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Bwrdd Iechyd Prifysgol
Abertawe Bro Morgannwg
University Health Board



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Report Title	ABMU Response to the WAO Review of Informatics Systems		
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Presented by	Professor Hamish Laing, Executive Medical Director & CIO Matt John, Assistant Director of Informatics		
Freedom of Information	Open		
Purpose of the Report	To update the Health Board about actions being taken both nationally and by ABMU to respond to the Welsh Audit Office Review of Informatics Systems in NHS Wales		
Key Issues	The report provides: <ul style="list-style-type: none"> • The national and local actions being taken in response to the WAO review, which focussed on strategy, leadership, governance, finances and project/benefits management • ABMU Informatics plans and progress 		
Specific Action Required <i>(please ✓ one only)</i>	Information	Discussion	Assurance
			✓
Recommendations	The Board is asked to note: <ul style="list-style-type: none"> • The actions being taken in response to the WAO review • The significant progress being made across the Informatics work programme 		

ABMU Response to the WAO Review of Informatics Systems

1. PURPOSE

To provide an update about actions being taken both nationally and by ABMU in response to the Welsh Audit Office Review of Informatics Systems in NHS Wales.

2. BACKGROUND

On 11th January 2018, the Wales Audit Office published its report into Informatics systems in NHS Wales. There were 13 recommendations across the following areas: Strategy, Leadership, Governance, Finances and Project/Benefits Management. The

subsequent Welsh Government (WG) response, 6th March, acknowledged the key findings concerning the difficulties in securing adequate funding to take forward the vision; the need to strengthen prioritisation processes, and the need to review the governance arrangements for NHS Wales Informatics Service (NWIS). All recommendations were accepted by WG.

The response stated that recommendation 7 (Harness innovation and accelerate technology and infrastructure developments) of the Parliamentary Review of Health and Social Care in Wales echoed many of the WAO findings, and as such the actions taken would be informed by the response to the Parliamentary Review – *A Healthier Wales*, the Long-Term Plan for Health and Social Care. Published in June 2018, it contains a clear message on the importance of digital transformation, with several key actions identified.

3. STRATEGY

RECOMMENDATION 1: *The vision for informatics of incrementally creating an electronic patient record is clear and had a clear rationale when it was first set following the 2003 strategy. However, the informatics market and community have moved on significantly since then. **The Welsh Government, working with NWIS and NHS bodies, should review the informatics market to test whether it offers new opportunities to achieve the aims of the Strategy.***

RECOMMENDATION 2: *NHS Wales has set up a task and finish group to seek to clarify the meaning of the ‘Once for Wales’ approach to developing and rolling out informatics systems. **The Welsh Government, working with NWIS and NHS bodies, should:***

- a. **clearly define the balance and respective responsibilities between national systems led by NWIS and locally led systems;***
- b. **ensure that national and local implementation plans are updated to reflect any implications for the funding, development and roll-out of informatics systems of the clarified approach to Once for Wales;***

Prioritise the development of a set of common standards to ensure that systems procured or developed locally are compatible with other local systems and the national systems.

RECOMMENDATION 3: *We found that the NHS has not set clear priorities for informatics. **The Welsh Government, NWIS and NHS bodies should agree a clear and achievable set of priorities for national informatics and resist adding new priorities without either deprioritising something else or adding new resources.***

RECOMMENDATION 4: *Many of the issues and concerns about barriers to progress that we found during our fieldwork have long been recognised. **The Welsh Government, NHS bodies and NWIS should produce an open and honest assessment of what has worked and what has not so far and produce a clear and jointly owned plan for overcoming the known barriers to progress. These documents should be in the public domain so that NHS staff can see that their concerns have been recognised and are being addressed.***

National

In addressing recommendation 1, WG proposed the approach to be taken for commissioning a system architecture review across NHS Wales to the National Informatics Management Board (NIMB) at its June meeting. ABMU, along with other Health Boards and Trust provided feedback and are awaiting next steps.

The meaning of 'Once for Wales' has been agreed by NIMB: *"Once for Wales is about all parties involved in health and care in Wales working collaboratively to add value and deliver the strategy of a single electronic patient record, ensuring that information is entered once and is made available to all those who need it, at the time and place they need it."*

The balance and respective responsibilities between local and national systems will be considered as part of the architecture review and inform national and local plans. A technical standards board has been established alongside the existing information standards board. It is envisaged that these two boards will oversee the delivery and maintenance of a catalogue of standards and requirements to enable integration and interoperability across all health and care systems.

