Meeting Date	12 January 2021	Agenda Item	2.3
Report Title	Audit Committee – Digital Services Health Board Risks		
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Report Sponsor	Matt John, Director of Digital		
Presented by	Matt John, Director of Digital		
Freedom of Information	Open		
Purpose of the Report	The purpose of this report is to provide the Audit Committee with an updated overview of the risks associated with Digital Services on the Health Board risk register and the actions being taken to mitigate against them.		

Key Issues	• There are 5 HBRR risks associated with Digital Services that are overseen by the Audit Committee:
	
	  ➢ Information Led Decisions;
	  ➢ Sustained Clinical Services – Digital Transformation;
	  ➢ Storage of Paper Records;
	  ➢ Cyber Security;
	  ➢ National Data Centre Outages		

Specific Action Required *(please choose one only)*	Information	Discussion	Assurance	Approval
	☐	☐	☒	☐

Recommendations	The Audit Committee are asked to: • **NOTE** the risks associated with Digital Services and the mitigating actions being taken

DIGITAL SERVICES HEALTH BOARD RISKS

1. INTRODUCTION

The purpose of this report is to provide the Audit Committee with an updated overview of the risks associated with Digital Services since last reported in March 2020, and the actions being taken to mitigate against them.

2. BACKGROUND

The Welsh Government's (WG) digital health and social care strategy 'Informed Health and Social Care' (2015) recognises the important role of technology in facilitating patient empowerment, health and wellbeing. The strategy sets out a vision for the future use of technology in the delivery of effective and safe health and care in Wales in line with the principles of prudent healthcare and co-production. The Healthier Wales document published in June 2018 builds on this and sets out the importance of technology to support more integrated working between health and social care, focusing on the patient at the centre of the integrated team.

The vision for digital services in Swansea Bay University Health Board (SB) is to deliver digitally enabled world class health, care and well-being for our population.

SBUHB organisational strategy 'Better health, better care, better lives' states that the organisation will maximise digital opportunities and use it to transform how people's health is improved and how care is delivered. This is reflected in the enabling objectives of delivering, digitally enabled health and wellbeing and digitally enabled care.

The aim is to achieve digitally enabled, health and wellbeing by utilising digital solutions to ensure that our citizens are supported to look after their own health and wellbeing, improving quality of life and longevity. It includes providing our citizens with information about their current state of health, the potential implications and risks they may face and the resources and access to expert advice that they may need to manage/avoid these.

Digitally enabled care is about ensuring that our clinicians and, staff have access to the information they need to manage the care of our patients when they require treatment. Information being available to patient will increase levels of co-production and self-care. This information will be available at the time it is needed, be accurate, complete, and comprehensible and support the decision making of the individual that requires it.

As outlined in the update provided to the Committee in March a number of positive National changes were planned in 2020/21 to support the delivery and governance around digital transformation including:-

- Principles of open architecture applied to national solutions
- Open platform and open standards will start to be embedded
- Investment of £50m for digital priorities
- Appointment of Chief Digital Officer for Wales

- Reformation of NWIS as a strategic Health Authority

The outbreak of COVID-19 at the start of 2020/21 has had an impact on the speed of progress of these national changes eg. part of the £50m was reprioritised to support the Digital response to Covid, work on open architecture and platforms has slowed. The consultation process for NWIS to the Digital Special Health Authority for Wales took place between September and November 2020. The Health Board submitted a response to the consultation broadly supporting the proposal. The outcome of the consultation will be published in the new year.

COVID- 19 has continued to be both a disruptor and an enabler to the delivery of Digital Transformation within SBUHB throughout the first nine months of the year. Whilst Digital resources have been diverted to support COVID 19 activities, such as workforce mobilisation, field hospitals, the Test, Trace and Protect and vaccination programmes, focus has further increased on the delivery of the programme of Digital transformation outlined in the IMTP.

Opportunities presented to SBUHB to exploit the need to change caused by COVID19 to accelerate the Digital Transformation plan have been seized and used to support the delivery of the original plan. This step forward has been clearly demonstrated by the accelerated roll out of Office 365, this has enabled improved communication through the use of Teams and efficiencies in using the tools of the wider O365 functionality.

