile per 1,000 hospital admissions, Apr 10 to Nov 20

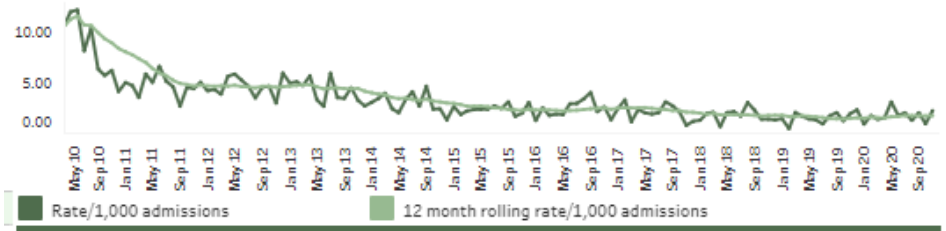


Chart 3. Cardiff and Vale UHB cumulative monthly numbers of C. difficile for Apr to Nov 20 compared to the equivalent period in 2019/20

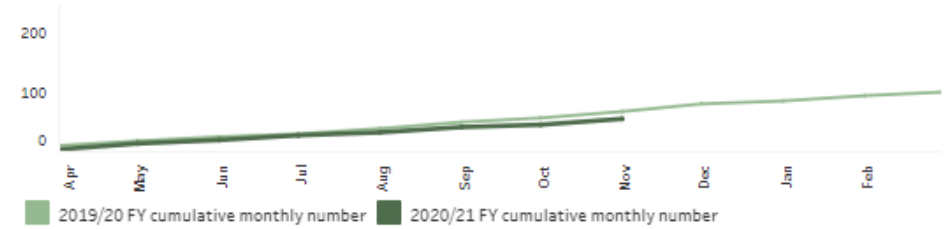


Chart 4. Cardiff and Vale UHB monthly rolling 12 month rates C. difficile per 100,000 population, Apr 10 to Nov 20

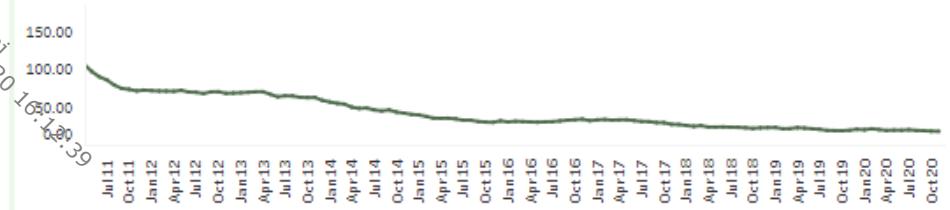


Chart 2. Cardiff and Vale UHB monthly rates of MRSA bacteraemia per 1,000 hospital admissions, Apr 10 to Nov 20

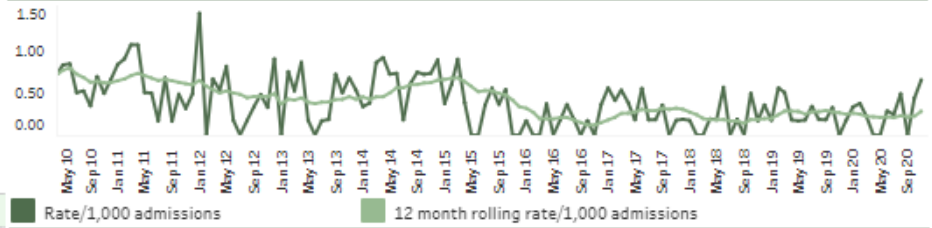


Chart 3. Cardiff and Vale UHB cumulative monthly numbers of MRSA bacteraemia for Apr to Nov 20 compared to the equivalent period in 2019/20

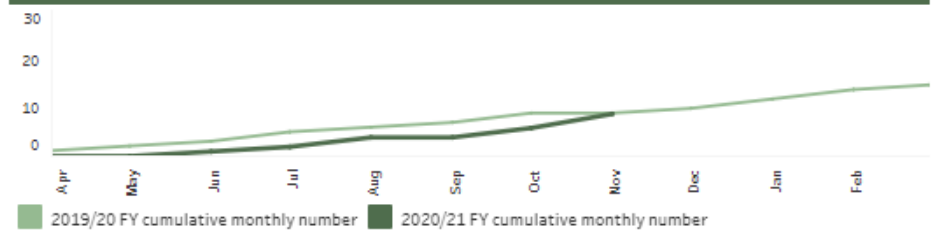
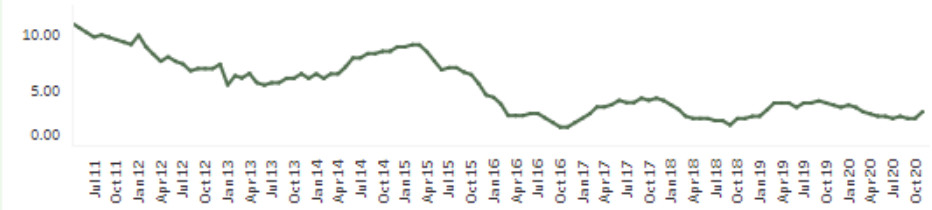
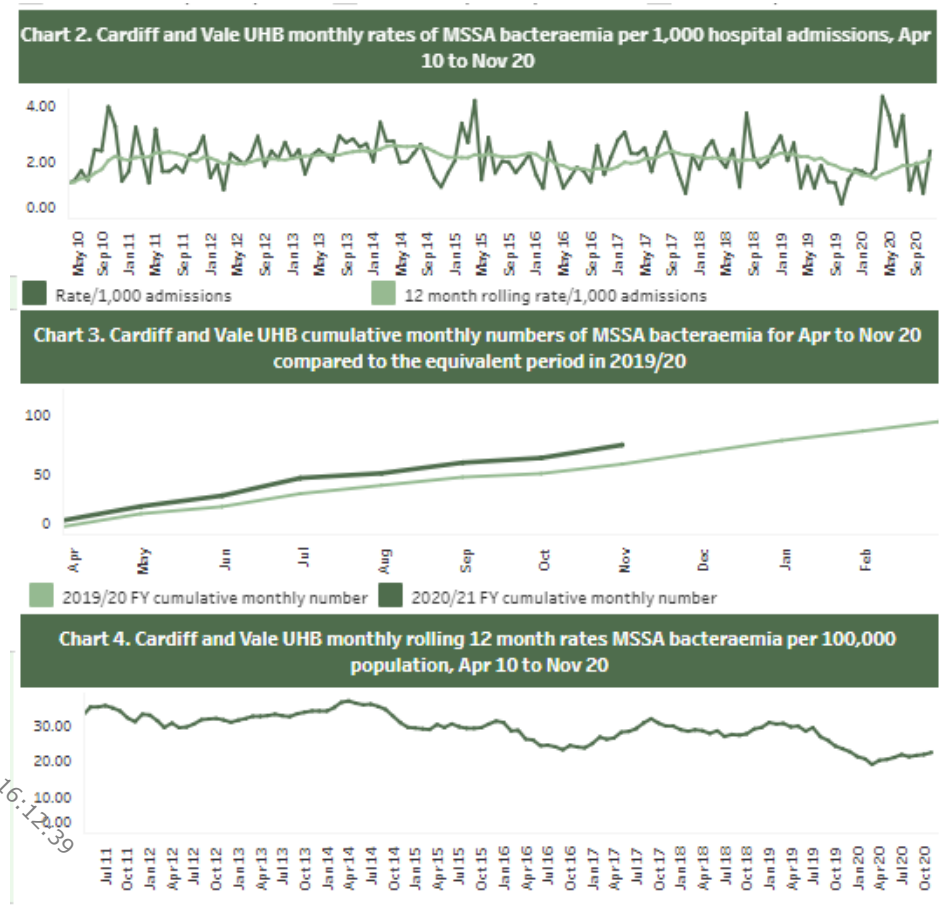
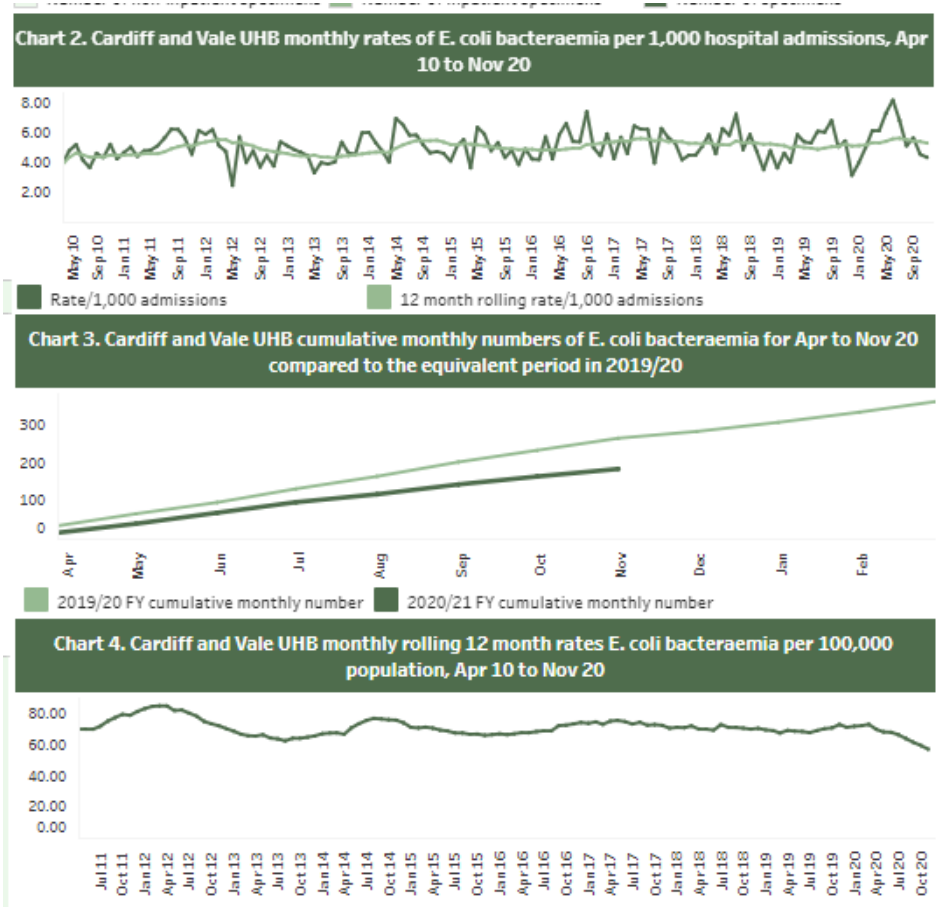


Chart 4. Cardiff and Vale UHB monthly rolling 12 month rates MRSA bacteraemia per 100,000 population, Apr 10 to Nov 20



Infection prevention and control





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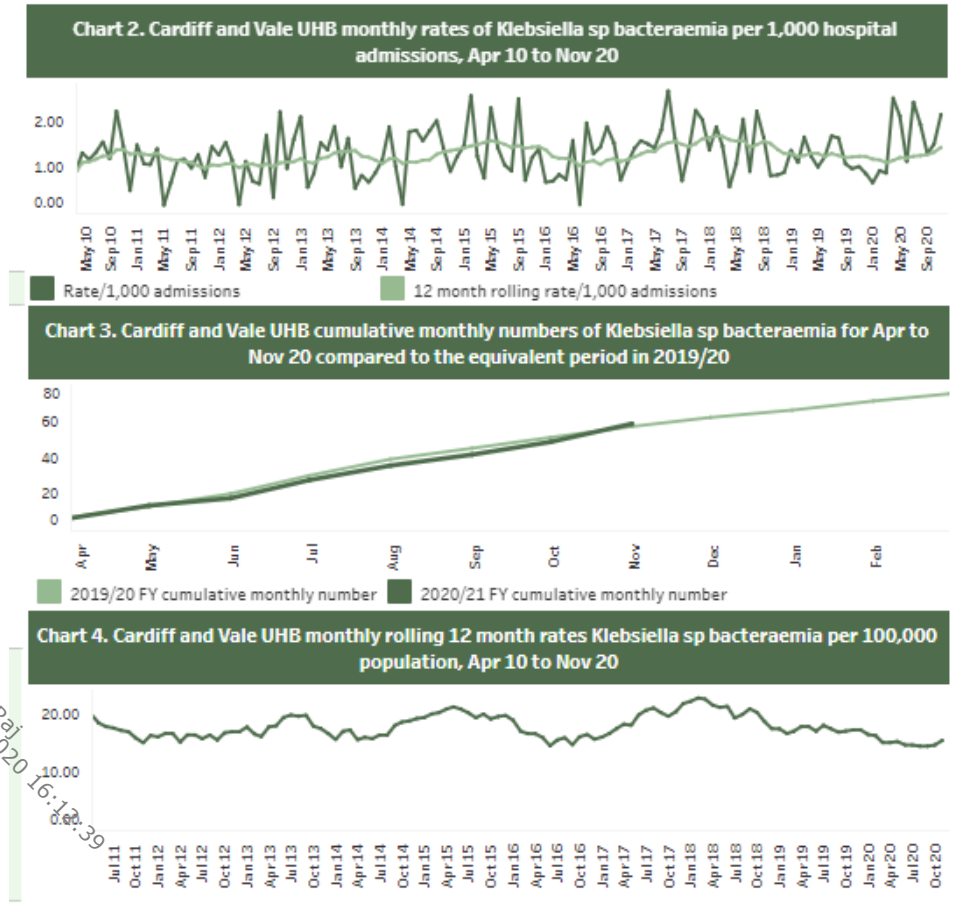
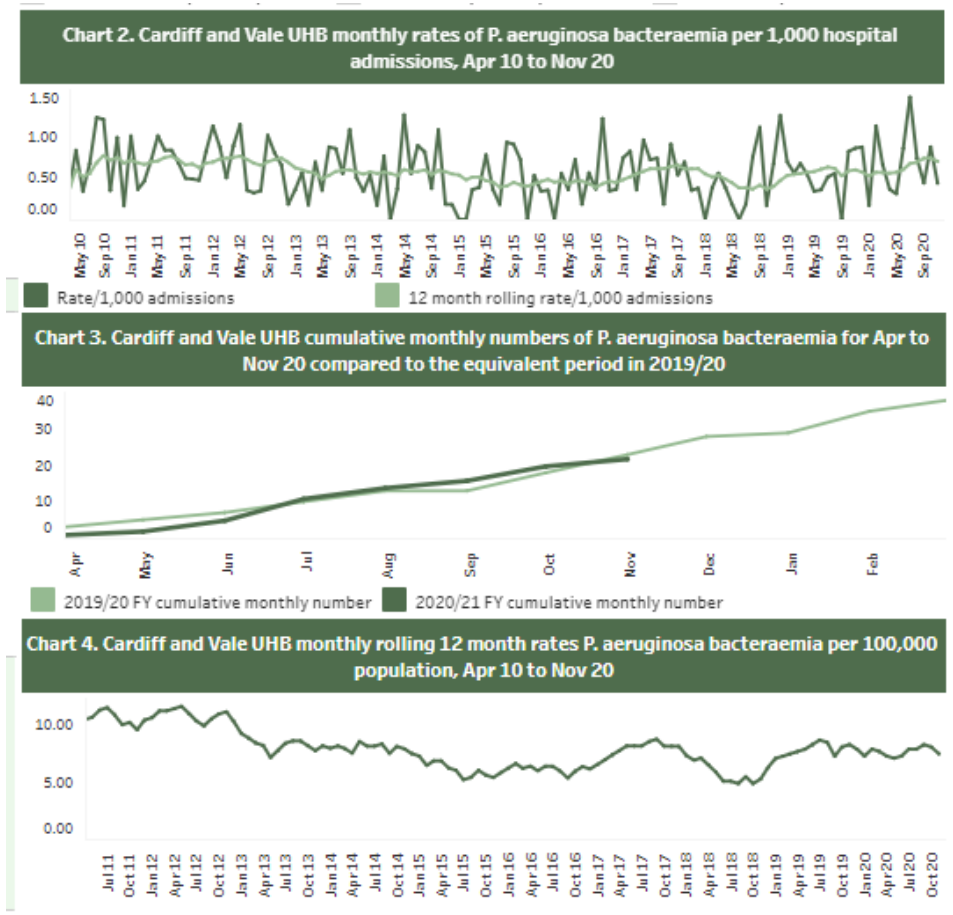
Infection prevention and control





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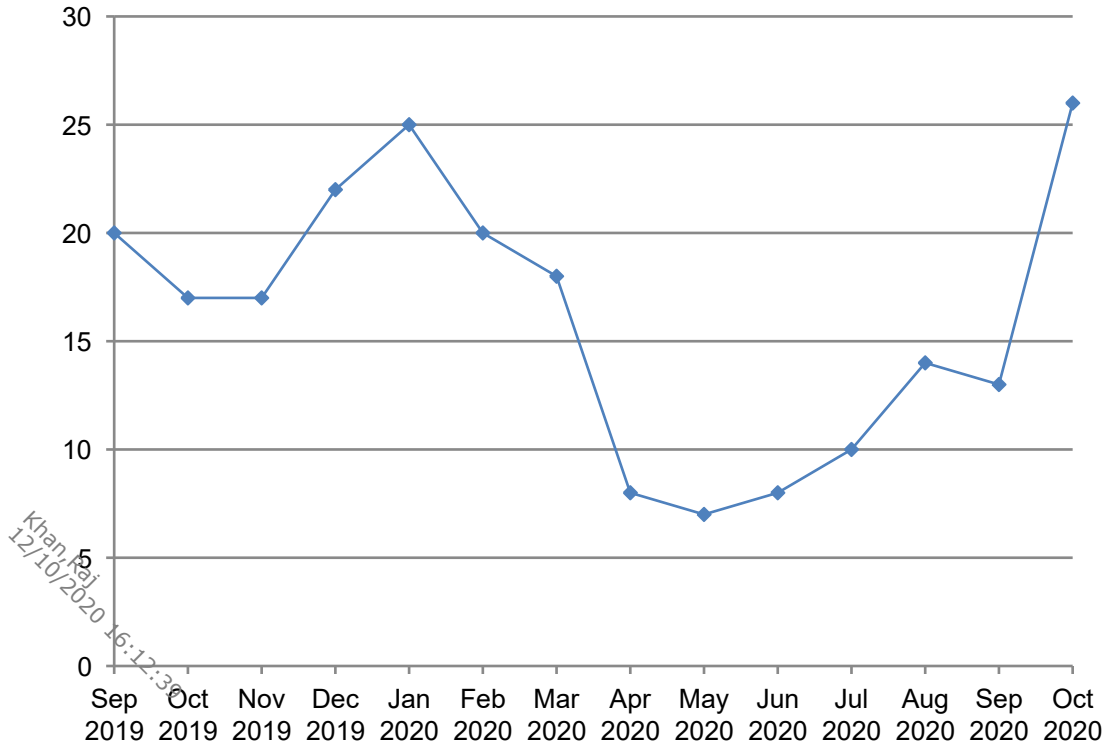
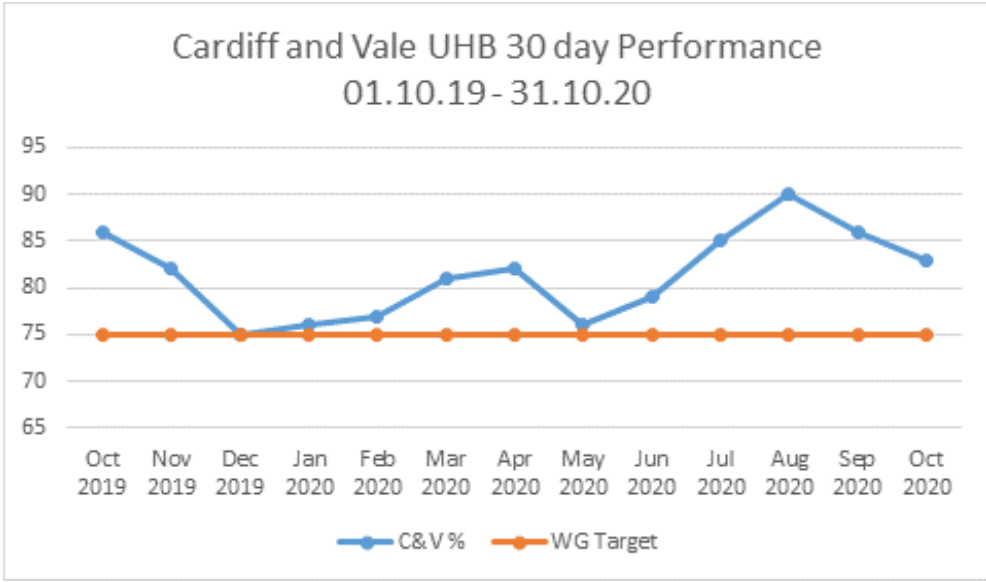
Serious Incident and Concerns

SIs reported to WG between September 2019 and October 2020



Concerns



CARDIFF AND VALE UHB

COVID-19 Discovery Report

GIG CYMRU NHS WALES

Bwrdd Iechyd Prifysgol Caerdydd a'r Fro

Cardiff and Vale University Health Board

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Chapter 4 – Case Studies during COVID-19

Appendix 1

COVID-19 Learning Report

Foreword by Chair and Chief Executive

The first wave of the COVID-19 pandemic, when it arrived in early 2020, forced the NHS across the UK to adapt in order to effectively respond to this once-in-a-lifetime event. The pandemic is perhaps the single biggest challenge that the NHS has faced in its seven-decade lifetime. Over the summer of 2020, while COVID-19 was very much still in our communities, the number of cases were lower, allowing us to reflect on the actions we took during the first wave and the lessons we learnt from it.