With regards to national informatics priorities and plans, a national planning process has been established in 2018/19 to:

- enable delivery of government priorities, inform IMTPs and support service transformation
- provide clarity on Health Boards and Trust priorities that would make demands on national resources (especially NWIS)
- inform choices on the level and use of future resources for informatics (both staff and funding)

The National Plan for 2018/19 was approved at the June NIMB and a 3-year plan for 2019-22 will be submitted to NIMB in October. A process for gaining ABMU approval for this needs to be agreed.

Local

The vision for creating an electronic patient record (EPR) across Wales is emerging and the development of Strategic Outline Programmes (SOP) across Health Boards and Trusts, of which ABMU's was the first to be approved by WG, has enabled a tactical approach for its delivery. However, the pace of delivery of the national programme is concerning and we welcome the system architecture review. The key feedback provided by ABMU to the architecture review proposal was that the review must analyse all viable options for delivering at pace an EPR for the professional, the patient, and the citizen and provides a world class data source.

In evaluating the strategic way forward, consideration must also be given to the hosting arrangements for IT systems across Wales. The occurrence of three major system failures since January, causing outages to multiple national systems hosted in the national data centres, has emphasised the necessity to ensure our clinical services are supported by robust and performant infrastructure. In the short term, ABMU must work with NWIS to ensure necessary improvements are made (see

Appendix 2). In the future NHS Wales must consider other hosting models, such as cloud-based services.

The Health Board has huge ambition to enable clinical and organisational quality, safety and efficiency improvements through digital transformation. This vision is set out in our Digital Strategy, “Destination Digital”, which was approved by the Board in 2017. This Strategy is closely aligned to the National Digital Strategy and ABMU colleagues across the organisation are playing key roles in delivering the “Once for Wales” vision collaboratively with NWIS and other Health Boards and Trusts.

ABMU has struck a careful balance between adopting national systems willingly whilst taking forward pathfinder projects on behalf of NHS Wales and leading on innovation in areas such as “mobilising the workforce”. A summary of ABMU informatics projects and plans can be found in **appendix 1**.

4. LEADERSHIP

RECOMMENDATION 5: *We found that there is considerable scope to strengthen national and local leadership on informatics across the NHS. **The Welsh Government should:***

- a. **work with NHS bodies to develop options for strengthening representation of informatics at board level, including reviewing the merits of a board level Chief Clinical Information Officer (or equivalent) role;***
- b. **work with NHS bodies to develop a clear action plan for the development of a cadre of senior clinician-informatics staff, in line with the recommendations of the Wachter review in England; and***
- c. **identify opportunities to strengthen the informatics voice at the most senior level in the Department for Health and Social Services, including reviewing whether and if so, how to strengthen the roles of the NHS Wales Chief Information Officer (CIO) and Chief Clinical Informatics Officer (CCIO) in NHS Wales’ strategic decision-making process.***

National

Health Boards and organisations are clearly in different positions when it comes to both leadership talent and structures. What is important is that a strong breadth of Informatics and Clinical Informatics leadership is built across organisations. We need to maximise training and business change opportunities to increase digital competency across Wales.

A Chief Clinical Information Officer (CCIO) development programme and network was launched by the Director General for Health and Social Care in March 2018,

which will support NHS Wales CCIOs and enable them to build strong links within Wales and more widely.

A “Healthier Wales” describes how the national informatics leadership will be strengthened as part of the creation of the national executive function for NHS Wales. The Executive function will be established by the end of 2018, with hosted national functions, such as NWIS, being reviewed in 2019.

Local

“To successfully implement the digital-enabled changes, Informatics must be aligned and integrated with business and clinical strategies and operations. Informatics must understand the business and clinical direction, issues and needs, while the organisation leaders must appropriately understand digital capabilities and limitations. To accomplish this alignment, Informatics must become a core consideration at multiple levels of the organisation, including the executive level, with each executive playing an appropriate role in deriving business and clinical value from Informatics related investments” (Advisory Board).

The WAO review also commented that NHS Wales lags behind the private sector in having informatics and ICT expertise represented at Board level. Best practices companies such as the Advisory Board are promoting the benefits of the Chief Informatics Officer (CIO) in healthcare being a dedicated role.