The planned Digital transformation programme has also continued and in Q2 Neath Port Talbot Hospital became the first hospital in Wales to have E-Prescribing implemented across all Wards. Combining this with the other Digital implementations across all sites, including NPT, such as SIGNAL (patient flow), Medicines Transcribing and E- Discharge, virtual ward rounds, virtual social services assessments, electronic patient visiting etc. is a massive step forward towards achieving the Digital Ward.

SBUHB Digital have been at the forefront of enabling data driven decision making during the COVID period, with the use of dashboards. The agile development of Covid and operational dashboard, has provided the GOLD command and strategic and operational managers with close to live reporting on key indicators across the HB across a range of critical indicators.

The rapid deployment of digital solutions and hardware over the last 6 months has resulted in an increased pressure on Digital Services Team to support business as usual. The roll out of over 2,200 additional devices and new applications such as Attend Anywhere (over 21,000 video consultations completed to the end of the year), Teams, SIGNAL etc. has meant that more and more staff have adopted digital ways of working and are using digital solutions to transform their services. This has resulted, on average, an increase of 45% in calls logged with the Digital Operations team compared to the same period in the previous year.

Covid has also had an impact on the Digital risks the Health Board faces and these are reflected below.

3. GOVERNANCE AND RISK ISSUES

As described in the update to the Committee in March 2020 the internal governance framework to support Digital Transformation has been strengthened. The Framework presented in March has been further aligned to the Health Board's Governance structure. Despite the disruption of COVID the model has been largely implemented with the inaugural Digital Transformation Leadership Group taking place in October 2020. The full Digital Services Governance Framework is available in Appendix 1 and in summary consists of the following key attributes:-

- Digital Transformation Leadership Group (DTLG) - governance and assurance of programme planning, prioritisation, implementation and benefits delivery from the 6 Digital programmes
- Information Governance Group (IGG) – governance and assurance of information and information risk
- Digital Service Management Group (SMG) – governance and assurance of operational informatics systems and services
- Business Analytics and Intelligence group – will be established to provide direction, governance and assurance of the strategy.

The Digital Services team have a monthly Risk Management Group (RMG) that reviews and manages existing and new risks that have requested escalation onto the Digital Services risk register. Risks that need to be escalated to the Health Board Risk Register are also actioned.

There are a number of risks that have been identified within the Digital Services risk register that are being managed to ensure ongoing delivery of the Digital vision of the Health Board. Five of these risks have been escalated to the Health Board Risk register and overseen by the Audit Committee.

Digital transformation (HBR27 Risk Score 16) – digital transformation requires significant financial investment and there is a risk if that investment is not forthcoming. Investment is not only required to support the launch of digital transformation initiatives and projects but also on a recurrent basis to support the growth in digital services and reflect the organisation's dependency on these solutions to maintain service provision. Whilst the HB have made long term capital commitments to support the implementation of digital solutions the revenue required to support ongoing service provision has been more difficult to secure. Since the last update to the Audit Committee the risk score has been increased from 12 to 16 due to a number of factors:-

- The digital response to COVID has meant the issuing of over 2,000 additional mobile devices and the escalation of a number of digital solutions (eg MS365 and attend anywhere). Support arrangements required to maintain sustainable digital services needs to be increased eg. Volume of calls a month to the IT helpdesk have increased by approximately 45%
- Funds being fed down to Health Boards from the National Digital funding have been less than anticipated

- CTM have also started the process to start ceasing parts of the Digital Services SLA. As flagged during the disaggregation process Digital services for SBUHB would not be sustainable if 28% of resources were transferred to CTM due to economies of scale

Key Mitigations and Actions
- Digital services have identified the financial impact of the expansion of digital solutions and are working closely with Finance to determine how to address the issue.
- Capital priority group for the HB considers digital risks for replacement technology which is fed into the annual discretionary capital plan. IBG process allows for investment requests in projects to be submitted to the HB for consideration and provides scrutiny to ensure Digital resources required are considered for all projects
- Informatics prioritisation process has been introduced to ensure requests for digital solutions are considered in terms of alignment to the strategy objective, technical solutions and financial implications
- HB has invested £900k recurrently in the project staffing resources to facilitate the delivery of the Informatics Strategic Outline Plan
- Working closely with WG, NWIS and other Health Boards to ensure appropriate prioritisation of national digital funds