Despite the challenges of the first COVID-19 wave, staff at Cardiff and Vale University Health Board came together, mobilised like never before, and found new ways of working to maintain our essential services. Now, as we face the second surge of the disease, it is vital that we look back on what we achieved and what we learnt in the process in order that we continue to innovate, adapt and offer the best possible care in these most challenging of times.

This report gives an overview of the Health Board's response to COVID-19 between March and September of 2020. It also includes a number of case studies about the actions taken by services and teams in order to both continue to serve the population of Cardiff and the Vale during the pandemic and plan for a future where healthcare is more agile and integrated with technology.

At this point, we would like to extend our sincere and heartfelt thanks to all members of staff across every team, department, and directorate in Cardiff and Vale UHB. During these dark days, it is your individual contribution to our NHS that was a shining light for the people of Wales to look to for hope, for comfort, and for inspiration.

Len Richards
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Charles Janczewski
UHB Chair
SeniorEA.Chair@wales.nhs.uk

Chapter 1 – Introduction

1.1 Timeline

December 2019
Authorities reported the first few cases of severe acute respiratory syndrome (SARS-CoV-2) in Wuhan. The virus is responsible for COVID-19 commonly referred to as coronavirus.

January 2020
Coronavirus spread throughout Asia, affecting Japan, Thailand and Korea, with the World Health Organisation (WHO) giving its first situational report.

30th January 2020
The World Health Organisation declares a pandemic.

31st January 2020
First case of Covid-19 confirmed in UK

28th February 2020
Authorities confirm the first case of coronavirus in Wales, an individual who recently returned from holiday in Italy.

5th March 2020
the first positive case is recorded in Cardiff and the Vale of Glamorgan.

11th March 2020
Wales has its first case of "community transmission", when a patient in Caerphilly with no travel history tests positive for COVID-19.

12th March 2020
A patient at Wrexham Maelor Hospital tests positive for COVID-19 – the first case in North Wales.

13th March 2020
The Welsh Government's Health Minister Vaughan Gething announces that all non-urgent outpatient appointments and operations will be suspended at hospitals in Wales, in a bid to delay the spread of the coronavirus pandemic.

17th March 2020
The Chancellor of the Exchequer, Rishi Sunak, announces a £350bn package of emergency support to help the UK cope with the coronavirus.

23rd March 2020
Prime Minister Boris Johnston announces a UK-wide lockdown.

28th March 2020
Work begins on Ysbyty Calon y Ddraig – Dragon's Heart Hospital in the Millennium Stadium in Cardiff.

1st April 2020
Official information released in the first week of April suggested a 4-day doubling rate of presentations of COVID-19 to hospitals. Without intervention, this could have overwhelmed this system in under two weeks.

12th April 2020
The temporary Dragon's Heart Hospital opens at Cardiff's Principality Stadium to admit its first patients.

21st April 2020
Figures released by the Office for National Statistics indicate deaths in England and Wales have reached a twenty year high, with 18,500 deaths from all causes in the week up to 10 April, about 8,000 more than the average for that time of year.

30th April 2020
The UK Prime Minister says at the daily press conference that "we are past the peak of this disease".

13th May 2020
Test, Trace, Protect plan announced by Welsh Government.

18th May 2020
The four UK Chief Medical Officers issue an update to coronavirus symptoms to include loss of smell or taste.

1st June 2020
Contract tracing begins in Wales.

22nd June 2020
A report on the factors influencing negative Covid-19 outcomes for individuals from BAME backgrounds is published by Welsh Government.

29th June 2020
Schools in Wales re-open. Children begin to return in a phased approach.

July 2020
Gradual easing of lockdown restrictions in Wales.

5th August 2020
£800m stabilisation package for NHS Wales announced by Welsh Government to help prepare for winter.

7th August 2020
The Minister for Health and Social Care, Vaughan Gething, announces the development of a winter protection plan.

1.2 What happened?

The discovery of a new virus (SARS-CoV-2) and the disease it causes (COVID-19) in December 2019 in Wuhan, China, set in rapid motion a chain of events which would eventually change the world. For Cardiff and Vale University Health Board (UHB), the situation was no different, as the COVID-19 pandemic forced our health system to adapt and work in ways that were challenging and unfamiliar. Planning and responding to this disease mobilised every part of the system in a way unlike any seen before in the NHS' history.

To prepare for the forecasted numbers of patients that Cardiff and Vale UHB would have to care for, the Health Board designed and built a 2000-bed surge hospital, Ysbyty Calon y Ddraig – Dragon's Heart Hospital inside Cardiff's Principality Stadium, completing the build in four just weeks. However, the story of Cardiff and Vale UHB's response to COVID-19 does not start and end with Ysbyty Calon y Ddraig.

There are stories to be told and lessons to be learnt across the whole system about how we came together to collectively tackle the pandemic, about how we learnt to work together in new ways to keep our patients safe, and about how the health service in Cardiff and the Vale of Glamorgan will look in the future.

1.3 The National Picture

To better understand the ways in which Cardiff and Vale UHB responded to the COVID-19 pandemic, it is imperative to first look at the national context in which the Health Board was operating. The first case in Wales was confirmed on the 28th February 2020 in a patient who had recently returned from northern Italy, the epicentre of the disease in Europe at the time.

Shortly after, on the 3rd March 2020, the UK Government published a joint action plan between itself and the devolved governments of Wales, Scotland and Northern Ireland. This plan included the contain, delay, research and mitigate phases, which formed the basis of much of the initial planning.

On the 13th March 2020, the Minister for Health and Social Services in Wales, Vaughan Gething, announced the suspensions of non-urgent NHS services such as non-urgent outpatients' appointments and non-urgent surgery in order to reallocate resources to priority areas.

On the 23rd March 2020, Prime Minister Boris Johnson announced lockdown measures for the whole of the UK. With the exception of key workers, everyone must stay home other than to shop for essential goods.

On the 27th March 2020, Cardiff and

Vale UHB announced that the Principality Stadium in Cardiff would be set up as a temporary surge hospital to provide 2,000 extra beds to the NHS. This will be supported by capital funding from Welsh Government. Health Boards across Wales also progressed plans to increase their capacity with other temporary hospitals announced in venues such as Parc y Scarlets in Llanelli, Liberty Stadium in Swansea and Venue Cymru in Llandudno. Hywel Dda University Health Board was building their surge capacity about for days ahead of Cardiff and Vale UHB, and we greatly valued the excellent sharing of learning, which was just one outstanding example of the mutual support between the two Health Boards.

Throughout April, there was a flurry of national activity to ensure that healthcare staff in Wales had adequate and correct personal protective equipment (PPE), that tests for COVID-19 were available and accessible, that critical care capacity in our hospitals was large enough to cope, and to increase the availability and viability of virtual healthcare appointments such as video and telephone consultations.

Over the summer of 2020, Wales' Test, Trace and Protect system was launched and lockdown restrictions continued to be relaxed by the government. In line with this, staff who had been redeployed across the UHB began to return to their substantive posts, and services began to increase their non-urgent capacity again in a safe way. However, healthcare in Wales was forever changed as we re-evaluated what our services should look like in world after COVID-19 while keeping an eye on the horizon for a potential second wave of the disease.

1.4 The Purpose of this Report

This report will illustrate in detail the actions taken by Cardiff and Vale UHB in its response to the COVID-19 pandemic. It will show how the UHB's action plans were developed and executed, how the UHB was restructured and how the organisation's culture changed in a collective response to this disease. It will also illuminate some of the action taken behind the frontline by teams such as the Health Board's procurement, research and digital teams to ensure that the work done by the frontline was as good as it possibly could have been. This report will present a number of case studies about how services adapted so that they could continue to be delivered safely to those that rely upon them, and how they will continue to operate in the future. Finally, it will reflect on the lessons that have been learnt by the Health Board as a result of COVID-19 but it will also interrogate that which we do not know and where our blind spots lie should a second wave arrive.

It is our hope that by chronicling the actions taken by Cardiff and Vale UHB and the lessons we learnt as a result, that this report will act as an enabler to further revolutionise healthcare. We owe it to our staff who have worked tirelessly throughout this pandemic and to everyone who has suffered at the hands of COVID-19 to ensure that we can distill something positive from these most challenging of times. Something with which we can make the service we provide better, making it more sustainable, more resilient, timelier, and more accessible for future generations.

Chapter 2 – How Cardiff and Vale UHB responded and what we learned.

2.1 – Cardiff and Vale UHB Key Achievements (as of 10th July 2020)

A **2000**-bed facility commissioned at the Dragon's Heart Hospital	Over **300 additional** beds repurposed on existing sites for cohorting of COVID-19 patients	Expansion of the critical care unit to 85 beds - a **124% increase**
2757 cancer and other urgent activity delivered at Spire Hospital	**1162 elective** and **961 emergency** surgical procedures, all with outcomes audited	Conversion of **four areas to wards** and build of new HCID unit
7996 staff tested and their household contacts	**Recruited 1178** additional staff	**21,330** Coronavirus tests undertaken
832 COVID-19 patients discharged home	**Essential services** maintained throughout	Rollout of **virtual appointments** and digital solutions
TTP service established 1st June and over **300 people** followed-up in first month	Worked with partners to **improve discharge processes** and reduce homelessness	Surveyed over **700 patients** following discharge from hospital

2.2 Planning and Preparation

After the coronavirus pandemic reached UK in February 2020, cases of COVID-19 started to emerge in Cardiff and the Vale of Glamorgan in early March. The spread of COVID-19 in Wales was slightly (around two weeks) behind that of the rest of the United Kingdom. However, Cardiff and the Vale of Glamorgan were impacted by the virus earlier than most of the rest of Wales with the exception of the local authority areas that make up the Aneurin Bevan University Health Board area (Monmouthshire, Newport, Torfaen, Blaenau Gwent and Caerphilly).

The initial modelling available to the Health Board indicated that, in a worst-case scenario, there would be an extreme surge in cases with subsequent hospitalisation, critical care requirement and, sadly, deaths. In Cardiff and the Vale of Glamorgan, this scenario, if left without any intervention, would translate to 81% of the population infected with 30,000 individuals hospitalised. However, with

mitigations such as behavioural and social interventions, the reasonable worst-case scenario projected up to 2,600 COVID-19 patients in Cardiff and the Vale would need hospitalisation at the peak of the pandemic. During the early stages of planning the Health Board had no choice but to plan for this mitigated reasonable worst-case scenario.

In order to respond to the anticipated surge in cases and need for care, Cardiff and Vale UHB rapidly implemented a three phase plan. Phase one saw the repurposing areas within the Health Board's footprint to treat COVID-19 patients, create more critical care capacity and create zones for COVID and non-COVID treatment. Phase two included the commissioning of addition capacity within Health Board facilities. Phase three was commissioning additional capacity outside Health Board facilities, such as Ysbyty Calon y Ddraig / Dragon's Heart Hospital and developing a partnership with Spire Hospital in order that urgent cancer surgery could continue in this new venue away from the treatment of COVID-19 at the University Hospital of Wales and University Hospital Llandough. On March 23rd the UHB established a Workforce Hub in order to quickly recruit as many extra staff members as possible in order to effectively respond to the pandemic. This programme of work is discussed in more detail in a case study in chapter four of this report.

There was a rapid increase in the number of cases in Cardiff and the Vale, with over 100 daily cases confirmed on 2nd April 2020. During this time, experience of the spread of the virus in other areas such as London and northern Italy was reinforcing the notion that health services could potentially become overwhelmed. In the first week of April, information from Public Health Wales suggested that the number of cases in Cardiff and the Vale of Glamorgan was doubling every four days. By extrapolating the number of confirmed cases on the 1st April using this rate, the Health Board found that that UHB's capacity generated by phases one and two of the response plan would be exceeded in just one week, which would mean over 1,500 COVID-19 patients in hospital by the 15th April.

By the 6th April, there was evidence which suggested the spread of the virus had begun to slow following the national lockdown measures implemented by the UK Government on the 23rd March. The number of new confirmed cases peaked for Cardiff and the Vale (and Wales) on the 9th April; the number of COVID-19 patients in our hospitals peaked the following week.

2.3 Changing the Structure of Cardiff and Vale UHB

In order to respond quickly and effectively to challenge presented by COVID-19, the Health Board implemented a new leadership structure which revolved around site-based leadership (Local Coordinating Centres) as opposed to Clinical Board leadership, the model by which the Health Board operated prior to the pandemic.

There are seven Clinical Boards within Cardiff and Vale UHB (Children and Women's, Clinical Diagnostics & Therapies, Medicine, Mental Health, Primary Community and Intermediate Care, Surgical Services, and Specialist Services), each of

which is responsible for a discrete set of departments, directorates, and services. For example, the Clinical Diagnostics & Therapies clinical board is responsible for such services as radiology and physiotherapy while the Medicine clinical board are responsible for the Emergency Unit and geriatric medicine. There was of course overlap in the responsibilities shared by the clinical boards in the holistic treatment of patients as they move through their care pathway.

The impending COVID-19 peak required agile decision making and fast communication to enable movement of staff. Within the clinical board structure, the communication lines were too long and negotiation around ward territory would have hampered progress and the implementation of decisions made and the daily senior staff meetings were not agile enough to make hourly operational decisions. Staff were extremely anxious and needed rapid updates on the current situation. In response, a site leadership model was implemented wherein there were named operational leads for both the University Hospital of Wales and University Hospital Llandough sites, alongside a team for primary and community care. In site-based leadership, the focus is to work together for the collective good of the site. The Local Coordinating Centre is the brain of the hospital; it is where questions are answered and the focus is on leadership rather than management. These centres allowed staff to work at pace as hub meetings were held at each site daily.

Existing communication cascades and relationships within the clinical boards were utilised, and these were still the structures for line management and governance. Some changes were also still conducted within clinical boards, for example moving the Trauma Clinic to UHL was entirely overseen by the Surgery clinical board.

With the sites running under the leadership of the Local Coordinating Centres, the decision-making process was shortened dramatically. Decisions were simply made and patient care was at their heart. The leadership teams had responsibility to ensure that no decision made impacted negatively on patients. The Local Coordinating Centres also acted as a physical space where staff could come to have in-person conversations and it has been reported as extremely useful to be able have everyone necessary to make quick decisions present in order to problem solve rather than individual telephone conversations or reliance on email communication. One staff member reported that decisions which used to have over 15 steps suddenly only had three or four. However, the combination of site-based leadership and clinical board leadership structures has in some cases created dependence on multiple decision-makers which sometimes slowed progress and caused confusion for staff about who to report to, with some saying that they felt as though they had two bosses.

Feedback suggests that the site-based leadership model ensures that an equal amount of support is given by the Health Board and its corporate services, such as digital or estate services, to both the University Hospital of Wales and University Hospital Llandough. Site-based leadership also helped to break down barriers between clinical teams (including between

mental and physical health) to produce site working. There is better support across clinical boundaries and we can utilise each site more effectively.

As the Health Board looks forward to restarting services which were suspended at the beginning of the pandemic, this could require the continuation of the site-based leadership model in order to re-mobilise workforce should Wales' Test, Trace, Protect programme have an impact of staff availability.

2.4 Culture, Leadership and Behaviour

Over the several years prior to COVID-19, Cardiff and Vale UHB has strived to implement a system of leadership and culture which inspired a high level of trust among staff and allowing them to operate within low levels of bureaucracy.

In the summer of 2019, the Health Board began its Amplify 2025 programme, which was based on what it had learnt from its partnership with New Zealand's Canterbury District Health Board. As part of this programme, staff were given the permission to innovate and act where they saw fit in order to make healthcare services better, more sustainable and more efficient in order to meet the goals as set out in the Health Board's 10-year strategy, Shaping Our Future Wellbeing, which was published in 2015.

The Amplify 2025 programme also had the goal of breaking down organisational barriers and bring leaders from across the health system together with a shared vision of improvement. We want to learn from each other and share ideas for a whole-system approach to culture and leadership transformation. Similarly, in 2019 the Health Board was instrumental in establishing and hosting the Spread and Scale Academy in Wales, which offered healthcare staff training and support in order to take a small-scale improvement project and develop it into something that can affect large-scale change.

These initiatives provided a cultural context in which the UHB was operating and, as such it wanted to drive change which was clinically-led rather than coming from the top down in response to the pandemic.

A new leadership structure and staff movement across traditional boundaries broke down barriers between clinical teams and silos. Staff have reported that traditional hierarchies were in some places flattened and that silos were broken down as colleagues came together to work collectively on the solutions to the challenges posed by COVID-19. Staff have been more accepting of change and willing to adapt as the pandemic focussed their attention. The ability to work on one project, towards one goal, with the

understanding that it is for the common good was transformational for staff and services. Despite feeling tired and anxious, staff reported feeling as though they were included, trusted and energised by their work.