With the current Executive Medical Director and Executive Lead for Informatics, Hamish Laing, leaving the organisation, the Health Board will trial for a period the Assistant Director of Informatics, Matt John, acting up into the role of CIO. This provides the opportunity to evaluate the benefits of a dedicated Informatics lead working more closely with executives and board members.

Across the UK some NHS organisations have mirrored private sector businesses and appointed full time Chief Digital Officers (CDOs) who attend the Board (eg NHS Digital, NHS Blood and Transplant, Greater Manchester Healthcare Partnership, NHS Sussex Partnership). Welsh Government also has a CDO (Caren Fullerton) and these posts are common in local authorities. Whilst CIOs focus on organisational ICT and data and technical delivery, CDOs are focussed on the adoption of digital working across the business and engagement, including citizen-facing services, which are vital to securing system shift. If ABMU is to embrace “digital first” as a principle, there is merit in considering the appointment of a CDO to drive the agenda for an initial three year period, supported by the CIO who ensures delivery and the CCIOs (CMIO, CNIO, CTIO) who ensure alignment with clinical need and product development.

The WAO review of Informatics Systems also states: *“There is a need to develop local clinical leadership of informatics. Clinicians struggle to find the time away from the day job to support and lead local delivery, which is hampering the design, testing and delivery of systems across Wales.”* In ABMU, in addition to the clinical digital champion role that Hamish Laing has delivered, we also have a 0.2 wte Chief Medical Information Officer (CMIO) Dr. James Chess, who plays a key role in engaging clinicians across the organisation in the “digital” agenda through our

Clinical Reference Group. We also have dedicated clinical roles on specific Informatics projects, such as a senior nurse and lead pharmacist. Moving forward we must continue to invest more and more in clinician-informaticians. It is hoped that the Senior Nurse role can be developed as a Chief Nursing Information Officer (CNIO) once the current project ends.

5. GOVERNANCE AND OVERSIGHT

RECOMMENDATION 6: *We found that the governance arrangements for overseeing and challenging NWIS are weak. **While the Welsh Government has written to Velindre NHS Trust requiring it to strengthen governance arrangements for NWIS, we consider that the Welsh Government should carry out a wider appraisal of options to strengthen governance and oversight of NWIS.***

RECOMMENDATION 7: *We found that the progress reports that NWIS produces for the Welsh Government and the public do not provide a complete or balanced picture. **The Welsh Government should work with NWIS to improve the reporting of performance to tell a more balanced story of what is going well, where there are difficulties and why. Performance reporting should include information about progress against initial project plans, user satisfaction and concerns with existing national services as well as those new systems being rolled out.***

National

The action specified in “Healthier Wales” to review hosted national functions, such as NWIS, with the aim of consolidating national activity and clarifying governance and accountability, is due for completion by the end of 2019.

Whilst progress reporting to NIMB by NWIS has improved recently, there is still more work to be done in ensuring a service view of progress is reported rather than from a NWIS perspective. Also, due to the timing of meetings, reports are often submitted directly to NIMB, before receiving more detailed scrutiny from the Informatics Planning and Delivery Group (IPAD) as the process requires. NHS Wales’ colleagues will continue to work with NWIS to make further necessary improvements.

Local

At a local level we currently have three Informatics related Boards:

- Information Governance Board (IGB) – governance and assurance of information and information risk across the Health Board, chaired by the Senior Information Risk Owner (SIRO) [currently Professor Hamish Laing]
- Informatics Programme Board (IPB) – governance and assurance of programme planning, prioritisation, implementation and benefits delivery, chaired by the CIO

- Service Management Board (SMB) – governance and assurance of operational informatics systems and services

Currently IGB provides reports to Audit Committee and IPB provides reports to the Executive Team. However, along with the newly formed SMB, all meetings will be reviewed in terms of their accountability in line with the review of wider corporate arrangements. Underpinning IPB, we are establishing Informatics Groups in each Service Delivery Unit (SDU) to ensure their clinical and business requirements are fully understood and prioritised appropriately and described in their annual /IMTP planning proposals. Over the last 12 months the Informatics Directorate has established a robust inclusive approach to informatics prioritisation that informs our local plans and feeds into IGB and the national prioritisation process.

In terms of national reporting, ABMU provide progress updates to NIMB on a bimonthly basis.