Paper Record Storage (HBR36 Risk Score 12) - the reliance on paper to record information and manage workflows within HB has created a huge volume of patient notes and other records that need to be managed and stored. The size of these records continues to grow and storage areas have reached capacity. The sheer volume of paper records and their increasing complexity also means it is difficult to ensure the quality of the record. As reported in March the rollout of RFID for the main Health Record libraries has been very successful in supporting the management of the paper record and freed up space in the main libraries but his has been offset by the enforced halt of record destructions as part of the Blood Enquiry. Further progress has been made on he digitisation of the health record eg the outpatients continuation sheet pilot and work will continue in this area with the wider planned roll out of the Welsh Nursing Clinical Record (WNCR).These initiative will reduce the volume of paper being used/added to the paper record. Unfortunately the planned development of a case for improved record storage and management has been delayed as a result of COVID.

Key Mitigations and Actions
- WNCR will commence rollout in 21/22
- Outpatient continuation Sheet has been rolled out and will form part of the plan to move Outpatients to paper light. Further outpatients modernisation will take place as part of the Outpatients Modernisation group.
- Roll out of WCP has continued during COVID and will progress further in 21/22
- MTED has been rolled out across Morriston and NPT. It will be rolled out in Singleton from January 2021
- Case for improved storage solution for acute paper record will continue to be developed.

Operational and strategic decisions are not data informed (HBR37 Risk Score 16) - the move towards capture of information and processes electronically means that data can be accessed and reported on much more quickly. Information therefore needs to be presented to the user in a timely and accessible way to allow them to use it to inform the decisions they make. As reported to the Committee in March the Health Board had already developed a number of dashboards but adoption of them had not been as high has would have been expected. The Covid outbreak however required detailed information and business intelligence to support the Health Board's response to the crisis. As a result a dashboard was developed to provide near live information from a wide range of digital sources to provide Gold command and operational managers clear views of the situation as well as modelling to provide indications of potential future impact on the services. There has therefore been a shift in adoption of the use of business intelligence in making key decisions and the dashboard has been used continuously throughout the Covid response in Gold and Silver Commands. Unfortunately COVID has meant that the Business Intelligence Strategic Plan that was completed in March 2020 was not presented to executive colleagues as planned and will now be refreshed and re-launched in Spring 2021.

Key Mitigations and Actions

- COVID19 Dashboards Developed and are being used to inform the decision making process at Gold (COVID SITREP, Mortality,TTP etc)
- Strategy developed but not presented to Board due to COVID19. This is planned for refresh in Spring 2021
- . Produce BI strategy implementation plan outlining investment requirements in capacity and capability
- New technologies being reviewed for advanced analytics and integration into a new Health Board analytics platform, which includes taking full advantage of the investment in Office 365 – Power BI tool. Power BI dashboards have already been developed and are in use.
- Continue to contribute to the development of the National Data Repository (NDR)

Cyber Security (HBR60 Risk Score 20) - The level of cyber security incidents is at an unprecedented level and health is a known target. The health board has increased digital services (users, devices and systems) and therefore the impact of a cyber security attack is much higher than in previous years. In the March update to the Committee it was reported that the HB had just recruited and Cyber Security Manager (new post). Since then a further two new posts have been recruited to and a cyber security team created. (Anticipated funding from WG for these 2 posts was not forthcoming so they have been funded internally). During the pandemic there has been an increased cyber security threat, with the NHS being targeted by fraud and other scams. Health Board cyber security leads, in collaboration with national colleagues, have utilised the tools invested in to combat any risk and raise awareness through bulletins and targeted emails. A comprehensive paper on the Health Board Cyber Security response was submitted to Senior Leadership Team, Audit Committee and the Health Board in Q2. The paper recommended that Cyber Security Training be made mandatory. A more detailed proposal for the mandatory training is being constructed.

Key Mitigations and Actions
- Improve compliance with Cyber Security Training for all staff

- The NHS in Wales is protected by a firewall by NHS Wales Informatics Service (NWIS).
- Swansea Bay UHB has advanced firewall protection to protect the network from potential cyber-attacks.
- The national security tools are in place to highlight vulnerabilities and provide warnings when potential attacks are occurring.
- A patching regime is in place which ensures desktops, laptops and servers are protected against any known security vulnerabilities. Anti- virus is in place to protect against known viruses with intelligent scanning on potential viruses not yet discovered.