However, it has been noted that staff across the Health Board show a particular loyalty to their department or ward; for example, staff may feel that that they work for Ward B7 rather than for Cardiff and Vale UHB. Since the initial COVID-19 surge in cases, as pre-COVID responsibilities begin to resurface for many staff members, old behaviours and barriers that accompany them have also begun to reappear.

The Organisational Development team now have the opportunity and responsibility to harness the clarity and energy felt by staff during the pandemic and establish how the Health Board can keep this momentum going forward, so that staff have an active input into the health system's future direction.

2.5 Maintaining Essential Services

Cardiff and Vale UHB has been able to maintain all essential services throughout the pandemic and is now resuming more intermediate services and, where safe, returning to normal service provision in some areas. At the pandemic's beginning, the Health Board reached an agreement with Spire Healthcare to enable patients with non-complex cancer and other urgent conditions to receive treatment at Spire's Cardiff hospital where around 3,000 procedures have been carried out since the start of the pandemic. This allowed the Health Board to protect this important service provision while creating additional capacity to care for COVID-19 patients at its main sites.

One major success for the Health Board during the pandemic is that it was able to safely maintain a large number a surgical procedures, both scheduled and urgent. This has been undertaken with a high level of safety, underpinned by a robust clinical audit process. As of June 2020, the Health Board had undertaken 1162 elective surgical procedures and 961 emergency procedures during the COVID-19 pandemic. This ability to maintain surgical services at Cardiff and Vale UHB means that we have been able to both save and improve patients' lives at the same time as responding to COVID-19; this will have a positive impact on the UHB's crucial task of tackling the waiting lists that have accumulated over the duration of the pandemic.

During the COVID-19 period, a large-scale rota was devised to co-ordinate staff members. However, there was a limited group of people coordinating this rota, including a limited number of senior decision makers. This group was bolstered by members of staff from associated specialities and senior trainees acting up,

such as registrars.

The workforce hub is still required and professional rota coordination needed. Medical Workforce adopted a 3 days on/off, 3 nights on/off rota system, which was a 'general' approach adopted by other Health Boards as well as other international organisations.

Moving forward, there is a need for clinical teams to continue operating as they are with staff being added where needed. Staff and managers need to communicate the idea that staff can be sent home if they are not required. There is also a need to rotate teams, as a single team in a red zone will quickly fatigue; many staff have and will come across distressing and highly emotional situations with patients.

Having a shift pattern longer than 3 day/night on/off could do much to help junior members of staff have longer periods of work together. Junior members of staff feel it was important for them to have such continuity as, within the locked-down months of March and April, their ability to have social interaction with friends and family was limited. The social interaction they enjoyed with each other when working was important for morale, their sense of belonging, and their sense of camaraderie.

There was good engagement with the Public Health Wales micro-biology team, as well as the local Cardiff track and trace and testing teams, to ensure that staff and family of staff were tested and could return to work quickly if they had negative COVID-19 results.

2.6 Procurement

COVID-19 exposed the fragility of supply chains across the public and private sectors. Global competition for stocks of PPE, and other consumables and equipment, meant that promises from suppliers could not always be fulfilled. The pandemic presented a unique challenge to NHS procurement departments across the United Kingdom as demand surged for consumable goods, such as items of personal protective equipment (PPE), and equipment such as hospital beds.

For Cardiff and Vale University Health Board the situation was no different after an initial analysis indicated that UHB resources were being consumed quickly at the beginning of the first COVID-19 peak.

Therefore, as the pandemic progressed around the world it was necessary for the procurement team to closely monitor the situation in Hubei Province in China as well as that in European nations with large outbreaks such as Italy and Spain in order to predict and proactively respond to the needs of the health system in Cardiff and the Vale of Glamorgan.

Cardiff and Vale UHB's procurement team procured an initial one million units of type 2R surgical masks, of which 400,000 were given to staff in the social care sector to be used in care homes throughout the region. As a result of this, the team were asked to work collaboratively with the NHS Wales central sourcing team to procure a total of 156 million type 2R masks from 3 large suppliers in China, delivered in batches of 6 million a week by air freight. This stock is expected to provide resilience in NHS Wales until February 2021. Cardiff and Vale UHB's procurement team also led a deal on the procurement of masks for the other UK nations.

Following this, the procurement team engaged in the international sourcing of a number of other PPE items including FFFP3 Respirator Masks, gowns, gloves and visors. Additionally, the procurement team were pivotal in sourcing 200 new beds as well as ventilators, CPAP machines and other equipment in order to increase the capacity of critical care units within the University Hospital of Wales and University Hospital Llandough. Most of the products needed had a standard four-to-six week procurement and delivery time but the Health Board was successful in using its procurement networks and existing relationships in order to convert eight wards in a two-week period.

The biggest challenge faced by the procurement team was furnishing Ysbyty Calon y Ddraig / Dragon's Heart Hospital. It was agreed that they needed to order 2000 electric-profiling beds and accompanying equipment late on a Saturday evening and by the Monday morning, the team had begun to place orders. Within two working days, they had completed around 90% of the list of required equipment including pharmaceutical and diagnostic facilities as well as a mobile mortuary. The Health Board's procurement team were vital in ensuring that there was enough resilience of consumables within the system so that everything was ready and in the right place for when the first wave of COVID-19 hit and patients began to be admitted.

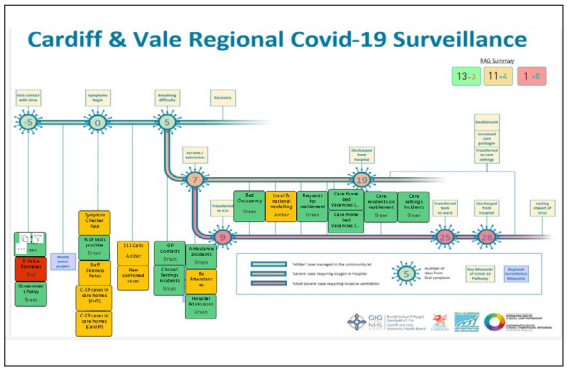
The team report having done the best they could with the time and resource afforded to them but the greatest lesson they learnt was the importance of having robust pandemic plans and a large pandemic stock available in the event of future diseases.

2.7 Digital Services and Innovation

As the initial peak of the pandemic loomed, there was a concerted effort by the Health Board's Information Management and Technology (IM&T) team to ensure that as many members of staff across the UHB had the tools and the ability to work from home. This tireless effort involved refitting and distributing over 900 laptops in order to allow remote working by the end of March 2020. The team also led the rollout of Microsoft Teams for UHB staff, which has allowed staff to work more flexibly and

collaboratively, while working remotely.

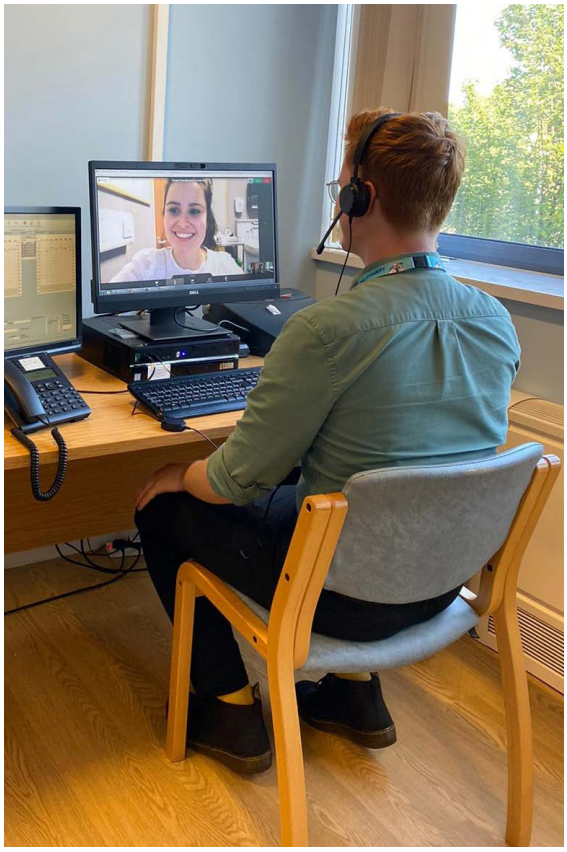
Digital and health intelligence staff also worked around the clock to support clinical and frontline colleagues by developing indicators in clinical workstations using pathology results to flag patients in real time as “suspected”, “confirmed” or “negative” for COVID-19 and developing a COVID-19 dashboard in the business intelligence system showing where suspected and confirmed COVID-19 patients were within the health system in real time.



The team also doubled the UHB’s Wi-Fi capacity and increased bandwidth in order to facilitate more remote working as well as virtual visiting for patients. To enable digitally excluded patients have contact with their loved ones, the Health Board distributed 300 tablet devices to wards across all of our sites, which were purchased using Welsh Government funding. A further 110 devices were bought and distributed by the Cardiff & Vale Health Charity.

Accounting for approximately one quarter of the health board’s inpatient population, digitally excluded patients do not have access to tablet or smartphone devices, or are unable to use them. Many of these patients had no means of communicating with their loved ones since the Health Board suspended visiting at its hospitals at the end of March to protect patients and staff from COVID-19. With the help of healthcare staff including medical and nursing students who have received specialist training, patients were able to use the devices board to video call their loved ones and keep up with the outside world through accessing selected websites and apps.

Video calls have also played a large part in contact between patients at home and their clinical teams, ensuring that the Health Board can still offer a high standard of care to those outside of hospital while keeping them as safe as possible in their own homes.



The digital team were instrumental in the rollout of the secure video consultation programme, Attend Anywhere. To date, over 3,000 video consultations have taken place using Attend Anywhere. Feedback

from patients has strongly emphasised that they feel as though video consultation has offered them a welcome degree of human connection and a stronger sense of personal care than offered by telephone calls. In Cardiff and Vale teams have undertaken clinical assessment across a wide range of conditions, exhibiting great innovative thinking in the use of video as a triage virtual front door clinical tool for physiotherapy, and as a remote orthotic fitting facility, amongst others.

There are important local environmental benefits too. The introduction of video consultations has already saved Cardiff and Vale patients more than 30,000 miles of travelling to appointments, in turn avoiding well over a tonne of CO2 emissions. Working closely with clinicians, the digital team have established a capable and impressive implementation for Attend Anywhere, which will play an important role in facilitating social distancing at the Health Board's sites as it continues to switch on more services safely.

The audiology team also piloted a digital personal health record hosted on a cloud-based system called Patients Know Best. Using Patients Know Best, patients can access up-to-date information on treatments, medication, allergies and more from any device. This information can be shared with different medical teams and carers to speed up and improve treatment. Features include access to diagnosis, symptoms, measurements, test results, images, medicines, care plans, appointment, letters, reminders, self-reporting, and the ability to ask questions of clinicians without having to travel to the hospital.

Following the successful pilot in audiology, Cardiff and Vale UHB is rolling out the digital personal health record across services over the coming weeks and is working to fully integrate the Patients Know Best system with the medical records and patient management systems already in use by the Health Board.

2.8 Communications and Engagement

Effective internal and external communications have both been absolutely crucial during the COVID-19 pandemic and will continue to be key as the Health Board looks to change services in order to keep them safe in light of coronavirus.

For staff, the Health Board implemented a daily COVID-19 update as part of its already existing CEO Connects programme. This daily briefing comprised all of the pertinent information discussed at the Health Board's daily operational meeting and was sent as an email to all staff and made available for download on the staff intranet, CAVweb. The bulletin included a situation report for the Health Board including the most up-to-date information on COVID-19 admissions and positive cases across the UHB's sites. It also provided staff with information on staff testing, personal protective equipment, and other operational issues alongside a daily morale-boosting collection of good news stories. There has been extremely positive feedback from staff for the daily updates, indicating that they have reassured staff and established a culture of openness and honesty throughout the organisation during COVID-19.

"On behalf of my team, I would like to thank Len Richards and his staff for the time and effort at this incredibly difficult time. The daily emails are informative and offer some reassurance for us all."

Gemma Keogh, Health Visiting

"Your regular open communication has provided a real sense of transparency throughout the organisation from the front-line to the top. I think this has enabled staff to feel reassured and has prevented any sense of staff being kept in the dark – which could so easily have happened. I can imagine it must have been really challenging producing an update 7 days per week for so long. I think it's been a great example of compassionate leadership and I hope it will act as an example to leaders throughout the organisation."

Matt Brayford, Early Intervention in Psychosis Service

The Health Board also developed a weekly briefing entitled C-19 which was issued to its key stakeholders including Welsh Government, Members of the Senedd (MSs), local Members of Parliament (MPs), councillors in the local authorities of Cardiff and the Vale of Glamorgan, and the Community Health Council. The briefing was issued by the Health Board's Chief Executive and Chair, and was followed by virtual meetings in which stakeholders could ask questions about the UHB's response.

A further bulletin was written by the communications team and issued by the Executive Medical Director to senior medical staff throughout the Health Board on a regular basis. This bulletin contained up to date guidance specifically tailored for medics as well as links to articles and research that may have helped inform their practice during the pandemic.

The Communications and Engagement team also administered the COVID-19

section of CAVweb, the staff intranet, uploading over 600 documents and subsequent updates on the latest guidance to staff about how to treat COVID-19 patients and protect themselves while doing so. These documents were also uploaded to a new application called Staff Connect, which was rapidly procured and rolled out by the communications team and which all employees of Cardiff and Vale UHB could sign up to and access on their mobile devices. This app allowed members of staff, who had previously been excluded from electronic communication from the UHB as a result of not having an email account, to access up-to-the-minute guidance and protocols. The app also allowed staff to access this information on the go, saving them precious time as they did not have to return to their desks to check the latest guidance, which was changing frequently as we learnt more about the nature of the virus.

The communications team built a new website, www.keepingmewell.com, and developed its contents alongside the Health Board's therapies teams. This new web resource was commissioned by the Executive Director of Therapies and Health Science and was procured, designed, built and launched just two weeks later.

It provides online support and guidance for patients affected by COVID-19, understanding the long recovery journeys they may face. It included content from Physiotherapy, Occupational Therapy, Dietetics, and Speech and Language Therapy. The website has been expanded to include a "prehabilitation" section, which support patients to be as fit and healthy as possible ahead of scheduled surgical treatment in order to ensure their outcomes from surgery are the best they can be.

The UHB increased its video team to capture footage of the response to COVID-19, including documenting the development of Principality Stadium to Dragon's Heart Hospital, and capturing stories of how the UHB mobilised quickly to respond to the demand, as well as educational videos and information around guidance, such as social distancing. A dedicated website was also developed for Dragon's Heart Hospital, which included a timeline of the build, key information for staff, and videos relating to the project.

The communications team also launched a special COVID-19 series of the Health Board's podcast, How Healthcare Happens. Across thirteen episodes, a diverse range of staff were interviewed to capture a series of in-depth insights into how the pandemic had affected their roles and their personal lives. Guests included Cardiff and Vale UHB Chief Executive Len Richards; the Director of Research and Development, Professor Chris Fegan; Consultant Clinical Psychologist for Critical Care, Dr Julie Highfield; and Reader in Infectious Diseases at Cardiff University School of Medicine and Honorary Consultant Physician, Dr Andrew Freedman. How Healthcare

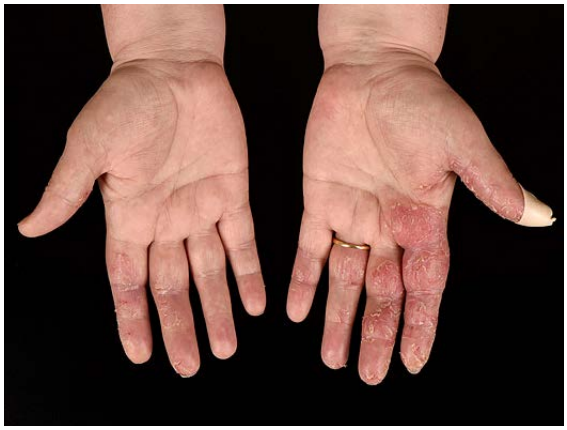
Happens has been extremely well received and, to date, has had over 3000 listens.

2.9 Staff Health and Wellbeing

The health and wellbeing of Cardiff and Vale UHB staff is of upmost importance, especially at this unprecedented time. The Health Board has been actively listening and proactively enabling facilities and resources to support staff. The Health Board's affiliate charity, the Cardiff & Vale Health Charity, funded Staff Havens at the University Hospital of Wales, University Hospital Llandough and the Dragon's Heart Hospital. The Health Charity team also staffed the Haven on the UHW site. These spaces offered Health Board staff a calm, quiet space away from their clinical area in order to wind down and relax during their breaks, and also acted as a central hub on each site to receive and sort donations to be distributed to staff.

During the COVID-19 pandemic, the Health Board was overwhelmed by donations of gifts, food and drinks from the public and other organisations, which were received and distributed to staff across all sites by the Cardiff & Vale Health Charity. The charity distributed over 70,000 meals to staff as part of their Spread the Love campaign.

The mental health of staff was a particular area of focus for the Health Board during the surge of the pandemic. In order to support as many staff members as best as possible, Dr Julie Highfield, a consultant clinical psychologist at Cardiff and Vale UHB developed and collated a series of fact sheets with tips for staff to better manage their mental health in the context is specific coronavirus-related situations. Examples include an end of shift wellbeing checklist, specific guidance for managers around grief and bereavement, and wellbeing tips for staff working at home. The Health Board also increased the capacity of its Employee Wellbeing Service as psychologists and staff from other departments were redeployed there; it is implemented telephone psychological support for staff. The Cardiff & Vale Health Charity also funded an employee wellbeing handbook which was written in conjunction with the Health Board's occupational health team. The occupational health team also worked with the dermatology department to implement a rapid-access skincare service for staff.



In order that many of the UHB staff's needs as possible were met during COVID-19, the Health Board arranged for a number of changes to its sites. It arranged suspension of parking restrictions at its sites so that staff could park in any available space regardless of whether they carried a permit. As visitors and patients had stopped routinely coming to hospital, this initiative ensured that parking onsite was as easy and convenient as possible for staff and that

they would not face penalties for parking in available visitor spaces.

Further, the Health Board's Capital, Estates and Facilities team arranged for 24-hour hot food provision to be implemented at the University Hospital of Wales restaurant, Y Gegin, and the restaurant at University Hospital Llandough. The team also planned and installed shower facilities at both UHW and UHL so that staff could shower before leaving site after their shift. There were also changing facilities made available to staff across the Health Board's sites. The Health Board also provided an accommodation booking service for staff who needed somewhere to stay urgently following working in hospital or if they had vulnerable family members meaning that they were unable to return home after caring for COVID-19 patients.

In order to improve staff wellbeing and morale more generally, the Health Board's arts team commissioned a number of art pieces. The pieces reflected the hard work, dedication and sacrifice of NHS staff and thank them for their incredible effort. This included the photographic collage created by Nathan Wyburn, which was reprinted on large banners and displayed across Cardiff and Vale UHB as well as other hospital sites around Wales.

2.10 Research Innovations

Cardiff and Vale UHB's Research and Development team were at the forefront of the national effort to research and trial potential treatments and therapies for COVID-19. To date, they have opened 42 COVID-related studies, including 10 different drug trials. These trials were comprised of 1276 patients, with over 200 patients recruited into drug trials which offered 17 different drugs/therapies to patients.