6. FINANCES

RECOMMENDATION 8: *The Welsh Government needs to decide whether and how to provide the additional funding that NHS bodies and NWIS have estimated is required to deliver the vision for an electronic patient record. **The Welsh Government should carry out a full cost-benefit analysis of the proposed investment, including the extent to which financial savings from new systems may enable funding to be redirected from existing services to invest in new informatics systems.***

RECOMMENDATION 9: *Despite some recent progress, there remains scope for better integration of medium-term financial planning of informatics across the NHS. **The Welsh Government, working with NHS bodies and NWIS, should set out clear and agreed medium-term funding plans for local and national ICT programmes. This should involve NHS bodies and NWIS working together before NHS bodies complete the first draft of their rolling three-year plans. It should also take account of any future decision on funding required to deliver the strategy.***

National

In response to the WAO review, Welsh Government stated it would undertake a robust assessment of the investment required and predicted business benefits, and together with NWIS and Finance Directors evaluate alternative funding models and savings opportunities. Furthermore, this would be informed by the outcome of the architecture review.

Currently, there is a commitment of £65 million capital for delivery of the digital strategy across 4 years. In 17/18 £10m was provided, but so far in 18/19 only a sum of £5m has been indicated by WG.

From a revenue perspective, with the announcement of the £100m Transformation Fund, we have been strongly encouraged to underpin and enable proposals for integrated health and social care with “digital enabler” projects by WG

A “Healthier Wales” states there will be significant investment increase in digital infrastructure, technologies and workforce capacity, supported by stronger national digital leadership and delivery arrangements from 2019.

Local

Digital transformation requires significant and sustained investment to achieve the long-term benefits. Recommendations from local audits, in addition to the WAO review, indicate the need for a robust investment plan for medium and long-term delivery of benefits through digital adoption.

The current Informatics revenue budget (excluding Health Records/Coding) is £7.6m. The Informatics revenue budget is subsidised by committed discretionary capital of £0.9m for the delivery of projects through capitalising staff associated with them. This total of £8.5m equates to 0.73% of the Health Boards revenue budget. It is widely held that successful organisations invest 3-5% of turnover in Informatics annually. This is supported by WAO who expressed concern at the very low levels of investment in ABMU in a recent report.

The Health Board also invests a further proportion of its discretionary capital each year to refresh existing technology. However, the current level of allocation only enables the replacement of PCs and Laptops that are over 7yrs old which is much longer than recommended for efficient working. As the amount of hardware increases with digital enablement of more staff, the requirement for “refresh” increases. There is no plan to accommodate this inevitable cost pressure, although encouragement of “Bring Your Own Device” is helping to mitigate this a little.

ABMU has also been very successful in securing funds from WG. Over the last 2 years we have received £3m in revenue grants and £5.1m capital grants above usual allocations. We have maintained a reputation for delivering our own IT projects which has contributed to this success.

This year we will update the Informatics SOP to support the clinical and business requirements of the organisation for the next three years, setting out the cost/benefit plan to enable the execution of our digital strategy. Plans will clearly have to account for the significance of the boundary change both financially and in other resources.

7. PROJECT AND BENEFITS MANAGEMENT

RECOMMENDATION 10: *NWIS is increasingly using the Agile approach to software development. There are potential benefits to this approach in terms of timeliness and quality, but the approach relies on deep engagement with clinicians and other end users, which has often been difficult to secure. **NWIS and NHS bodies should work together to:***

- a. **strengthen the relationship between developers and clinicians, particularly in designing and testing new systems and functions, so that there is a better collective understanding of what is wanted and what is possible; and***
- b. **engage with managers to identify their information needs as well as the needs of clinicians.***

RECOMMENDATION 11: *NWIS is developing but does not yet have a full workforce plan, and reports that it struggles to recruit and retain senior developer staff due to competition from the private sector. **The Welsh Government, NWIS and NHS bodies should work together to explore options to secure the experienced ICT staff and developers that NWIS needs within the context of a comprehensive workforce plan for NWIS and taking account of the ICT staff available to NHS bodies.***

RECOMMENDATION 12: *We found that there is a lack of clarity as to responsibility for delivering the intended benefits of national informatics systems and a lack of monitoring. **The Welsh Government, NHS bodies and NWIS should work together to ensure that:***

- a. **there is a clear allocation of responsibility for achieving the benefits; and***
- b. **there are clear responsibilities and processes in place for monitoring and reporting progress in delivering those benefits.***