National data centre outages (HBR70 Risk Score 20) – a number of the Health Board's systems are national and are therefore hosted within data centres that are managed by NWIS. There have been a number of multi system outages over the last 2 years with a number of factors causing outages or resulting in extended outages. The latest outage in June 2019 in the Blaenavon Data Centre was caused by poor maintenance of cooling systems and insufficient monitoring. National data centre outages will disrupt health board services. Since the update provided to the Committee in March there has been a National Infrastructure review which is being considered by WG and NWIS. The supplier of the Blaenavon Data Centre has confirmed it is ending the contract and the data centre will need to be moved to a new location. Whilst this presents a risk in the period of transition it also provides an opportunity for NHS Wales to improve stability of hosted services. In recent years WLIMS has been one of the hosted solutions that has suffered from stability issues. In Dec 2020 the WLIMS platform was upgraded and it is expected that this will increase the stability of the solution.

SB are well represented on the national Infrastructure Management Board (IMB) and Service Management Board (SMB) which are responsible for holding NWIS to account for delivery of services and ensuring actions are identified to address any failings/risks.

Key Mitigations and Actions
- The national Infrastructure Management Board (IMB) and Service Management Board (NSMB) are the boards that oversee Major Incidents, identify risks for national services and make recommendations to improve the availability of national services. These boards meet monthly to hold NWIS to account for delivery of services.
- Infrastructure major incident reviews are undertaken with selected board members and recommendations agreed in the board.
- The impact of outages are also mitigated against by the Business Continuity plans that are in place within the Service Delivery Units to allow operational services to continue during a data centre service outage.
- Monitoring the success of the WLIMS upgrade over the next period. If there is clear evidence that the changes have established a significantly more robust platform, it is possible that the overall risk score will be reduced.

4. FINANCIAL IMPLICATIONS

The financial implications of COVID-19 and Digital Transformation are being addressed in partnership with Finance and Digital services as part of the 21/22 planning process.

5. RECOMMENDATION

The Audit Committee are asked to:

- **NOTE** the risks associated with Digital Services and the mitigating actions being taken

Governance and Assurance		
Link to Enabling Objectives *(please choose)*	**Supporting better health and wellbeing by actively promoting and empowering people to live well in resilient communities**	
	Partnerships for Improving Health and Wellbeing	☐
	Co-Production and Health Literacy	☐
	Digitally Enabled Health and Wellbeing	☐
	Deliver better care through excellent health and care services achieving the outcomes that matter most to people	
	Best Value Outcomes and High Quality Care	☒
	Partnerships for Care	☒
	Excellent Staff	☒
	Digitally Enabled Care	☒
	Outstanding Research, Innovation, Education and Learning	☒
Health and Care Standards		
(please choose)	Staying Healthy	☒
	Safe Care	☒
	Effective Care	☒
	Dignified Care	☒
	Timely Care	☒
	Individual Care	☒
	Staff and Resources	☒

Quality, Safety and Patient Experience

Ensuring the organisation has robust risk management arrangements in place that ensure organisational risks are captured, assessed and mitigating actions are taken, is a key requisite to ensuring the quality, safety & experience of patients receiving care and staff working in the UHB.

Financial Implications

The risks outlined within this report have resource implications which are being addressed by the Director of Digital Services working with finance leads and taken into consideration as part of the Board's IMTP processes.

Legal Implications (including equality and diversity assessment)

It is essential that the Board has robust arrangements in place to assess, capture and mitigate risks faced by the organisation, as failure to do so could have legal implications for the UHB.

Staffing Implications

Staff will be briefed on the changes required by the digital programme and the mitigation of digital associated risks through workshops and training programmes

Long Term Implications (including the impact of the Well-being of Future Generations (Wales) Act 2015)

No implications for the Committee to be notified of.

Report History	Previous update provided to March 2020 Audit Committee
Appendices	Appendix 1: Digital Governance Framework

Audit Committee – Tuesday, 12th January 2021