Cardiff and Vale University Health Board was the first health organisation to open the national RECOVERY study and was one of the highest recruiter into this trial in the UK per catchment population. On the 16th June 2020, the UK Prime Minister mentioned by name the Health Board's contribution to this study. The RECOVERY study was pivotal in showing that the drug Dexamethosone saved lives in those requiring oxygen therapy and that Hydroxychloroquine and Lopinavir/Ritonavir were ineffective. As a result of its contribution to this study, Cardiff and Vale UHB has senior authorship on the RECOVERY study's Dexamethasone paper (NEJM), Hydroxychloroquine paper (NEJM),

and Lopinavir/Ritonavir paper (The Lancet).

Outside of the RECOVERY study, Cardiff and Vale UHB was also the second largest recruiter in the UK to the TACTIC clinical drug trial, it was the only Welsh health organisation to take part in Gilead's Remdesivir study (which showed the drug was effective treatment of COVID-19),

and is currently sponsoring the Copter convalescent plasma study in Wales.

The Health Board also made a major contribution to the paediatric study showing that children with COVID-19 often present differently to adults, in that they tend to develop more gastrointestinal upset. This was the Rapid-19 Study, which was launched in May 2020 and published in early September 2020, and for which Cardiff and Vale UHB was one of only four contributing organisations.

Cardiff and Vale UHB has also been instrumental in developing a dried finger-prick bloodspot test for COVID-19 antibodies, which is currently being considered for mass population testing by Welsh Government.

Further, the Health Board was the first, and to date is the only, organisation to have administered an experimental anti-complement therapy to severely unwell COVID-19 patients on the intensive care unit. The manuscript for this trial is in press in the American Journal of Respiratory and Critical Care Medicine, the world's foremost publication on intensive care.

2.11 Education

In order to respond to COVID-19 and treat patients effectively, it was necessary to upskill and retrain a large number of staff. Staff required training and education in a variety of fields including the proper donning and doffing of full personal protective equipment, and the treatment of COVID-19. The Health Board's Medical Education team delivered COVID-19 simulation training to over 650 members of staff. The team also continued to provide support to all trainees, and increased the level of pastoral and wellbeing support offered to both trainees and consultants across all specialities. The Medical Education team also worked with the UK's General Medical Council to ensure that the Dragon's Heart Hospital was a registered training site.

The Learning Education and Development directorate also developed a 2-phase essential skills strategy to support non-ward based nurses returning to the wards, nurses joining the temporary Nursing and Midwifery Council register and nurses returning to critical care.

2.12 Testing

Across Cardiff and the Vale of Glamorgan TTP is being led and delivered by Cardiff and Vale UHB, Cardiff Council, Vale of Glamorgan Council, and Shared Regulatory Services working in partnership. The approach to testing has been aligned to the UK-wide Coronavirus action plan:

1. Containment

Prior and up to the announcement of the global pandemic on 11th March 2020, the aim was to identify and test all early cases in the local general population, using the RT-PCR throat swab. Working jointly with Public Health Wales, Community Resource Teams in the UHB enabled testing to take place promptly where people resided. Only a relatively small number of cases were identified during this time, 27 positive out of a total of 165 tests.

2. Delay

Following on from the pandemic announcement, and in order to 'flatten the curve', we followed UK Government advice and testing was reserved for those admitted to hospital and a small number of priority front line staff only. RT-PCR testing was conducted by hospital staff, and Primary, Community and Intermediate Care (PCIC) staff, respectively.

3. Research

Local research aligned to testing includes the use of near patient testing in Emergency Units (EU), to test the ability of EU staff to take the test and to see how the test performed against the RT-PCR test. The trial of an Antibody testing service for healthcare workers began on 19th June 2020, utilising a venepuncture pathway on 400 pathology service staff, who received their results via the NHS Wales Text Service. Work is ongoing to expand this service to Clinical Boards and Corporate Departments. The UHB began phased testing utilising Point of Care Testing (POCT), for teachers and other school staff on Monday 29th June 2020.

4. Mitigation

The current testing regime continues to focus on symptomatic individuals, including inpatients, key workers or members of the community. However, following government policy aimed at maximising reassurance to the care home community specifically, the UHB now also tests hospital inpatients prior to discharge to care homes and asymptomatic staff and residents in a 'whole home' testing programme.

There are now five routes open to individuals outside of hospital, for RT-PCR testing. The first three are coordinated by Cardiff and Vale UHB, tests are analysed in NHS Wales laboratories, and data are therefore available.

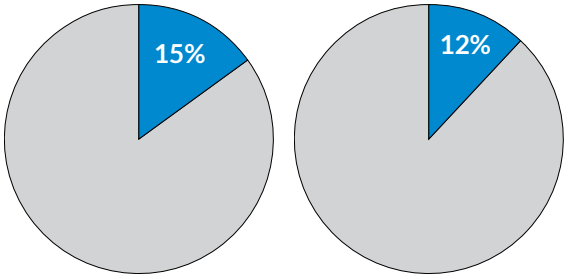
The Community Testing Units (CTUs) are drive-through facilities based on the Whitchurch Hospital site and in STAR Hub, Splott). These serve Health Board, Welsh Ambulance Service and Velindre NHS Trust staff who are symptomatic, and their symptomatic household contacts (Cardiff & Vale of Glamorgan resident) with 7,996 tests carried out as of 30th June 2020. In exceptional circumstances, staff without access to a car will be visited in their own homes to be tested.

The Population Testing Unit in Cardiff City Stadium facilitates 240 tests per day and is a drive-through facility for other (non-health) key workers. Originally run by Public Health Wales, since 10 June 2020 it has been run by the UHB. Since 10th June 2020, up to and including tests on 30th June 2020, the UHB has tested 2176 people via this pathway - averaging 109 daily. Our CTU teams also visit Cardiff and Vale care homes to test. Up to 30th June 2020, 7,326 tests had been carried out by our CTU in such settings.

Since Monday 15th June 2020, all asymptomatic care home staff have been offered a weekly test for a four week period. These involve the use of self-administered swabs. All symptomatic care home staff are still being offered tests via the UHB testing service.

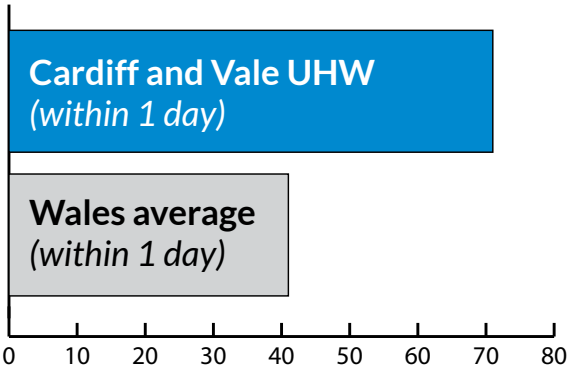
Overall within the first three services above, 15,132 tests have been carried out

in Cardiff residents (15% positive) and 6,198 tests have been carried out in Vale of Glamorgan residents (12% positive), in the period up to 30 June 2020.

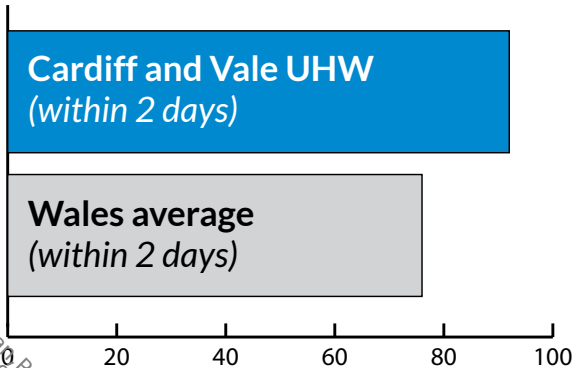


Positivity in Cardiff *Positivity in Vale of Glamorgan*

Comparing timeliness of test results returns for CTUs across Health Boards, Cardiff and Vale UHB has the highest percentage of tests returned within one day (71%, Wales average 41%) and two days (92%, Wales average 76%).



Tests returned within 1 day



Tests returned within 2 days

2.13 Capital, Estates and Facilities

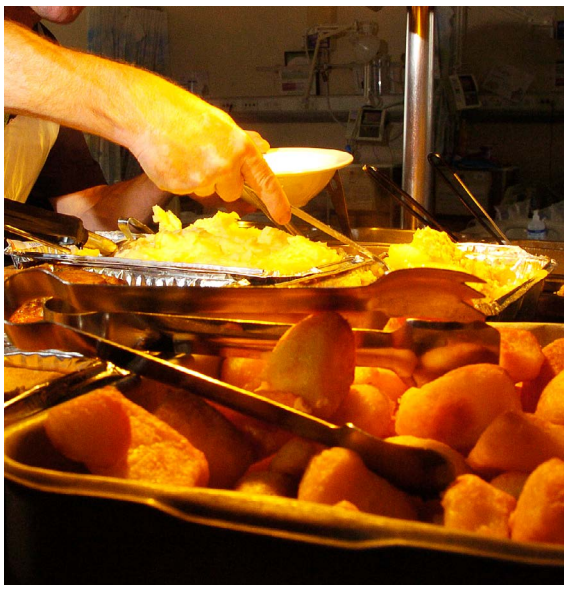
Workforce recruited and handed over the details of 479 temporary staff. At the end of April there were 339 temporary staff in post. The temporary staff covered duties in catering, housekeeping, waste, portering and linen. The calibre of staff taken on was excellent and 54 of these have subsequently been taken on in permanent roles within the HB.

There has been daily full cleaning of all public areas (corridors, stairs, concourse etc) and a Rapid Response Team was formed to cover urgent work, deep cleans, outside areas, and the tunnels. This helped to improve public perception and clear discarded PPE/masks. Touch point teams were formed to repeatedly clean all areas especially banisters, door handles, door frames, window sills. Porter cleaners were employed to make sure wheelchairs were sanitised after use. The number of night staff in EU and ITU was increased to maintain cleaning levels around the clock. All red wards were double-staffed so the cleaning specification was higher with 2 chlorine cleans per day.

Large numbers of ward based caterers trained to ensure patient meals could continue to be served if caterers became sick. Food production was increased to a 6-week stock level to ensure continuity of service and feed extra capacity if needed. X-Ray Aroma in UHW was used as a ward kitchen to EU due to green zone restrictions

Some Aroma outlets were closed to allow a concentration of service in most used areas. There was increased service (evening and nights) at Y Gegin and UHL Restaurant to

provide a 24-hour service for staff. This provided basic nutritional meals that staff wanted. All seating areas were re-shaped to allow for social-distancing. A delivery service for green zones has been provided.



Security tasks increased to 1,100 tasks in April/May due to ensuring safe movement of COVID patients around the hospitals. This reduced to 360 tasks in August but has seen a 20% increase on this in September.

A number of departments requested use of radio channel meant for major incidents. EU were able to use this, which improved response not only for COVID patient work but also for responding to violence and aggression incidents. If there were an increase in channel availability allowing other departments use of the radio then further improvements in response times could have been made.

Portering compliance figures were able to be maintained during this period by balancing the number of staff isolating or shielding against bringing in temporary staff and the suspension of outpatients.

Additional pressure was put on Switchboard services due to many staff working from home leading to calls to direct lines being unanswered and returning to switchboard for answering. Visitor exclusion also added to the volume of calls due to people phoning the hospitals to check on their relatives instead of visiting.

There was an initial steep increase in postal volumes due to departments sending out cancellation notices for appointments etc.

An average monthly volume of 127,000 pieces of mail increased to
148,000 in March
but then fell to an average of less than 90,000 for April to June.

Over the period
3,800 litres of anti-bacterial soap
were purchased,
9,500 litres of alcohol gel
were used.

5,000 units of 500ml soap dispensers were purchased as a contingency for a supply chain issue on usual supplies from China.

2.14 Primary Care

General Practice

The Covid pandemic forced primary care in to a period of rapid change on an unprecedented scale. GPs and other primary care health professionals found themselves having to work very differently to adapt to the changing social landscape

in order to maintain service continuity whilst ensuring the safety of patients and staff. The resilience and agility shown by GP practices was impressive; while surgery doors were closed to avoid unnecessary footfall and reduce risk of infection GP practice teams ensured that patients continued to have access to the services they required through increased telephone access, video consultations and email consultation.

It is important that there is reflection and opportunity to learn from both the positive and negative experiences and use the experience to develop service resilience moving forward.

Positive outcomes

- The rapid introduction of technology enabled GPs and other professionals to maintain service provision to patients. Although face to face contact was preserved only for those who absolutely needed it, patients were still able to have contact with their practices over the telephone. Many practices increased the use of telephone triage to make sure that those who needed there help were able to get it. For the first time in most cases, many patients were also offered the opportunity of seeking help and advice from practices either through email or through video consultation. A key part of this was the procurement of the E-Consult platform on behalf of GP Practices. This platform offers patients the option to consult with their practice through an email function. This helps patients to set out the reason for their contact and allows practices to consider the best cause of action for the patient, often without them needing to visit the surgery. This has been a vital tool in enabling service continuity while limiting footfall at practice premises.
- Practices acted quickly to make physical adaptations to practice premises in order to provide a safe working environment for their staff while maintain necessary access to service for patients. These adaptations included;

  - The introduction of one way systems throughout practice premises.

  - Replacement of carpeted flooring and textile seat covers with plastic alternatives that enable easier cleaning and better infection prevention and control.

  - Remote entry systems to practice premises to enable screening of patients prior to them being able to enter the surgery.
- Practices, clusters and wider locality teams worked well together to keep services running. Practices have reported how staff have "gone the extra mile" to make sure practices can remain operational and patients have ongoing access to services. Cluster hubs were developed through collaborative working and the sharing of resources.
- All practices, either at their premises or through a cluster hub, operated distinct "hot and cold" zones, which enable patients who reported covid symptoms to be seen face to face if necessary.
- All practices also adopted quickly and effectively to infection control advice by obtaining the necessary protective clothing and equipment.
- There has been investment in IM&T to enable practice staff to work remotely if required and safe to do so.

- Health Board recruitment of salaried GPs on a short, fixed term to provide service resilience to practices and clusters

Lessons to learn

While technology has provided different ways of accessing primary care services there is little doubt that people prefer face to face contact with their GPs. It could also be argued that GPs, likewise, would rather see a patient than have a conversation over the telephone, through email or via Skype. While technology certainly widens the scope of access to services it should not be seen as a replacement for traditional face to face methods.

Demand on primary care services reduced significantly at the start of the pandemic. While much of this reduced demand was welcome because patients were thinking twice about getting in touch with their GP for more minor ailments, it was also clear that people would have been putting off making an appointment when they should have been seen. This will very likely have resulted in missed opportunities for diagnosis or exacerbating conditions.

There has also been a rise in patient complaints related to access to GPs. While many accepted the restrictions earlier in the pandemic there now appears to be what GPs refer to as "compliance fatigue", where patients are now less accepting of being offered alternative methods of consultation. The importance of timely and informative communication with patients via social media.

Bank Holiday Extended Hours Enhanced Service

The UHB Commissioned an enhanced service which offered a payment to practices to open either fully or partially during the Easter Bank Holiday weekend. This service was commissioned to help reduce pressure on the GP Out of Hours service and other urgent care services.

While uptake of the enhanced service from practices was very good patient demand on primary care services around the Easter bank holiday was very low resulting in minimal activity in practices. Moving forward, we would consider whether there is value in practices remaining open in terms of the running costs and impact on staff wellbeing.

Care Homes

Delivery of services to care homes came under specific focus given the prevalence of outbreaks and the relatively high mortality rate in care homes. Although the Care Home enhanced service had been suspended along with other enhanced services Welsh Government directed a specific enhanced service for people in care homes in response to the pandemic with the aim of optimising access to services during the pandemic, incentivising pre-emptive care and ensuring response to urgent need. Positive uptake from Cardiff and Vale practices ensured that care home residents had the opportunity to access the enhanced service.

Plans for the future

- Quality Improvement is quickly becoming a key element of primary care. The new GMS contract places a

strong focus on helping practices to embed QI methodology in to normal ways of working, so they have a clear understanding of what factors may be causing them problems and help them to deliver improvements. The Primary Care Team, through the QI and Primary Care Academy Pacesetter Schemes, will support practices to reflect on what didn't work for them during the pandemic in terms of work flow, patient flow, use of premises, communications, etc. with a view to making controlled changes to services to improve efficiency and better managing growing demand.

- We will continue to review and improve patient communications, making use of social media to let patients know that general practice is open but operating differently, emphasising principles of primary choice, pharmacy first and other schemes that aim to support patients make decisions about how and when to access care.
- We will undertake a detailed evaluation of e-consult to demonstrate effectiveness and value in supporting workload management in general practice. A key lesson to take forward is to make sure that the view of technology is as an enabler to access rather than a barrier.
- Evaluation of fixed term GP recruitment including an assessment of how the UHB helps to provide workforce resilience
- Ongoing review and development of GMS Escalation processes ensuring all practices, clusters and PCIC teams are clear on who needs to do what, and when in relation to business continuity.

Dental services during COVID-19

Dental services often deliver dental interventions using aerosol-generating procedures (AGP) and also work in very close association with patient's airways.

These two factors place dental team members at a high risk of infection from patients who may be infectious. In addition, the aerosols generated take time to either settle or clear. In the absence of other mitigating factors such as room air changes the settle time is in excess of one hour and therefore staff and another patient are at risk of infection if the room where an AGP has been carried out is entered before settling and subsequent cleaning have taken place. On 23rd March Welsh Government, through the Chief Dental Officer, issued a 'Red Phase Escalation' alert to dental services. This detailed the early response which in brief was for practices to form staff in to teams or bubbles; to provide telephone triage and remote prescribing; to continue to see patients face-to-face where indicated by acute and potentially serious conditions; to work with other practices with their primary care cluster area to provide mutual support. The University Dental Hospital became the designated site for people with COVID-19 who were also experiencing serious dental problems.

The Community Dental Service continued to provide parallel clinical services to their patient group which comprises the most vulnerable members of our community.

The Primary Care dental team coordinated the response and provided both material support and clinical leadership via its Dental Practice Advisors with additional

help from the Local Dental Committee. Our Advisors became members and deputy members of the All-Wales Clinical Dental Leadership group.

On 10th June the Chief Dental Officer wrote to dental teams describing the recovery plan for dental teams and attaching the Standard Operating Procedure for non-AGPs and AGPs in dentistry which had been produced by the All-Wales Clinical Dental Leads group. Dental services, supported by the PCIC dental team and colleagues at the University Dental Hospital, began to increase access for patients to receive patient-facing care. The health board Comms team have a video presentation of how dental services now look.

Positive outcomes

Dental services have managed to provide urgent and emergency dental care for patients throughout the pandemic and have kept pressure off secondary care services. They are now extending access to face-to-face care as part of the Dental Services recovery plan. This is due to a positive working relationship between the health board PCIC team, the Local Dental Committee and the University Dental Hospital. Cardiff and Vale UHB PCIC team, led by our Head of Primary Care, have shown just how agile the NHS can be in times of emergency. The use of telephone and video triage has been helpful and there is now the opportunity for dental services to use Attend Anywhere for consultations. Remote consultations and information gathering allows other members of the dental team to engage with patients and this use of skill-mix complements the ideas of contract reform for dental services.