RECOMMENDATION 13: *We found that many staff in the NHS are frustrated with some of the functionality and quality of national informatics systems. NWIS has a process for updating national systems, but there are concerns about the slow pace and lack of feedback and the Change Advisory Boards themselves could function more effectively. **NWIS should review its process for managing change requests and where necessary make changes to:***

- a. **provide clearer feedback to the service about how their requests have been dealt with and whether and when any changes can be expected;***
 - b. **remain open to minor changes that could have a significant impact in improving end users' use and perception of the systems; and***
- provide clearer agendas and work programmes for the Change Advisory Boards to make them more focussed on enabling impactful improvements to systems.***

National

From a WG perspective, the identification of clinical informaticians (CCIOs, CMIOs, CNIOs) within NHS organisations provides a link between clinicians and developers and will develop the skills required to support agile working and better stakeholder and user engagement. Stakeholder engagement will be considered as part of the systems architecture review and governance review.

Regarding recruitment difficulties, WG acknowledges that a sustainable recruitment model for people with informatics skills is vital for all of NHS Wales not just NWIS. The creation of Health Education and Improvement Wales (HEIW) in October 2018, together with the recently-established Welsh Institute of Digital Innovation (in collaboration with University of Wales Trinity St Davids) will help to secure and retain the level of skills required, as will improved links with other public-sector partners.

At a national level, benefits measures and improvement measures have been agreed for acceleration of national clinical systems supported by capital investment. A proposed common framework for describing and quantifying benefits has been developed following a review of the strategic outline programmes developed by Health Boards/Trusts and NWIS and this has been used this to inform the prioritisation for the National Informatics Plan. Following NHS Chief Executives approval in February, improvements to digital business case processes are being implemented and will further support the implementation of the National Informatics Plan.

In response to recommendation 13 on the management of change requests, WG have committed to working with NWIS to improve its approach and to monitor at monthly meetings with the NWIS Director.

Local

The ABMU Informatics team continue to build excellent working relationships with clinicians, managers and staff and are ideally placed to bridge the gap between NWIS colleagues and staff at the coalface. We have some very good examples where ABMU Informatics have worked in collaboration with NWIS on the design and development of systems and we must continue to do more of this. There should be more investment in locally-based business analysts who can work with clinicians and managers to identify business requirements; work with national and local development teams to ensure products are developed as required; and lead on the implementation/business change.

The updated ABMU SOP will need to ensure the appropriate levels of skills and resources are available to the Informatics team. We will need to review our structure to ensure it is fit for purpose and can deliver an ambitious plan. Successful recruitment and retention is fundamental to this and we must take full advantage of our links with Swansea University and other local colleges as well as collaborating with HEIW and NWIS. Furthermore, partnership working with Hywel Dda under ARCH will enable us share resources and skills to accelerate digital transformation across the region. Similarly, there are opportunities as we take forward boundary

change planning, to collaborate with Cwm Taf on joint working and sharing of resources where beneficial.

Over the last 12 months ABMU Informatics have placed a lot of emphasis on improving benefits management. This has included procuring external consultancy (Channel3), with expertise in health and care business change projects. As a result, we have adopted their benefits management tool, CABER, which we are now using for all new Informatics projects.

8. RECOMMENDATION

Health Board is asked to note:

- The actions being taken in response to the WAO review
- The progress being made across the Informatics work programme

Governance and Assurance							
Link to corporate objectives (please ✓)	Promoting and enabling healthier communities		Delivering excellent patient outcomes, experience and access		Demonstrating value and sustainability		Securing a fully engaged skilled workforce
	✓		✓		✓		✓
Link to Health and Care Standards (please ✓)	Staying Healthy	Safe Care	Effective Care	Dignified Care	Timely Care	Individual Care	Staff and Resources
	✓	✓	✓	✓	✓	✓	✓
Quality, Safety and Patient Experience							
Implementation of informatics systems in healthcare can have a significant positive impact on quality, safety and patient experience. Critical to success is the wide scale adoption of an effective business change model. However poorly designed and implemented and without user centred design they can introduce risk.							
Financial Implications							
See section 6 above							
Legal Implications (including equality and diversity assessment)							
There are no legal implications contained within this report. However, specific impact, where relevant, will have been considered within individual projects.							
Staffing Implications							
There are no direct implications on workforce in this report. However, specific impact, where relevant, will have been considered within individual projects.							
Long Term Implications (including the impact of the Well-being of Future Generations (Wales) Act 2015 - https://futuregenerations.wales/about-us/future-generations-act/)							