The need to use AGPs as infrequently as possible has led to a realisation that dental care can be delivered more holistically and the use of skill-mix has been welcomed by patients. There has also been a really understanding and reassuring response from our communities to the difficulties dentistry faces.

Lessons to learn

- Some patients do not have access to the IT services needed and there is no substitute for face-to-face consultations for many dental conditions and so these must be available in future pandemics.
- The information around room air changes and ventilation has meant many practices have had to be inventive and highly adaptable to accommodate changes to the fabric of their buildings. The health board should work with practices in future to optimise ventilation and work towards the best standard possible.
- Practices can be under pressure to carry out elective interventions however, it is necessary to prioritise those with increased risk and/or need.
- Practices need the sort of financial support provided but also need to have the flexibility to reward staff who are working differently.

Plans for the future

There is an opportunity for NHS dental services to be delivered differently in future. Prevention and management of dental disease has improved markedly in recent years. The health board should support, and work with, Welsh Government in introducing the concepts of Minimal Intervention Oral Care and Minimally

Invasive Dentistry. The concepts involve co-production with patients; shared decision making; use of primary, secondary and tertiary prevention techniques and, where a physical intervention is needed, that this is delivered using biological and materials science. This would introduce added value to dental care.

Independent Prescribing Optometry

Service 'Eye Casualty in the Community'

When UHW was attempting to reduce patient attendance to Eye Casualty at the start of the Covid-19 crisis, the Optometry profession stepped in to help. The Independent Prescribing Optometry Service was established on 24th March 2020, one day after Welsh Government lockdown. Sharon Beatty, the Optometry Advisor to Cardiff and the Vale University Health Board, sought the help of IT Digitisation Consultant Gareth Bulpin to roll out the Independent Prescribing Optometry Service on 24th March earlier this year, which took 4 days to roll out. This was one day after the Government had officially announced a lockdown for the country.

The service links up the four participating optometric practices (all of which have optometrists who hold the Independent Prescribing qualification) who were connected electronically safely and securely using Blackberry technology and were able to communicate with OpenEyes (Opthalmology Electronic Patient Record) hosted in the University Hospital of Wales. The optometrists using this digital technology were able to share live patient data and upload eye images onto OpenEyes and access previous patient management history form Eye Casualty.

Thanks to this innovative way of working, consultants have a virtual oversight of patient management in the community; this ensures only patients who need hospital intervention are now required to attend UHW eye casualty. The service was digitally enabled by 28th March 2020 with installation and training all provided remotely with the latest digital tools.

The vast majority of optometry practices in the Health Board provide an urgent eye care service whereby most eye problems can be managed by the initial optometrist (22,779 urgent appointments seen in Optometry practices in 2019/2020). Prior to the Independent Prescribing Service, more complex eye conditions required referral to eye casualty for treatment. However, now these complex eye conditions can be managed and treated by the Independent Prescribing Optometrists in the community.

It was with the help of the Cardiff and Vale accommodating digital innovators and the co-operation of the four practices that have worked on a six day per week rota that has made this service a success. By treating more patients in the community, Cardiff and Vale have significantly freed up capacity in UHW. Consultant Ophthalmologist Professor James Morgan has been central to providing the clinical oversight and support to the optometrists via Open Eyes, an electronic patient record which enables shared care between primary and secondary care.

Treating patients closer to home is part of the Health Board's 10 year strategy, 'Shaping our Future Wellbeing'. As well as

putting the strategy into practice, providing this service has helped maintain social distancing and reducing the risk of coming into contact with others for patients. There are 64 optometry practices in Cardiff and the Vale alone who are able to refer to this Service so national rollout could see all practices with the Independent Prescribing qualification in Wales provide this service.

Positive Outcomes

357 appointments for complex eye conditions to UHW Eye Casualty were avoided in May/June 2020 alone which indicates an average 2,142 appointments saved per year. There are now (October 2020) six Optometry practices providing the service which is set to double in 2021.

More social distancing space and capacity has been created in UHW Eye Casualty enabling patients from other specialties to be assessed.

We've had very positive feedback from patients who have used this service, particularly those who have shielded who mentioned that they felt safer being treated closer to home.

We presented the process and findings to Welsh Government who has recommended that this service has potential for national rollout so we're pleased to say this is just the start of the new way we're working in optometry. Two other Health Boards in Wales have now followed our lead.

This principle of a shared care service has now been extended to UHW glaucoma patients and over 500 glaucoma patients have been assessed in community Optometry practices rather than attend UHW since June 2020 with data and images uploaded to UHW for consultant virtual review to decide the next steps in patient care. Only patients deemed requiring hospital management are then required to attend UHW.

Lessons to Learn

Independent Prescribing Optometry Services should be available in each cluster and Cardiff and Vale Health Board is collaborating closely with trainee Independent Prescribing Optometrists to ensure they receive their hospital training placement as soon as possible to enable them to qualify and join the Service at the earliest opportunity. Feedback from the Optometrists have enabled us to improve and refine the Service for both practitioner and patient benefit. A long term funding solution is needed to ensure that Service provision is not compromised.

Training videos are being produced so that Optometrists can complete software training when convenient.

2.15 What were our blind spots?

As the Health Board prepares for the challenging winter season, which this year will be made even more challenging by the COVID-19 pandemic, we must reflect on where our blind spots were located during the pandemic's initial wave.

Firstly, at the beginning of the COVID-19 pandemic, the disproportional impact that COVID-19 would have on members of the Black, Asian and Minority Ethnic communities was not yet understood.

Sadly, in Cardiff and Vale UHB, we know the impact of this all too well with the passing away of five members of staff from COVID-19, three of whom were of Black, Asian or Minority Ethnic backgrounds. In order to try and mitigate this disproportional impact, the Health Board quickly adopted the All-Wales COVID-19 risk assessment tool and strongly communicated the importance of completing it. Individuals score themselves against a list of risk factors that apply to them. This gives each person a final risk score. With this risk score, individuals are able to look at their work setting and convert this into an action. Individuals will discuss and agree these actions with their line manager, record the agreed plan and set a time for review.

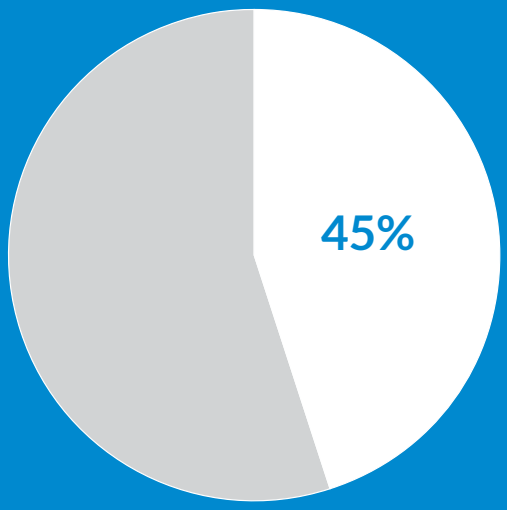
A second issue that the Health Board is still learning from is the effect on members of staff of "Long COVID". A study published in September 2020 has found that around 60,000 people in the UK have been suffering from long-term symptoms of COVID-19.

Common symptoms include profound fatigue, breathlessness, and muscle aches, which can last for several weeks if not months. In some cases, these lingering symptoms are so severe that they preclude the sufferer from returning to work which has a negative impact on the capacity of services within the health board.

As COVID-19 is such a new illness, there is still not concrete guidelines on the best management of "long COVID". However, the Health Board's rehabilitation website, Keeping Me Well, could be of good use to those suffering from protracted symptoms as it will be a central source of the most up-to-date guidance and treatments for the best management of "long COVID" symptoms.

Thirdly, the Health Board is striving to better understand the impact of COVID-19 on the mental health and wellbeing of its staff members.

In May 2020, the British Medical Association found that 45% of doctors are suffering from depression, anxiety, stress, burnout or other mental health condition related to (or made worse by) the COVID-19 crisis.



While every effort has been made to support its staff, Cardiff and Vale UHB understands that there is more to be done to understand the extent of the effects of COVID-19 of staff Mental Health and more to be done to support staff, as the course of the pandemic proves to be longer than originally anticipated.

Chapter 3 – Ysbyty Calon y Ddraig / Dragon's Heart Hospital

3.1 Development Timeline

- **March 18th** - First COVID projections received
- **March 28th** – Principality Stadium announced as temporary hospital
- **March 29th** – Work begins to transform the stadium into a hospital
- **April 2nd** – 600 staff are recruited. Official information released in the first week of April suggested a 4-day doubling rate of presentations of COVID-19 to hospitals. Without intervention, this could have overwhelmed this system in under two weeks.
- **April 5th** – Vaughan Gething, Minister for Health and Social Services visits site
- **April 12th** – First ward prepared for 335 patients
- **April 20th** – HRH the Prince of Wales opens Dragon's Heart Hospital
- **April 28th** – First patient admitted
- **May 5th** – First patient discharged
- **May 8th** – Official handover to Cardiff and Vale UHB. There is capacity for 1,500 beds
- **June 4th** – Last patient date
- **June 18th** – Decommissioning begins. Levels 4, 5, and 6 returned to stadium function. Partial handover back to Welsh Rugby Union

3.2 Developing the Dragon's Heart Hospital

When the forecast for the COVID-19 pandemic was released in March, Cardiff and Vale UHB's executive team were faced with an appalling prospect. If the trajectory of the virus remained unchallenged it seemed as though in a reasonable worst case scenario that health services in Cardiff and the Vale of Glamorgan would be overwhelmed with COVID-19 patients in a matter of weeks. If this were to be the case, in order to cope with the demand for care, the Health Board would need to double its bed capacity as quickly as possible.
To rise to this challenge, the Health Board had to respond boldly and decisively.

Within hours of the realisation of the need to double capacity, a plan of action had been made and agreed upon. Within the next few days, the team responsible had identified and secured the site and begun to assemble a team of partners to help build it. Within just one week, the hospital had been designed and planned, and in under

two weeks it was ready to receive up to 300 patients. In a further two weeks, the hospital's capacity was expanded to 1,500 beds.

The construction of Dragon's Heart Hospital took over 250,000 labour hours from over 600 members of staff, and although they were from a wide variety of organisations, they felt as though they were one team, working for the greater good of the community they serve.

Funded by Welsh Government to support the communities of Cardiff and the Vale of Glamorgan, and potentially areas in Wales, Dragon's Heart Hospital is a 'step-up and step-down' hospital with patients who are coming to the end of their treatment of the virus and require rehabilitation and support as part of their recovery and sadly for some, end of life palliative care. On-site facilities included mobile x-ray, CT scanners, a pharmacy and an end-of-life pathway of care for people in the last weeks or days of their life. The hospital was the second largest COVID-19 surge hospital in the UK, one of the very few to see and manage patients, and the stadium bowl housed the largest tent structure in Europe, the area of which was eight times larger than the Pyramid Stage at Glastonbury Festival. It was also the only surge hospital in Wales to be equipped with oxygen tanks.

During the build, over **16km of water pipes** were installed and over **60km** of internet cables were laid, with over **1,000 deliveries** of equipment made by lorry to the site.

In the Cardiff Blues' adjacent Cardiff Arms Park stadium, there is a Staff Haven rest area and a reception area for relatives. For the staff working there, over 2,000 meals were prepared daily.

3.3 Structure and Partnerships

A team was quickly assembled and structure for the programme formed with many members of staff volunteering to face the challenge. This included a Senior Responsible Officer, Programme Director, and Clinical Lead as well as a number of senior colleagues from across the organisation to lead on individual projects including workforce, digital and IT, clinical support services as well as partners, with building firm Mott Macdonald leading on the build itself. The military were also a key part of the team and were integrated at every level. A robust governance structure for the programme was quickly formed.

Twice daily programme leads meetings allowed for oversight of progress, quick decisions and escalation of risks and issues.

A key success of the build of the Dragon's Heart Hospital was the collaborative approach and the

partnerships that were forged as part of the process without which, the project could not have been achieved.

In total, there were over 90 partner organisations involved with key partners including Welsh Government, Welsh Rugby Union, Cardiff Blues, Cardiff Council, Mott Macdonald, and the Welsh Ambulance Service Trust.

The full list of partner organisations can be found in Appendix 1.

3.4 Model of Care at the Dragon's Heart Hospital

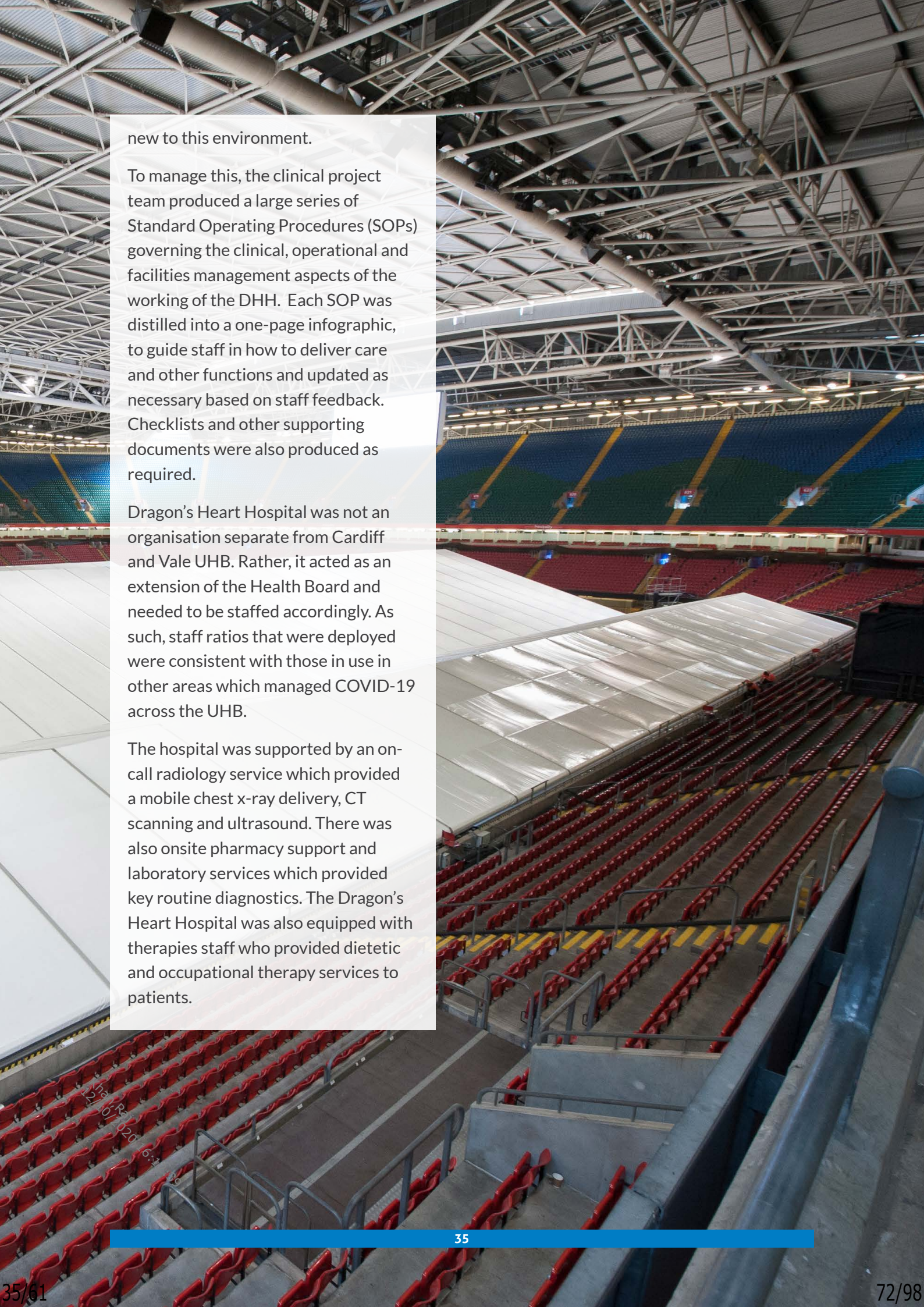
The model of care for the Dragon's Heart Hospital initially proposed included four groups of adult patients with confirmed or suspected COVID-19; those requiring step-down, rehabilitation and discharge planning, those requiring active management of COVID-19 with a ceiling of treatment and end of life care when necessary, those with no ceiling of treatment requiring level 1 (ward-based) care, and those requiring assessment following referral by their GP. It was not designed as a critical care facility, and patients requiring higher levels of care would need transfer to the local acute hospital sites.

The initial operational capability was for patients already admitted to a UHB site and recovering from COVID-19 but requiring step-down, rehabilitation and discharge. Due to a combination of increased capacity at existing hospital sites (e.g. due to paused elective work) and a significant reduction in the number of expected cases, the model of care changed to reflect the needs of patients already admitted at other hospital sites, with the aim of improving patient flow. The focus of care changed to patients with confirmed COVID-19 requiring step down, rehabilitation and discharge planning only.
Overall, 47 patients were treated at DHH. The patient cohort consisted of predominantly frail, elderly patients with low levels of medical needs but higher levels of nursing and rehabilitation needs.

The majority of patients (70%) were discharged to their permanent place of residence (home / residential home / nursing home).

3.5 Staffing the Dragon's Heart Hospital

Once the physical infrastructure of the hospital was in place, there was an enormous challenge in mobilising staff to the site, inducting them and establishing systems and ways of working. In a normal hospital, much of the way the organisation works depends upon tacit knowledge of these things. It is for this reason that even the most experienced and skilled locum doctor or agency nurse were at a disadvantage compared to those normally working in an organisation. While most DHH staff were established UHB employees, all were



new to this environment.

To manage this, the clinical project team produced a large series of Standard Operating Procedures (SOPs) governing the clinical, operational and facilities management aspects of the working of the DHH. Each SOP was distilled into a one-page infographic, to guide staff in how to deliver care and other functions and updated as necessary based on staff feedback. Checklists and other supporting documents were also produced as required.

Dragon's Heart Hospital was not an organisation separate from Cardiff and Vale UHB. Rather, it acted as an extension of the Health Board and needed to be staffed accordingly. As such, staff ratios that were deployed were consistent with those in use in other areas which managed COVID-19 across the UHB.

The hospital was supported by an on-call radiology service which provided a mobile chest x-ray delivery, CT scanning and ultrasound. There was also onsite pharmacy support and laboratory services which provided key routine diagnostics. The Dragon's Heart Hospital was also equipped with therapies staff who provided dietetic and occupational therapy services to patients.

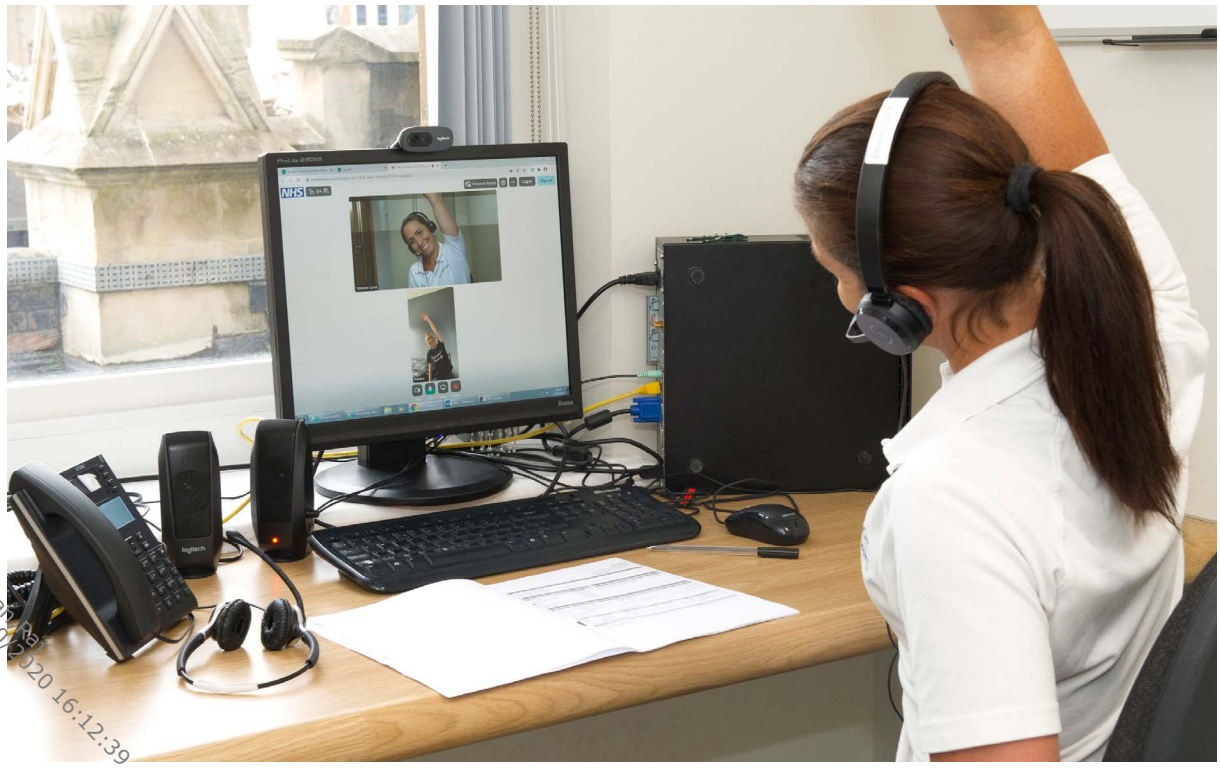
Chapter 4 – Case Studies during COVID-19

4.1 Virtual Clinics for Adult Physiotherapy

One of the services offered by Cardiff and Vale UHB that was drastically affected by COVID-19 and the decision taken by Welsh Government to temporarily suspend non-urgent services was Adult Physiotherapy. As a specialty that typically requires close physical contact, physiotherapy clinics across Cardiff and the Vale of Glamorgan shifted to a predominantly virtual (telephone / video) service with only essential rehabilitation provided as physical face-to-face consultations in order to minimise transmission of the virus.

Previously, patients would have been referred for face-to-face appointments with physiotherapists by either their GP or another secondary care speciality. The appointments were booked and then a letter inviting the patient to attend was mailed to their address. If the patient required multiple appointments, this would inevitably lead to repeat visits to our hospital sites, an impossibility during the peak of the COVID-19 pandemic.

Accordingly, there has been a dramatic shift to virtual appointments with physiotherapy outpatient consultations moving to a virtual model just prior to the national lockdown in late March. This switch immediately changed the entire model for delivery of care as all routine care was suspended. Instead, patients who had been referred were triaged by an appointment over the telephone or video chat to ensure that only those with an urgent need were seen face-to-face.



Video consultations were carried out using the programme AccuRx while the UHB developed and continues to develop online resources to complement the virtual appointments which are sent to patients via links in SMS messages. The physiotherapy team went from delivering no virtual appointments to delivering 500 in a week. To date, over 19,500 patients have been seen in this way.

Positive Outcomes

Staff now have a variety of different ways to communicate with their patients that offer a variety of benefits that face-to-face appointments do not, namely, a reduction in necessary travel and disruption to patients' routines. Further, there are a group of people, approximately 20-30% of musculoskeletal referrals across Wales, who did not have adequate access to physical appointments, even before COVID-19. The expansion of virtual consultations can therefore ensure that equitable access is offered to people across the country, provided they have the right technology.

Patients have recognised what is and what is not possible as a result of COVID-19 and are generally grateful for the continued support from their physiotherapy teams. Further, this new model of treatment is empowering patients to take more ownership of their treatment, thereby encouraging greater levels of self-care and healthier lifestyle choices.

The move to more digital technology has also meant that there is great physiotherapy capacity for unscheduled care, based in minor injuries area of UHW's Emergency Unit. Previously, there was limited physiotherapy cover in minor injuries across Monday to Friday for patients attending the unit. However, to support the wider Health Board COVID response physiotherapy has deployed additional two expert MSK physiotherapists 7 days a week to provide face to face clinical care from 7am to 7pm. This has provided patients with on the day access to these expert MSK physiotherapists and also supported nursing staff to be released to provide wider COVID pathway delivery roles.

Lessons to Learn

Many patients do not have access to digital technology or do not have the level of IT-literacy required for video consultations. In these scenarios, telephone appointments are offered to those with a phone or carers/relatives are asked to help with technology. Staff are reporting that there are pockets of patients who are becoming frustrated at not being able to use physiotherapy services in the usual way and want the traditional model.

Old IT hardware used by the physiotherapy department has presented a barrier to service as it's sometimes slow.

Plans for the future

Virtual group sessions are planned for the future. These go beyond one-to-one appointments allowing patients can share their experiences. This needs risk assessments and clinical governance, to support information-sharing, carers and relatives.

The service also plans to go paperless by using SMS text reminders and having all online resources in one, easily accessible place.

Physiotherapy is a hands-on speciality and virtual appointments are not appropriate for all patient needs. The service plans to develop a triage system as more patients are able to receive face-to-face treatment.

4.2 Audiology Virtual Appointments

When the audiology outpatients' clinics were suspended due to COVID-19, this team were presented with a particular challenge of meeting their cohort of patients' specific needs remotely. Previously, the service offered face-to-face appointments based at the University Hospital of Wales and the Noah's Ark Children's Hospital for Wales, which would last around 45 minutes. There was also a clinic based at West Quay Medical Centre in Barry for hearing tests and to fit hearing aids. Further, there was a walk-in service for repairs of hearing aids, which would see around 100 patients a day.

In order to adapt and operate safely in response to COVID-19, the audiology service introduced virtual care and treatment pathways for balance, tinnitus, and hearing clinics for adults and children, alongside specialist clinics for patients living with dementia or learning disabilities. Patients have been triaged by a patient questionnaire and a telephone consultation if appropriate. Following this initial period, audiology have also begun to offer balance and tinnitus video consultations using the programme, Attend Anywhere. If the patient needs seeing urgently in a face-to-face setting, PPE and social distancing measures are applied.

Appointments for tinnitus counselling, which are provided over the telephone, have been able to be shortened to 30 minutes due to the information gathered during the triaging process.

Audiology was one of the services which piloted the Health Board's rollout of a digital personal health record hosted on the system, Patients Know Best (PKB). Patients have rehabilitation exercises and advice on tinnitus given over the telephone, sent through the post, or through Patient Knows Best (PKB), which has videos of rehabilitation exercises and helpful guides for patients, such as fitting hearing aids correctly, depending on what suits and is comfortable for the patient.

Positive Outcomes

There has been great uptake for the digital personal health record following a mailshot to advertise it to the service's 9000 or so patients. Using PKB, patients have been able to individually message audiologists, in a more secure and timely way than over e-mail.

Once registered with PKB, patients can log-in to their bespoke page to access the details about their care. From here, they are able to watch videos, such as the See to Hear videos developed by Nottingham University which show how to correctly fit a hearing aid and videos developed in house with the UHB's Medical Illustration team, in the programme's library and treat themselves.

Triaging patients ahead of their first appointment has allowed the service to cut its waiting times. Making decisions alongside patients on what it possible and comfortable (for example, hearing aids using custom

moulds with slim fit tubes are suitable for 50% of patients) can help to provide faster treatment to cut waiting even further.

To date, from the 23rd March over 900 virtual consultations have been carried out with patients. A postal repair service for hearing aids has also been launched with deliveries direct to patients' homes. To date, nearly 20,000 packets of batteries have been sent to patients and 2,500 hearing aid repairs have been completed and mailed to patients.

Lessons to Learn

Staff have had to adjust to this new way of working and have missed face-to-face contact with patients. They are hoping to roll out more video consultations and want support with the IT infrastructure to do so.

PKB was not fully integrated with the UHB's patient management systems. This should be corrected when the digital personal health record is fully launched across all UHB services in October 2020.

Greater staffing capacity is required and the team is looking to recruit trainees from September 2020.

Plans for the future

Patients Know Best will be used in future for checking the cochlear implant sites for patients who live long distances away. Remote programming of cochlear implant processors is now possible and audiology are working with the information governance team and the cochlear implant companies to enable this.

4.3 Integrated Discharge Service

The integrated discharge service (IDS) is a team of staff to support ward teams and help facilitate patient discharges across the Health Board. The team comprises of discharge liaison nurses working with hospital social workers from the Cardiff and Vale of Glamorgan local authorities, discharge officers, first point of contact officers, and third sector charities (e.g. Age Connect) working at an interface with the community. They manage patients of all ages, but predominantly over the age of 70, and focused on complex and end of life cases. The discharge teams support the ward staff and educate them around what they should be doing to prepare patients for discharge. Planning for discharge should start on admission to hospital. The forecasted spike in COVID-19 cases meant there was a shared objective across health and social care to protect hospital beds, and make sure there was capacity for the predicted peak in cases.

The role of the discharge team has not really changed, although the priorities and guidance have changed significantly. At the start of COVID-19 pandemic in Wales, Welsh Government (WG) directed that patients must be discharged to be assessed (D2RA) in the community, as

opposed to being assessed on the ward. Patients were placed in a care home for six weeks during which time they would be assessed and a decision about long term care and accommodation made for them to return home or in a to a alternative accommodation or suitable care home.

The discharge teams were responsible for liaising with patients, families, community support teams, care homes, and local authority social workers to find out how many care home beds were accessible each day and where they were.

Positive Outcomes

In the majority of cases the D2RA discharge model achieved what the patients and families wanted (a quicker discharge from hospital). The D2RA model ensures that patients are not taking up beds for patients who need to be in hospital. Patients are no longer subject to recurrent infections and subsequent diagnostic tests and investigations, therefore saving money and staff resources.

The hospital environment is not the place to make assessments of a patient's mental capacity, or how well they are able to cope in a home environment. Using the D2RA model allowed the patient to be assessed over a prolonged period, not just a limited interview with social workers, psychiatrists and psychologists in a significantly false environment of hospital.

Everyone worked together to achieve the shared aim of discharging patients. Previously the Local Authority required financial and eligibility assessments to be carried out before patients were given a place in a care home. During COVID-19, that was all deprioritised to facilitate discharge of patients. Even for people who were going to return home if this was not able to happen within days due to possible house clean or equipment provision step down to placement for D2RA was the preferred option.

The removal of the choice protocol from WG enabled UHB and LA to make decisions about placements, considering patient and family wishes but not dependent on choice. By using D2RA there was still the ability to give patients and their families a choice but not delay discharge in doing so.

Lessons to Learn

Long-term implementation of the D2RA model requires funding and agreed criteria adopted by the multidisciplinary team for sending patients home. The initial budget allocated by Welsh Government has come to an end, as a result, staff have been forced to return to old ways of working.

While waiting for a care home bed, patients were being moved a number of times around the hospital to get them in the right place. Patients were getting confused by this, particularly patients with cognitive deficit.

When visitors were stopped from visiting, patients became very isolated whilst waiting for D2RA. Some of the wards were being staffed by nurses and healthcare support workers (HCSW) who had been redeployed from other areas. They did not know the patients and had never worked with each other before, or in the particular specialism.

Plans for the Future

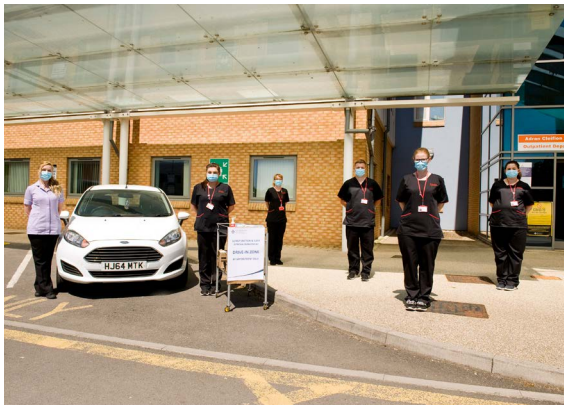
There is good evidence to suggest that patients should spend as little time as possible in hospital. This is particularly relevant to older patients. Every day counts.

4.4 Drive-in Sleep Apnoea Clinic

Prior to COVID-19 the Lung Function and Sleep Apnoea team, would run a face-to-face clinic whereby new patients would attend for an assessment and be provided with overnight diagnostic equipment to use at home. Patients would then attend for initiation of continuous positive airway pressure (CPAP) treatment if they had a diagnosis of Obstructive Sleep Apnoea. The team conducted around 6 diagnostic assessments per day and set up 10 CPAP patients per week.

For already established CPAP patients there was an app available for Physiologists to monitor their CPAP treatment and compliance, but prior to the pandemic this wasn't routinely used by staff due to patients attending for face to face appointments enabling the physiologist to physically interrogate the machine via the SD card.

As a result of COVID-19, only urgent face-to-face sleep apnoea cases were being seen and no lung function tests could be conducted as they are aerosol-generating procedures. Patients who were already established on CPAP were called for a telephone consultation and sent out any relevant consumables. At this point, the importance of the app was realised to allow appropriate monitoring of established CPAP patients in the absence of face to face visits, therefore physiologists designed an instruction guide and posted this out to the 2500 established patients to download the app.



Additionally, the team established a drive-in service, for patients on the waiting list for a sleep diagnostic or set up on CPAP.

This new service was designed collaboratively by the respiratory physiology team in one day and were given permission by directorate manager to implement it at the end of that day which launched at the end of April 2020. Staff had the trust of the management, risk assessments were conducted by the lead respiratory physiologists and there were minimal barriers to the new service's implementation.

Patients were prioritised based on their clinical need and had a telephone

consultation with a respiratory physiologist to explain the procedure and then would attend the drive-in zone just outside the department to collect the sleep test equipment and return it the next day or collect their CPAP machine and mask to start long term treatment. The team worked collaboratively with the Infection, Prevention and Control department to determine the correct way to clean equipment. A second drive in bay was secured after a few weeks of success to allow an increase of the throughput of patients in their car New CPAP patients are required to download the app so their compliance information can be monitored remotely by the team. Follow-ups continued to be conducted by telephone and staff can use the app to monitor their patients' symptoms and care routine.

In addition to the change in the sleep service SOP, during the COVID-19 pandemic Respiratory physiologists also provided face-to-face training on CPAP machines for Healthcare professionals to use on patients who were COVID-19 positive on wards within UHW and UHL.

Positive Outcomes

Service capacity was increased to 70 patients per week, and faster diagnosis and treatment has led to a reduction in waiting times. Patients have been very grateful and positive about continual service during the COVID-19 pandemic.

For new CPAP patients, a more in-depth guide has been developed for patients to operate their CPAP and to fit, clean and maintain the consumables. Generally, those who use the service have become much more independent and can do more for themselves whereas previously they were keen to have everything done for/to them and would come to respiratory physiologist for simple adjustments.

Staff morale is high as they are proud of the service they designed. They report feeling good at having designed the protocol and being able to be proactive in their roles to solve problems.

Good publicity for the new service and contact from other Health Boards to try and replicate it in other parts of Wales.

Lois Attewell, Clinical Lead (Respiratory and Sleep) said: "Within just 8 days, our Respiratory and Sleep Physiologists had carried out 159 telephone consultations and 71 new patients had been seen within the drive-in area to collect their equipment. It has been extremely successful, with the capacity to see 70 patients each week and the feedback has been overwhelmingly positive. Many commenting that they were expecting to wait upwards of a year following the pandemic. I feel really proud of the team and pleased that this innovative solution was introduced so quickly and smoothly to ensure patient care of the highest quality can continue to be delivered during these uncertain times."

As of 1st September 2020, the service has completed 1370 virtual consultations. 1074 new patients have completed a sleep study (overnight oximetry or multi-channel sleep study) including a telephone consultation with a Senior Physiologist, followed by collection of equipment in the drive-in zone. This includes the entirety of the backlog of 1003 patients and an additional 69 referrals

received since May. Waiting times have reduced from 48 weeks to 7 weeks.

296 new patients have been set up on CPAP therapy, including an explanation of their sleep study results and CPAP during a telephone consultation with a Senior Physiologist, followed by collection of their mask and CPAP machine in the drive-in zone. This includes the entirety of the backlog of 79 patients and an additional 217 patients with moderate-severe OSA diagnosed through 'drive-through' sleep diagnostics. Waiting times have reduced from 28 weeks to 10 weeks.

Lessons to Learn

Lots of patient phone numbers on the UHB's system were wrong. Now, an 'invite to book' system has been implemented where letter is sent, patient calls receptionist to book into a respiratory physiologist telephone consultation. They are booked into a 'pickup slot' once the consultation is completed. This has reduced respiratory physiologist time but increasing the admin support required.

Plans for the future

The drive-in service will remain in place for the foreseeable future and will be used in conjunction with the app to reduce patient attendance to hospital.

While there is no routine lung function testing in operation due to the AGP status, the whole of the department is focused towards the sleep service, therefore the respiratory physiologist team has capacity to work through their sleep service waiting list using this new way of working.

4.5 Rapid Access Personal Protective Equipment for the Resuscitation Team

Prior to COVID-19 and the subsequent restrictions within hospital, the UHB's resuscitation team were able to move around the hospital sites freely and attend hospital inpatients in cardiac arrest when required.

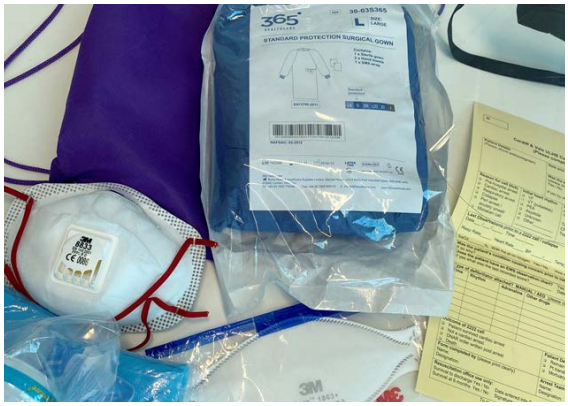
Across the UHB, staff outside of COVID-19 treatment areas did not have full personal protective equipment (PPE), FIT testing, or training on how to properly use it.
As a result of COVID, amendments to Resuscitation were implemented across the HB. This was as a result of National Changes. As chest compressions are an aerosol generating procedure, there was a need to ensure all staff across the HB to have appropriate PPE prior to commencing resuscitation. Therefore, there was a barrier to how the resuscitation team could have rapid access to full PPE required when

undertaking such a procedure.