Digital transformation is fully congruent with the aspirations of the future generations act	
Report History	None
Appendices	Appendix 1: ABMU Informatics Plans and Progress Appendix 2: National Data Centre Outages Update Appendix 3: Glossary of Terms

Appendix 1: ABMU INFORMATICS PLANS AND PROGRESS

Headline Benefits delivered:

- Emergency Department Morriston - Electronic data capture of triage, diagnoses, treatment and discharge
 - Reduction in transcription errors/re-working of discharge summaries: from 50% → 3% error rate
- NPT Community Resource Team Speech and Language Therapists - Using voice recognition on an iPad
 - Saving 2 hrs per Therapist per day = 18 additional contacts per week across service
 - Health Visiting in Bridgend - Accessing schedules and clinical information on an iPad, increasing visits per day from 3 to 4
- Pharmacy save approximately 32 minutes per patient viewing GP Summary Record in secondary care
 - 39,905 “out of area” pathology results viewed by ABMU clinicians increasing patient safety and increasing efficiency

Key Projects:

Welsh Clinical Portal:

- We are accelerating our rollout of the Welsh Clinical Portal (WCP):
- Access to clinical documents: 2.7 million ABMU clinical patient documents are now available via the WCP along with several million others from across NHS Wales. Secondary care clinicians can also access the GP summary record for the first time.
- Referral management and prioritisation: Over 90% of GP referrals are received and prioritised by consultants electronically – making the process far more efficient end-to-end.
- Pathology electronic test requesting: Already rolled out across NPT, the solution is currently being implemented in wards in Morriston. While making the requesting process more efficient, it also allows clinicians to see what test requests have already been made and where they are in the process, helping to avoid unnecessary and duplicated tests. Decision support can also manage test requests when made online.

Hospital Electronic Prescribing and Medicines Administration (HEPMA):

- ABMU are the pathfinder site for HEPMA on behalf of NHS Wales – with deployment underway now in two of our hospital sites (NPT and Singleton).
- There are significant benefits to be realised in terms of patient safety, quality and efficiencies and cost. ABMU will provide learning to inform national programme (WHEPPMA). Morriston will remain to be deployed at the end of the pathfinder.

Electronic Nursing Documentation:

- ABMU are fully committed to the national e-Nursing Documents projects which will replace the main paper-based documents with revised, shorter and dynamic electronic forms that will be viewable by clinicians in WCP.
- ABMU have already tested software locally in Wards at NPT Hospital on mobile devices to provide learning to the National Programme.

Citizen Held Record (Patients Know Best™):

- ABMU is the first Health Board in Wales to allow patients to access, control and share their own patient records with interfaces to the national information systems.
- We are working with 'Patients Know Best™' and NWIS to empower citizens to support their own health and wellbeing through the provision of the Patient Knows Best™ platform. This will also allow different ways of managing patients with long-term conditions, with fewer face-to-face appointments.
- The first patients began using the system on Tuesday 10th July 2018!
- During Q3 and Q4 of 2018/19 outpatients in ten clinical services in POWH will be encouraged to take accounts. In recognition of the partnership approach that has developed between ABMU and PKB, the contract has been extended to allow four services in Swansea to participate in the evaluation demonstrator of this platform and App.
- A full evaluation is being conducted with external support from Swansea University, College of Human and Health Science.
- We are working with Digital Communities Wales (Wales Cooperative Centre) and our volunteers to support patients in adopting this application.

IntERnet redevelopment (“website”):

- In collaboration with WG and NWIS, ABMU are in the first phase of the all Wales project (The Mura™ project: SRO Professor Hamish Laing) to redevelop NHS internet sites across Wales to make it much easier for users to find the information they wish to see on whichever device they wish to use. An ABMU beta site is planned for launch by September subject to local resourcing.

IntRAnet & Communication Hub:

- The Investments & Benefits Group (IBG) have approved a business case to deploy a new Intranet & Communication Hub across the Health Board built in Microsoft SharePoint™.
- The development will allow staff to find the information they need to work effectively, to carry out administrative work far more efficiently and to collaborate better whilst reducing the dependency on paper.
- The major project will commence this financial year, leading to phased implementation throughout 2019/20.