The solution was simple but revolutionary for the team. They secured rucksacks in which they could keep a full set of all the PPE required to do their jobs and save patients' lives. This meant that they could carry, and be responsible for, their own protection and equipment rather than having to rely on the wards that they visited.

Lessons to Learn

Extra time was required to don PPE before reaching the patient.

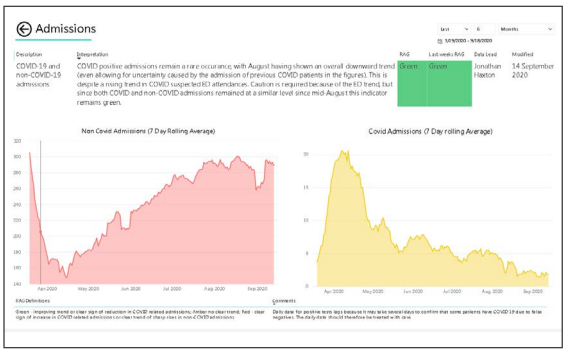


4.6 The Regional Early Warning Surveillance System

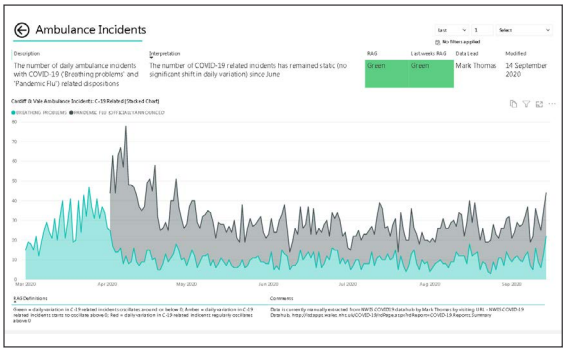
The Regional Early Warning Surveillance System (REWSS) project was undertaken by the Regional Information Group (RIG), a partnership between the Cardiff and Vale Local Authorities (CVLA), the Cardiff and Vale University Health Board, and Public Health Wales (PHW).

From the very beginning of the COVID-19 pandemic, organisations across the world did their best to create systems to identify sudden changes in the transmission of the disease to anticipate surges in demand for health and social care services across primary, secondary and integrated care, with the aim to support planning for a safe and timely response.

Cardiff and Vale UHB developed a model to predict the demand from COVID-19 patients on health and social care services once discharged from hospital, designed to give prior warning to the organisations outside of hospital settings to plan appropriate resources. From this, different organisations across the region recognised the need for a surveillance system which could help to anticipate changes in demand, across the whole care system from community, pre-hospital to post-discharge care services.



The RIG was established with collaboration between the different regional partners to develop a series of indicators. The objective was to create a surveillance dashboard to which any partner could access at any time, with accurate and up-to-date information.



Positive Outcomes

There was seamless collaboration achieved across the partnership, between local authorities, the Health Board, and PHW. This has made it possible to shape a well-rounded view on the COVID pandemic across the whole region, and to keep up momentum and high pace since the beginning of the surveillance initiative. Also, the General Data Protection Regulation (GDPR) has been followed to the letter and did not represent an obstacle thanks to the open collaborative attitude of each partner.

Technologically speaking, innovation stems from the quick integration of various datasets, coming out of different data warehouses and systems, into a unique business intelligence solution, which has then been made accessible to all RIG members through a collaborative platform. Also, weekly surveillance indicators can be reviewed and updated digitally, with information automatically refreshed to allow any modification, at any time of the week, to become effective almost instantaneously.

When the surveillance dashboard was already up and running the system evolved further, to automatically update some external datasets such as Google and Facebook, thanks to the wider collaboration atmosphere across multiple tech giants during the COVID-19 pandemic.

The main success of the project lies within the fact that we can now monitor the state of the pandemic at a system-wide level to analyse with clarity, inform, plan, respond and satisfy the needs of our population and our patients, in the best we can. This fulfils the scope of the surveillance initiative, but most importantly, it fulfils the scope of all members of the partnership as service providers: to care about our people. The REWSS has been so successful that the RIG has been tasked to explore other opportunities where collaboration across the partners can deliver greater benefits than working in isolation.

Lessons to Learn

The first challenge was to understand which indicators were necessary for the surveillance solution to be most powerful. The pandemic tested the UHB's ability to explore the unknown and build knowledge on scarce evidence, both empirical and academic, particularly at the very beginning.

The group had to identify which was the best way of creating a solid interconnection between information flows that, in principle, were not designed to link between each other, while considering the GDPR implications of doing so.

Once the solution was created and started functioning on a weekly basis, RIG had to agree the best process to manage it, build resilience over time, and how to get the highest practical value out of it, so that it could feed system-wide discussions on COVID-19 early warning response and planning. The main enabler was the open, collaborative attitude of each member of the RIG partnership; without this, absolutely no work could have been completed. A further enabler has been the technological solution chosen, as it is based on collaboration and information sharing which was a key element within the scope of the surveillance initiative.

Plans for the future

The intervention is already embedded into business as usual, and it will be an example to learn from and follow, for any future implementations of collaborative solutions or workflows across different organisations, or different departments within the same organisation. It is a clear example of how silos can be broken to let collaborative work happen seamlessly.

4.7 Dermatology and Staff Wellbeing

Due to more frequent hand washing and the use of alcohol gel, alongside protracted use of Personal Protective Equipment, all types of which have the potential to cause skin irritation, staff members reported an increase in skin irritation and lesions in some extreme cases.

To manage this and ensure that staff were able to continue to do their jobs as comfortably as possible, the Occupational Health team worked collaboratively with dermatology to implement virtual skin health clinics. Occupational Health nurses and the dermatology team have worked together closely for many years. With corporate executive level support, they quickly set up a COVID-19 occupational virtual skin clinic which saw up to 10 patients a week. This service was advertised in the CEO's daily updates, the Staff Connect app, and COVID-19 branded posters on the hospital sites.

The Occupational Health nurses screened staff to advise them of self-care measures or, for cases of persistent moderate to severe skin disease, they would refer to dermatology for a virtual consultation. The team also set up a centralised administration email account which could securely receive photographs for the dermatologists to review. The Health Board also provided free emollients on wards for its staff.

Positive Outcomes

The collaborative work between the Occupational Health and dermatology teams meant that the setting up of the rapid referral pathway was seamless thanks to excellent communication and close team working. The expert presence of Dr MMU Chowdhury meant that staff were able to receive the most up-to-date support which had been benchmarked with national peers.

To date, dermatology have received 56 staff referrals and the work that has been done during the first wave can be quickly escalated again in the event of a second wave.

The team have also developed a skin care leaflet for users of PPE which can continue to be used after the COVID-19 pandemic. The work undertaken by the team was featured in the British Medical Journal (doi: https://doi.org/10.1136/bmj.m2281)

Lessons Learnt

Dermatology conditions were only one side-effect of wearing PPE that was dealt with by the Occupational Health team. The team have also reported respiratory and ophthalmic conditions presented. However, the team do not have the same relationship with the relevant departments as they do with dermatology so are working hard to replicate the collaborative working of this initiative.

4.8 The Workforce Hub

On Monday 23rd March 2020 Wales went into lockdown as a result of the COVID-19 pandemic. At this time Cardiff & Vale UHB was experiencing high levels of hospital admissions, extremely sick patients and staff absence was extremely high. There was a need to recruit as many additional staff as we could to resource the demand that the pandemic brought.

The Workforce Hub was established on 23rd March 2020 and a social media advert was place that afternoon, asking for people from numerous staff groups/professions to support Cardiff & Vale UHB during this time.

Examples of roles included:

- Registered Nurses
- HCSW
- Facilities Staff (Housekeepers, Catering Assistants, Cooks, Porters, Drivers, etc.)
- Medical Staff
- Therapists, registered and unregistered
- Administrative Staff
- Biomedical Scientists, Pharmacists, etc.

Within hours of its launch, the team were inundated with applications for roles. The Workforce Operations Team became the Workforce Hub Team and also recruited volunteers to support from both within and outside of the organisation. Volunteers included furloughed staff who had experience of recruiting and nurses who couldn't work on the front-line because of COVID-19.

The Health Board took the decision to lead the recruitment process ourselves rather than follow the normal recruitment processes via the NHS Wales Shared Services Partnership Recruitment. This decision was made purely because of the

pace the Health Board needed to work at as well as the volume of applications. Also, it needed to be in complete control of the process. There was no time to plan, the team just had to do.

The team started recruiting and the first group of facilities staff arrived on the Thursday of that week with approximately 50 offers made. Over the coming weeks, they offered over 1000 people roles within the organisation, working flexibly to meet the needs of the service.

It's important to note that the specialist medical recruitment was undertaken by the Medical Workforce Team and registered nurses were recruited via the Temporary Staffing Department. It was a real team effort.

Further, the UHB's existing staff who were not fully utilised in their substantive roles because of the changes in services were redeployed into priority areas. For example, research nurses were deployed into front-line clinical roles, any nurses working in other areas who had previously worked on intensive care units were provided with training and moved back to the critical care directorate to provide support.

Positive Outcomes

Staff adapted very quickly to the change in role and duties, they developed new skills very quickly. There was no time to plan in any detail so the team developed the processes as they went along. They identified quickly what worked well and what needed to be improved, the processes were constantly being tweaked to ensure we were able to deliver what the organisation needed.

The team have been commended on performance and delivery during this difficult time. They received lots of positive comments from managers and leaders within the organisation. The common theme was to not go back to the previous recruitment process that they felt was slow and not as effective.

Over 2000 applications were received by the Workforce Hub and over 1000 offers made to applicants.

Lessons Learnt

At the start of the recruitment process, the majority of the processes were paper based but as the weeks went by the team developed more effective electronic systems which made it much easier. Due to the volume and pace of work, the current recruitment system (Trac) would not have worked for us in this situation.

Key enablers were effective leadership, a flexible and hard-working team, effective working relationships between the hub and operational managers.

Plans for the future

The organisation has the confidence that in the event of a second wave of COVID-19, it can repeat the Workforce Hub process and recruit additional staff in high volume, very quickly.

The extreme nature of the situation means that the way in which additional staff were recruited was very flexible, outside the normal contract between the UHB as an employer and its staff. For example:

- *Individuals were recruited on a temporary basis and there was no obligation for the organisation to offer shifts and equally*

no obligation for the individual to accept shifts (bank workers).

- *Employment checks were minimal, no references were sought, we accepted the DBS if individuals provided the DBS certificate from their current/previous employer, facilities staff were allowed to start work whilst we were processing their DBS on the understanding that they would be supervised.*

The success of the Workforce Hub has given the Health Board the opportunity to work with the NHS Wales Shared Services Partnership recruitment team to share learning, with an aim to make the regular NHS Wales recruitment process more effective and timely.

4.9 Cardiff's Rapid Access Prescribing Service

Substance misuse services are commissioned in Wales by Area Planning Boards for Substance Misuse (APBs). APBs are partnerships of both statutory and non-statutory organisations and aim to avoid duplication of systems, get the best value for the public purse and ensure that the substance misuse-related needs of the population are met. Cardiff and Vale UHB is a member of the Cardiff and Vale APB alongside Cardiff Council, the Vale of Glamorgan Council, the National Probation Service, South Wales Police, the office of the South Wales Police and Crime Commissioner (PCC), and Cardiff's third sector council.

The APB commissioned the Cardiff Rapid Access Prescribing Service (RAPS) in February 2019 in order to respond to the complex needs of individuals who are

homeless and or roughsleeping who find it very difficult to access and maintain engagement with mainstream services. Medical treatment for heroin dependency is described as Opiate Substitute Treatment (OST) as heroin is an opiate. The standard form of OST is methadone which is itself an opiate and has to be administered under strict procedures in a clinical or pharmacy setting usually on a daily basis.

Prior to Covid 19 the APB had supported clinicians within the RAPS to try the appropriateness of long acting buprenorphine injections – Buvidal in a handful of instances to monitor efficacy within this cohort of individuals with very complex needs. The use of Buvidal, as an alternative to Methadone, reduces the level if interaction otherwise required through supervised consumption, from daily or several times a week to once per month.

This early adoption of Buvidal in Cardiff and the Vale proved pivotal in the local

APB's response to COVID-19 as it was able to increase the capacity of the treatment system to accept new opiate substitute treatment referrals whilst at the same time reducing footfall into clinical premises. It is particularly important to engage dependent heroin users into effective treatment due to their generally poor physical health which compromises their ability to fight off covid 19. However the cost of Buvidal medication alone is much more costly than Methadone (medication alone) and the guarantee of additional funding from Welsh Government to meet these unexpected costs has proven crucial to the success of this project.

At the onset of Covid 19 the APB had the challenge of ensuring adequate provision of essential clinical services for individuals whilst at the same time trying to reduce the footfall into clinical areas to maintain service user and staff safety.

Positive Outcomes

Rough-sleeping service users could access a same-day prescription of Buvidal. The fact that this opiate substitute treatment only requires a monthly injection means that staff administering the medicine and the service users themselves were more protected from COVID-19 due to reduced interaction and footfall within the clinic.

This project is unique in Wales and is the largest Buvidal project in the UK.

Lessons Learnt

Substance misuse teams elsewhere in Wales haven't been able to take such a proactive approach. The chair of the Cardiff and Vale APB is the Health Board's executive director for public health who maintains very close working and strategic links with local authority housing and homeless colleagues. Having a shared vision of approaching homelessness and substance misuse has helped to drive through this change. The APB support team also had an experienced substance misuse nurse who redeployed into the RAPS between March and May 2020 and therefore linked commissioning with frontline practice and this in turn meant the APB was able to scale up so quickly.

Plans for the future

This pilot is now leading to the development of a research project which should have national and UK wide applicability.

4.10 Haemodialysis Provision

The Nephrology and Transplant Directorate based in the University Hospital of Wales (UHW) provides Haemodialysis (HD) to over 500 patients across South East Wales.

Most of these patients receive their care at one of six Satellite Dialysis Units (SDU) across the region, in Llantrisant, Merthyr Tydfil, Pontypool, Newport, Cardiff North (Pentwyn) or Cardiff South (Penarth Road), which are operated by non-NHS third-party providers. In addition, up to 28 patients receive HD at the David Thomas Unit (DTU) at UHW, and the Directorate also supports approximately 100 patients who receive either HD or Peritoneal Dialysis (PD) at home. Patients routinely attend their SDU for four hour treatment sessions three times a week, and many depend on Non-Emergency Patient Transport run by Welsh Ambulance Service Trust (WAST) to enable this. SDUs are operational six days per

week, Monday to Saturday, with different shifts of patients morning and afternoon; each shift comprises 15 – 30 patients depending on the unit capacity.

Dialysis patients are entirely dependent on their regular treatment to survive, and missing even a single treatment session can be associated with extremely severe illness or even death. In addition, these are collectively a vulnerable and relatively elderly cohort of patients, with a high incidence of Diabetes, Cardiovascular disease and impaired immune function. In recognition of this, all dialysis patients were included within the ambit of the Welsh Government's Shielding Guidelines, published in response to the COVID-19 pandemic.

It is clear that the COVID-19 pandemic represented a significant challenge to the delivery of effective HD treatment to this patient cohort. Whereas it was possible for the Health Board to temporarily discontinue many other inpatient and outpatient therapies to enable resources to be focussed on meeting the immediate challenges of COVID, it is clear that this couldn't apply to HD, since this would prove fatal to a large portion of the patient cohort in a matter of days to weeks. The challenge in this case was to continue to deliver effective HD safely, despite the new constraints associated with the pandemic.

The Directorate Management Team considered a number of options, and implemented a plan based on the following principles:

- *To maintain a community-based model of care as far as possible.*
- *The treatment capacity of the community treatment centres cannot be reproduced in hospital without compromising our ability to direct inpatient resources towards treating sicker patients who needed admission. The community-based strategy minimises travel times, which in turn would lessen strain on WAST, and reduce opportunity for virus spread in cohorted transport.*
- *To maintain three-times weekly treatment for patients as far as possible.*
- *Reducing treatments to twice weekly for some patients to reduce workload was considered, and may have been necessary in extreme circumstances, but our aim was to continue to offer optimal therapy wherever possible. This is in contrast to units in other health boards in Wales, which implemented this measure as an initial step.*
- *To restrict hospital admission patients to hospital only when too unwell to remain in the community, not solely based on a positive COVID-19 PCR swab.*
- *Other units in the UK planned to cohort all patients with a positive test, however ill, in their main hospital units. We felt this would have the potential to overwhelm central resources unnecessarily, and be a potential conduit to increase viral spread.*

Successful implementation of this plan depended on a number of key measures:

Patients

1. Patients were advised to follow shielding guidance.
2. Patients were advised to attend for treatment at their allotted time, to avoid congestion in the waiting area
3. Patients were encouraged to provide their own transport where possible, and to wait in cars outside the unit until called by unit staff, rather than use the waiting area.
4. Seating in the waiting area was reduced to meet social distancing advice.
5. All patients had temperature measurement and symptom assessment on arrival.
6. If a patient had a temperature or symptoms compatible with covid-19, they received scheduled treatment, if well enough to do so, in isolation, and underwent community testing following return home. Patients would remain in isolation until either the test was negative, or they had completed stipulated 14 days of quarantine and symptoms resolved.
7. Patients becoming unwell before during or after HD were sent by ambulance to nearest appropriate hospital.
8. As national advice evolved, patients were provided with surgical facemasks during their treatment sessions.

Dialysis Unit

1. In addition to standard IP & C precautions, which are designed to counteract spread of BBV, staff were provided with surgical facemasks. HD itself is not considered to be aerosol generating, and FFP3 masks were not routinely required
2. Scope to provide isolation facilities was maximised, by adjusting entrance and exit points to the units where possible
3. Use of waiting area was minimised
4. Dialysis stations are conventionally widely spaced and enabled patients to remain socially distanced during treatments
5. To minimise attendance to SDUs by non-essential staff: ordinarily, Nephrologists, Dieticians, and Vascular Access Specialist Nurses visit SDUs to review patients and deliver care. These visits were extensively replaced by remote working, using the Directorate's existing IT system

Nephrology and Transplant Directorate

1. The Directorate established a daily multi-disciplinary meeting that including the Directorate Management Team, Medical and Nursing teams covering the ward, and administrative staff where indicated. This enabled the team to review and respond to the evolving nature of COVID-19 pandemic, share responsibility

for difficult decision making, coordinate between SDUs and the inpatient service, and communicate consistently.

2. The Directorate acted as gatekeeper for any requests from SDUs for patients requiring community testing, and reviewed all suspected and confirmed patients at the daily meeting.
3. The Directorate maintained a record of test requests and testing outcomes in the renal clinical database VitalData, which is available to all clinicians in all SDUs in real time.
4. The Directorate addressed the potential for harmful isolation in this vulnerable group of shielding patients. The Directorate's Social Worker and Youth Worker developed a screening tool to help identify any patients particularly at risk of isolation, and trigger referral for further support, including from the Clinical Psychology team the charitable sector. The Directorate also established a support telephone line and email address for patients to use for queries and requests for help.
5. Alongside the daily MDT regular communication, separate virtual meetings took place with SDU managers and WAST to address operational or logistical challenges.

The success in implementing the plan required cooperation from a number of key external stakeholders:

1. WRCN/PHW:
At the beginning of lockdown in March, community testing teams were stood down by PHW. In conjunction with other departments in Wales through the Welsh Renal Clinical Network, we were successful in re-establishing community testing for HD patients, which was a cornerstone in being able to manage potential and defined COVID cases safely, both on the units and during transport provided by WAST.

2. B|Braun Avitum and Fresenius Medical Care
The third party providers of care in the SDUs engaged in open discussions about implementing our care strategy, and were flexible in matching their approach to ours. They have continued to deliver a high standard of care during these difficult times.

3. WAST:
Effecting communication with WAST over patient transport has been essential for the successful management of our HD patients. WAST implemented a number of effective solutions to reduce cohorting of patients on transport, including offering a reimbursement scheme to patients who opted to transport themselves for treatment; use of volunteers and different vehicles, and early use of PPE for drivers and patients and masks to minimise the risk of viral spread.

Positive outcomes

Patients have continued to have life-prolonging treatment during the entire COVID-19 pandemic to date, without significant interruption of care delivery at any unit.

Early in the response to the pandemic, at the time lockdown was implemented nationally in late March, case rates in the HD population reflected COVID incidence in the wider communities, particularly in Newport. Once appropriate measures were implemented however, there have been no significant subsequent out-breaks among our HD patient population, despite significant levels of virus circulating in the broader South East Wales community.

There is no evidence of any COVID-19 transmission between staff or patients on any SDU, and no evidence of spread due to WAST transportation dialysis treatment including in patient transport to and from the units.

It has been possible to safely and effectively treat HD patients known to be positive for COVID-19 on their SDUs to the point of recovery from their illness, without spreading infection on the unit or via transport, which has substantially reduced the need to provide HD at UHW, either on the ward or DTU.

Lessons learnt

The Directorate believe that the success of our clinical care strategy for HD patients rests on a number of largely straightforward and easy-to-reproduce factors:

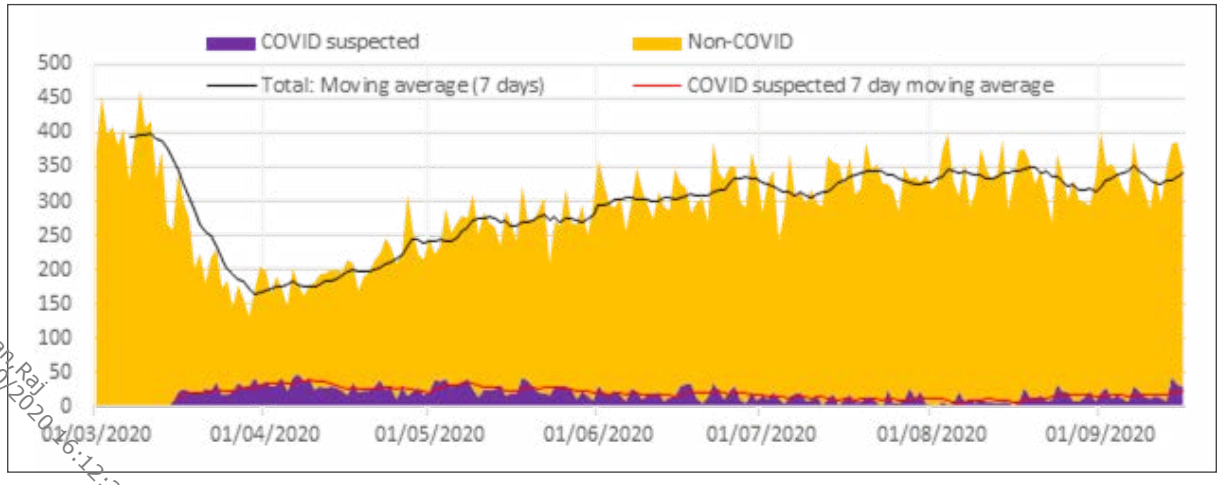
- *Rigorous and consistent application of social distancing rules and basic infection control procedures, such as the use of surgical masks*
- *Clear and honest communication between all stakeholders to ensure a coordinated response*
- *Access to timely COVID-19 PCR testing*
- *A genuinely multidisciplinary approach*

Plans for the future

The Nephrology and Transplant Directorate plan to continue to implement this approach to managing any future cases of COVID-19 in the dialysis units, with an ongoing commitment to review and modify the plan as circumstances dictate.

4.11 CAV 24/7: Transforming Urgent Care

There is longstanding recognition that the delivery of Urgent Care should be consistent over the 24 hour period. Furthermore, in its work with Canterbury



District Health Board, the Health Board has been exploring new ways of working to achieve this.

The COVID-19 pandemic has heightened awareness, concern and need to rapidly explore collaboration between Primary and Secondary care and other partners to deliver safe, comprehensive and consistent urgent care services. There was a significant change in demand for urgent care services as a result of the COVID-19 pandemic. Emergency Unit (EU) attendances fell from around 400 per day to below 150 per day towards the end of March. However, as the graph below demonstrates, this dramatic reduction gave way to attendances steadily increasing again.

In May 2020 the Royal College of Emergency Medicine (RCEM) issued a position statement which sets out how the College believes EUs should change to manage patients safely as we move from Pandemic to Endemic COVID-19 situation. Specifically the RCEM state that EUs should never become crowded again and should return to their original core purpose: the rapid assessment and emergency stabilisation of seriously ill and injured patients. Furthermore, they identify "enhanced clinical telephone triage services" as the appropriate route of access for patients to the right healthcare in the safest place.

The continued presence of COVID-19 in the community and the related social distancing and safety measures impacting on the physical capacity of the EU indicate that the current operational model of care is neither safe nor deliverable. Assessments of the reduction in attendances at Emergency Units across the UK had shown that those who did not attend during the pandemic did not necessarily need an EU response but could have been supported more effectively as a planned event or in an alternative setting.

A proposal was developed by clinicians designed to provide a safe service for patients before the numbers of people attending EU started to rise back towards pre-COVID levels. The focus of this proposal was on a 24/7 phone-first triage model, targeting people who would traditionally have 'walked up' to the Emergency Unit. The aim was to ensure people were kept safe by reducing unnecessary footfall through the Emergency Unit and to enable social distancing.

The model needed to be able to manage calls for all people who would have walked in to EU, which is an average of 240 daily attendances (88,000 per year). This is in addition to the current volume of contacts managed by the Cardiff & Vale Urgent Primary Care (Out of Hours) Service (120,000 per year) and a proportion of cases that are urgent primary care and unable to access same day access in-hours. The assumption was that around half of the people who would usually walk in to EU could be managed in a different, more appropriate and more effective way.

In order support its implementation, there was rapid recruitment and training of triage nurses and call handlers, which was also supported by other areas of the Health Board which redeployed staff on an interim basis. There was a 9-week turnaround time from the project's approval to launch date.

During this period there was also extensive

significant stakeholder engagement facilitated by the UHB's communications team and led by clinicians and included discussions with specific stakeholders, including a public Facebook live session. A detailed communication and engagement plan was developed around three messages – Phone First, Stay Safe, and Right Place First Time. There was significant social media based on a range of scenarios to target and get attention of specific groups. Core presentations and briefing packs were provided for stakeholders. There was also significant interest by the media so a range of interviews with the team to explain the service worked well.

The new phone-first system, entitled CAV 24/7 was launched on the 5th August 2020. People were asked to call CAV 24/7 to receive an initial assessment and then for a clinical triage assessment would be undertaken. If, following this assessment, there was a need for the patient to attend EU or the minor injuries unit, then a booked appointment would be made.

Positive Outcomes

This was a significant change in how people who think they need to be seen in EU would access the service, albeit the model was aligned to how the Urgent Primary Care/Out of Hours service was provided. This was the first model in Wales and was supported by Welsh Government as a 'pathfinder' project.

To date, the service has received an average of 207 calls a day, 64% of which are booked into the Emergency Unit or the Barry Minor Injuries Unit. This means that the remainder have been successfully redirected to other community or primary care services.

Feedback from an initial patient survey with more than 650 responses indicated that of the people who used the service, 87% would use the service again. The response from clinicians and staff within EU and the CAV24/7 service has also been positive.

The accompanying communications campaign has been very successful with overall coverage reaching an estimated 91.76% of people in Cardiff and the Vale of Glamorgan based on analytics of communication activity.

Lessons to Learn

For the Emergency Unit, around one third of attendees access it via the new phone-first system. A second third are from referrals from primary care or via an ambulance and the final third continue to self-present as walk-ins. An audit of this final cohort has identified they are typically in the younger age groups, many with minor conditions who should have come via CAV 24/7. Further work is being taken forward on a targeted communications campaign to influence this cohort further combined with more redirection at the EU front door, recognising this requires a fundamental change in public and clinician behaviour.

Plans for the future

Since its launch, CAV 24/7 has become a core element of the Urgent Primary Care/OOHs service. Whilst for learning and monitoring purposes the CAV24/7 service is being considered as a separate component, it is an integral part of access to urgent care across the system.

4.12 Palliative Care and COVID-19

4.12a Use of a new type of delivery pump (Accufuser) for subcutaneous Furosemide infusions in the community setting.

During the first wave of Covid-19 there was much planning for the provision of end of life care to the expected large numbers of patients anticipated to be highly symptomatic with shortness of breath and agitation during the final stages of life. It was assumed that many patients would need to be managed with medication given by syringe driver pump as a subcutaneous delivery system to control end of life symptoms in various settings including potentially large numbers in the community and in the Dragon Heart Hospital.

There were known to be potential limitations to the numbers of syringe driver pumps available in Cardiff and Vale UHB because these are very expensive and because the usual type of pump used have recently had design faults. This meant that giving infusions of Furosemide subcutaneously by syringe driver at home for advanced heart failure patients to avoid hospital admissions would potentially be less readily available.

Furthermore advanced heart failure patients are highly susceptible to Covid-19 infection and have been shielding at home, so a method of providing care that minimised contacts with health care professionals was desirable. We also wanted to limit demand on district nursing services with setting up daily subcutaneous Furosemide infusions by syringe driver when we knew that their services would likely be needed for helping manage end of life care for Covid-19 patients in the community setting.

Using the Accufuser pump for subcutaneous infusion of Furosemide in advanced heart failure patients has not been done before. These pumps are very safe to use and have a larger capacity than can be accommodated by a syringe driver. The greater capacity means that the solution of Furosemide can be diluted as needed with saline with a potential reduction in risk of infusion site reactions and also the possibility of infusing the solution over a number of days rather than the 24 hour limitation of a syringe driver.

Currently, the pharmacy department are investigating the stability of Furosemide solution over seven days (some published literature suggests stability for 96hrs).

Positive Outcomes

The benefit of longer stability is that we can run infusions for a number of days with remote monitoring which limits visits from potential Covid-19 contacts and with far less burden on district nursing services. Furthermore risks such as infection or drug errors are reduced by the pumps being pre-filled in the aseptic unit rather than in the home setting and the district nurses can set up the new pump far more quickly. Evaluation shows a patient preference for the new pumps over syringe driver. The

patients both stated that they prefer to have subcutaneous Furosemide infusions at home and to avoid hospital admissions.

There was a preference for the new pump as it meant less contacts from healthcare professionals during Covid-19 and it was easier to dress with the new pump as less heavy than a syringe driver.

Lessons to Learn

The main challenges were:

- District nursing leads were concerned that the district nursing teams were experiencing innovation overload during the first wave of the pandemic which initially delayed us trialling the pumps for 2 day periods in the community.
- Pharmacy wanted to replicate published stability studies for Furosemide infusions in the new pumps.
- The Supportive Care team were pulled back into providing Palliative Care service during the first wave of the Covid-19 pandemic.

Plans for the Future

This innovation will fit into the Supportive Care pathway for advanced heart failure patients and be continued during and after the Covid-19 pandemic as all the benefits of limiting burden on district nursing services, greater patient acceptability and less site reactions are still important in the usual service provision.

Palliative care now plan to pilot with a cohort of 20 patients for 7 day periods, once we have the stability data to support using the new pumps, which is expected to be possible by the end of September.

4.12b Development of a pathway to assist in the symptom control of patients with Covid-19 deteriorating despite CPAP (NIV) who are entering the end of life phase

In the early stages of the COVID-19 pandemic when the Palliative Care team were attending ward B7 at UHW to support the palliation of patients, it quickly was brought to their attention that patients who were deteriorating despite CPAP, where CPAP was the ceiling of care, were experiencing very distressing deaths.

The ward staff reported that it would become apparent that a patient was deteriorating as their oxygen saturations would start to fall but the patient would seem to remain unusually awake. However, on discontinuation of CPAP the patient would experience sudden and extremely distressing air hunger described by witnessing staff as 'suffocation.' This was causing significant distress to the patients and also B7 staff despite their extensive experience with end of life respiratory patients.

The team recognised that not only was there a need to deal with this to ease suffering at end of life for the sake of the patients but also for the staff who would be dealing with this type of patient repeatedly and would not be able to cope for much longer with this uncontrolled situation without the risk of significant emotional trauma. They therefore evaluated the patient notes and consulted the literature for comparative situations and created a symptom control pathway for the discontinuation of CPAP in the deteriorating Covid-19 patient. This was a completely new situation and required an innovative approach.

Positive Outcomes

This pathway has already been embedded into routine management of patients on B7 and will be used again for any further cases of Covid-19 or for a further wave. The pathway significantly improved the management of the symptoms of patients being withdrawn from CPAP. Feedback from the respiratory team has been very positive 'This pathway is something good that's come out of Covid' commented Katie Pink, Respiratory Consultant, and ward staff surveyed after implementation of the pathway rated its value in managing discontinuation of NIV/CPAP in Covid-19 positive patients at end of life as 8.9/10.

Lessons to Learn

One of the challenges to this innovation during the first wave of Covid-19 was the difficulty for the Palliative Care team to implement the pathway when they were often managing support for patients from outside the room whilst the respiratory team were in full PPE attending to the patients. However, they have an excellent relationship with all staff on B7, being a ward with day-to-day business which includes frequently caring for many patients with cancer and end-stage respiratory conditions, which allowed them to work together and use the confidence the team already have in us to establish this new pathway quickly and effectively.

Plans for the future

This pathway has already been embedded into routine management of patients on B7 and will be used again for any further cases of Covid-19 or for a further wave. We are now exploring how we might apply this pathway during normal working times for non-Covid-19 patients when discontinuing ventilatory support on the respiratory and neurosurgery wards.

The respiratory team are now looking to adapt the pathway for more general use on the respiratory ward for patients who are deteriorating on NIV/CPAP and require symptom support whilst withdrawing ventilation and through the end of life phase. We have also had this guideline included on The All Wales Covid-19 Hospital Guideline on line resource.

4.12c Videos to educate healthcare professionals on how to communicate and demonstrate compassion to patients whilst wearing PPE

Recognising the barriers created by healthcare professionals having to wear PPE when looking after patients with Covid-19, many of whom may be feeling isolated and/or who may be dying, videos were created to outline basic communication concepts and how these can be adapted to the situation of wearing PPE.

One video is a 'Talking Head' video discussing how healthcare professionals can still convey compassion and communicate with patients effectively despite the barriers of PPE. The two other videos are filmed from the patient view point, the first showing the patient experience of a usual 'typical' daily ward round review in PPE and then the second showing the same review using the tips discussed in the talking head.

Positive Outcomes

There have not been any other similar videos created in the UK to address these important issues. These videos were used

as a part of COVID-19 refresher sessions provided for medical teams in Cardiff and Vale UHB working with the Postgraduate Education team. They were also used for training of nursing teams who were being redeployed during the first phase of COVID to different clinical areas. The talking head video has reached a wider audience via Twitter with 5265 views.

4.12d Development of a new educational board game to teach key elements of palliative and end of life care

The palliative care team identified a need to improve understanding and confidence of medical professionals and newly qualifying junior doctors in the management of the palliative approach and end of life care during the first wave of the COVID-19 pandemic. Some specialities such as anaesthetics and orthopaedics, who usually have limited interface with dying patients were anxious about increased need to manage such patients during the pandemic. Therefore, they developed a new approach to teaching end of life management in the form of a board game called Bedrace. It's based on answering questions related to palliation and symptom control in the end of life period.

This game involves teams working together to answer questions based on palliative care and end of life clinical dilemmas. Along the way, the teams pass seven checkpoints, which are key stages of the patient journey, including 'Breaking bad news', 'Discussion with family', 'Spiritual care', 'Discussion of prognosis.' By answering questions at the checkpoints, the teams can win 5 minature items which represent key elements of end of life management (syringe driver, DNACPR certificate, a heart whcih symbolises compassion, a bag of anticipatory medications, tube of oral hydration gel) which they then collect in a small hospital bed which moves along the 'end of life journey' to the finish.

Positive outcomes

The team have initially trialled the game with 5th year medical students who are preparing for practice with great feedback:

"Was a lovely change, a really interesting way of learning"

" fun way to learn that was much better than sitting in front of a PowerPoint"

" Engaging format, really useful clinical scenarios"

" A lighthearted entertaining way of including everyone in competitive discussions, working together to find out the right answer"

" Really well designed, useful practical learning points done in an engaging creative way".

Evaluation of how effective it has been as a learning tool and how well students will retain the information we have taught them is underway using Mentimeter.

Plans for the future

Next, the team plan to work with the Postgraduate Education team to create a more 'Advanced' version for junior doctors and also for future training sessions with teams from a variety of specialities and for all clinicians at all levels of seniority who may want to learn, refresh and update knowledge of end of life care.

They are also now exploring how to commercially produce the game as there is a huge potential market for this educational game across the UK and internationally as the UK are world leaders in Palliative Care.

Appendix 1

List of Partner Organisations involved in build phase of Ysbyty Calon y Ddraig

Abbott Diagnostics	GL Events	Production Science
Aggreko	Hoara lea	PSBA BT
Ainscough	Horiba	PTL
ALM (Architen)	IKM	Q5
AQS Cleaners	Insight	Q5
Archus	Insight	Radiometer
BDP	IPD	RHM Event Graphics
BDP	IT teams from C&V	Rock City
BMA	J-EMSS	Rubicon
BMS	Kingfisher pest control	SC Productions LTD
BOC	KOMS	Setsquare
BT	Lifestyle Express	Showsec
CAE Technology Services	Mark-Key	Showstars
Cando	Masons	Sign Up Systems
Cardiff Airport Fire Service	MEC Engineering	Sport Wales
Cardiff Blues	Medstorm	SSE Enterprise Contracting
Cardiff Council	Millipore	St Johns Ambulance
Cisco	Misc	Star Live
Computer Centre	MITIE	Sweeney Todd Flooring
Computerworld Wales	Military	The Secret Garden
Csenge Szabolcsi	Mott Macdonald	Trefoil
CSM	MTD	Tremorfa
Daisy	Multitone	Trustmarque
Dell	Neptunus	Velindre Radiation Protection Services
Diagon LTD	NG Bailey	Virgin
Dimension 8	Nine Yards	Vocera
Ductbusters	Nutrivend	Walters
Dwr	NWIS	WAST
Eat to the Beat	Oak Valley	Waterloo Gardens
Egerton	Overlay Events	Welsh Government
EPS	PACS	Welsh Rugby Union
ESG	Principality Stadium	Werfen