Mobilising the Community Workforce in readiness for the Welsh Community Care Information System (WCCIS):

- Enabling staff to familiarise themselves with mobile technology through the deployment of 2,500 iPads (funded by ETTF) which is well advanced.
- Significant benefits are already being seen in terms of efficiency – reduction in duplication, reduction in travel time back to base and new ways of working.
- WCCIS presents a significant opportunity to enable models of integrated care across Western Bay but requires significant financial investment by Health Boards and Trusts to deliver the benefits.
- ABMU plans to achieve local business case approval and establish a deployment order for the system by the end of March 2019, with a view to a phased implementation from April 2020.

Business Intelligence and Analytics:

- As a Health Board we recognise the importance of data driven/informed decision making and are taking advantage of the opportunity presented by today's technology.
- We have numerous digital dashboards being used by managers and clinicians: Unscheduled care, planned care, clinical variation, ward (currently being spread).
- We are further investing in analytics tools and resources to accelerate the provision of analytics at the point of care.
- There remains a great deal to do to build analytical capacity and a culture of using data to inform decision in the Health Board
- Opportunities to partner and co-fund academic informatics posts with the Computational Foundry at Swansea University are being pursued.

Modernisation of Health Records:

- ABMU still has over 2 Million paper medical records as well as thousands of other clinical records in storage. As part of ABMU's journey to a digital health record, we are implementing RFID case note tracking (funded by WG Invest to Save) significantly to improve the efficiencies of our paper-based health records service.

- This project will provide numerous benefits. It will modernise and transform the way that the Health Records Service manage, store, access and track paper records across the Health Board, which in turn will improve efficiencies and provide very positive return on investment over the lifetime of the project.

WIFI Infrastructure:

- In March 2018, with the implementation at Singleton Hospital and our Community Hospital Sites, we completed our ambition to establish WIFI across all ABMU's hospitals.
- Not only does this give our patients and staff free Wi-Fi (we have 70,000 devices accessing our network every month) but it underpins our vision of providing our staff with the ability to access and capture information at the point of care. The network also provides the EDUROAM network allowing students to link to their educational systems and resources wherever they are. Changes in the configuration of the NHS Network will allow staff from Hywel Dda University Health Board automatically to connect to the NHS without needs to use VPN and authentication. We are planning to do this for Cwm Taf employees as well.

Bring Your Own Device (BYOD):

- ABMU actively encourages our staff to access Health Board digital resources on their own devices by making free software available (MobileIron™). We currently have 1,857 active users, which is the largest number across Wales.

Cyber security

- There has been considerable investment in Information Security measures to protect the integrity of our systems and information which has included the upgrading of software versions and patches.
- The move from capital purchased licences to software as a service (revenue funded) for the major Microsoft products will help ensure we are running the most recent versions of these products. However, it has created a significant revenue cost pressure on Health boards.
- A nationally commissioned review of all Health Board and Trust cyber security maturity is informing further capital investment this year.

Information Governance

- The Health Board has invested in Information Governance to improve current and ongoing compliance with the General Data Protection Regulations which came into force on 25th May 2018. There has been good progress against the delivery plan presented to the Board. An update will be reported to Audit Committee.
- The Health Board has deployed and monitors actively the National Information Systems Audit Tool (NIAS). This allows potentially inappropriate access to patient information to be identified and investigated. This is an

important part of Information Assurance and a requirement of GPC Wales for access to the GP summary record.

Electronic Discharge Information

- ABMU remains the only Health Board to measure and publish openly its performance for completion and timeliness of discharge information using its own application (eTOC and dashboard). Performance has improved significantly.
- In a collaboration with Royal College of Physicians UK (TROCAR project) we will adopt an improved version of the national application MTeD later in 2018/9.

Appendix 2: NATIONAL DATA CENTRE OUTAGES UPDATE

There have been three major incidents since January causing outages to multiple national systems hosted in the national data centres.

There have also been a significant number of less extensive incidents causing loss of service for individual systems hosted in the national data centres. We experienced an unplanned episode of WLIMS (Pathology) downtime on Saturday 7th July.

These incidents have caused disruption and additional work for staff in our Health Board services and delayed some patients care or required repeat samples. No serious harm to patients has been identified, however internal Business Continuity processes have been required on several occasions.

As a result of the incidents, the Chief Executive wrote a letter of concern to Mr. Steve Ham (CEO of Velindre NHS Trust which hosts NWIS) on 27th April. Andrew Griffiths, Director of NWIS responded to the letter on the 12th June. Subsequently a response was also received from Mr Ham.

There are several areas of for potential improvements, ranging from change control and resolution processes through to communication and reporting, and a need to secure investment for ageing infrastructure in NWIS.

The response from Andrew Griffiths highlighted a number of aspects that NWIS is focusing on to address the concerns raised. These are summarised below, along with proposals for further action, to be discussed between Andrew Griffiths and Tracy Myhill on 11th July.

Infrastructure Management Board (IMB): attended by Health Board and NWIS Technical Leads has recently stepped up to take on more responsibility in assuring NWIS processes. In this, NWIS representatives are being completely open and inclusive and a detailed action plan regarding the areas below is being monitored by the group and reported via IPAD.

Change Control - In most cases ICT incidents are caused by change. **Action planned:** Infrastructure Management Board have agreed to receive schedules of major changes planned and receive regular reviews of recent changes. **Further action required:** Proposal that there should be a review of current change control processes, especially where changes impact across NHS Wales organisational boundaries, to ensure that they are fit for purpose.

Incident Resolution Processes - In some cases the incidents have taken longer to resolve than anticipated. **Action planned:** NWIS is undertaking a review of its "System Restoration Plan for Multiple Concurrent Service Failures" and is making some changes to improve this. **Further action required:** Once the revised plan is complete, it should be presented to Health Board leads via the Infrastructure Management Board for further assurance.

National Infrastructure - NWIS has reported that some of the recent problems have occurred on equipment that is around 7 years old and that greater investment is

needed to replace aging infrastructure and systems before they start to fail. **Action planned:** NWIS have commissioned an external review of key elements of the data centre infrastructure. **Further action required:** Proposal that the scope of the review should be reviewed by IMB Members and the reporting arrangements for the review to include Health Boards and Trusts.

Communication - Early and regular communication between NWIS and Informatics teams is critical for all incidents. Whilst NWIS endeavour to facilitate this, there is room for improvement in terms of timeliness, consistency and communication processes (especially when hosting audio conferences). **Action planned:** Welsh Government have worked with NWIS and Health Board representatives to create a new communications protocol that will be used during significant outages. NWIS have procured a new emergency communications system (Blackberry *Ad Hoc* Alerts) to enable timely notifications to multiple recipients. This is being commissioned over the next 2-3 months and will be introduced in a phased manner to manage future outages. **Further action required:** IMB Members to work closely with NWIS to ensure this is implemented effectively.

Reporting and Learning Lessons - The regular reporting of the root causes of incidents and the lessons learned has not always been clear or timely. Infrastructure Management Board recently received a report on the first two multisystem outages and NIMB received a verbal report on the outages. **Action planned:** NWIS to provide regular reports on national service incidents to IPAD and local service incidents to Health Board and Trust SLA meetings. **Further action required:** Improved timeliness and scrutiny of incident root cause analysis and lessons learned reports.

Appendix 3: GLOSSARY OF TERMS

Abbreviation	Term
CCIO	Chief Clinical Information Officer. Umbrella terms for CMIOs CNIOs, CTIOs etc.
CDO	Chief Digital Officer. Focussed on digital transformation including citizen facing services.
CG	Caldicott Guardian. Oversees the application of the Caldicott principles, data sharing and access requests
CIO	Chief Information Officer. Focussed on organisational systems, delivery and information
CMIO	Chief Medical Information Officer
CNIO	Chief Nursing Information Officer. Increasingly important as digital systems begin to impact on nursing processes
CTIO	Chief Therapies Information Officer. Increasingly important as digital systems begin to impact on therapies processes
EHR	Electronic Health Record. A single system replacing the case note with integrated decision support, pathway determination, reporting functionality and analytical capabilities
NWIS	NHS Wales Informatics Service. National function hosted by Velindre NHS Trust. Responsible for IT and information standards, product development and deployment, national infrastructure and cyber security.
SIRO	Senior Information Risk Owner. Advises the Board on Information Risk
WCP	Welsh Clinical Portal. A place where different sources of information about patients are brought together on a single screen (eg blood test results, X ray reports, letters and documents, demographics, GP summary record). Increasingly these are from across all of NHS Wales. Not the same as an Electronic Health Record.