Records Digitisation
Final Internal Audit Report

May 2023

Hywel Dda University Health Board

GIG CYMRU NHS WALES
Partneriaeth Cydwasanaethau
Gwasanaethau Archwilio a Sicrwydd
Shared Services Partnership
Audit and Assurance Services

GIG CYMRU NHS WALES
Bwrdd Iechyd Prifysgol Hywel Dda University Health Board

Contents

Review reference:	HDUHB-2223-25
Report status:	Final
Fieldwork commencement:	6th February 2023
Fieldwork completion:	21st February 2023
Debrief meeting:	5th April 2023 & 28th April 2023
Draft report issued:	28th April 2023
Management response received:	4th May 2023
Final report issued:	9th May 2023
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Acknowledgement
NHS Wales Audit and Assurance Services would like to acknowledge the time and co-operation given by management and staff during the course of this review.

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Executive Summary

Purpose

This review considered the progress made, and governance arrangements in place for the Records Digitisation Project

Overview

We have issued limited assurance on this area.

The Health Board has two projects currently operating in relation to digitalisation of records. These are not managed within an overarching programme.

Projects were subject to appropriate approval and governance structures are in place, however reporting does not cover the full scope and benefits have not been fully defined.

The significant matters which require management attention include:

- Developing Programme Governance
- Defining and establishing a benefits realisation process

Further matters arising concerning the areas for refinement and further development have also been noted (see Appendix A). These include

- Cost Benefit analysis
- User Acceptance testing

Report Opinion

		Trend
Limited 	More significant matters require management attention. **Moderate impact** on residual risk exposure until resolved	N/A first report

Assurance summary[1]

Objectives		Assurance
1	Project Governance	Limited
2	Project Scrutiny	Substantial
3	Cost-Benefit analysis	Reasonable
4	Benefit tracking	Limited
5	Record quality and security	Reasonable

[1]The objectives and associated assurance ratings are not necessarily given equal weighting when formulating the overall audit opinion.

Key Matters Arising

		Objective	Control Design or Operation	Recommendation Priority
1	Programme governance	*1*	Design	High
2	Cost Benefit Analysis	3	Operation	Medium
3	Benefit Tracker	4	Operation	High
4	User Acceptance Testing	5	Design	Medium

1. Introduction

1.1 In line with the 2022/23 Internal Audit Plan for Hywel Dda University Health Board ('the Health Board') this review considered the progress made, and governance arrangements in place for the Records Digitalisation project.

1.2 The Health Board is currently 'paper heavy' with over 1.5 million paper patient medical records. This has significant repercussions for both the cost of storage and accessibility of information. The Records Digitalisation project proposed an in-house scanning solution and the purchase of an electronic record document management system (EDRMS) to facilitate storage, retrieval and viewing the scanned documents.

1.3 This response is appropriate to the current situation and is consistent with the Health Boards broader digital ambitions as described in the digital response to the organisational strategy- 'Our digital Response 2020 – 2025'.

1.4 The risks considered as part of this audit were:

- Poor project governance results in time delays and acceptance of inappropriate risk;
- The medical records digitisation project does not deliver the anticipated benefits;
- There are inadequate resources to meet the project objectives;
- Loss / unavailability of information; and
- Breach of legislation due to inappropriate access to information.

2. Detailed Audit Findings

Background

2.1 The Health Board have been aware they were paper-heavy for some time, reports and proposals on record keeping and storage have identified this as a potential issue for several years'.

2.2 The digitalisation solution currently being developed started out of an immediate need to alleviate a critical situation with physical record storage. The Health and Safety Executive and the Fire Service were going to issue sanctions on the Health Boards main record storage facility in Dafen. These would have effectively closed the site and had a catastrophic effect on all of the Health Boards regular scheduled activities.

2.3 The current position is that the immediate crisis with record storage has been remediated by sending a total of 277,500 inactive patient records to three scanning & storage providers procured on a regular commercial basis. They have scanned a sample of @350 documents each with the physical and electronic versions returned to the board for quality checking and testing.

2.4 The Records Digitalisation project is currently two projects running in tandem. These are:

- The creation of an in-house scanning solution with the twin aims of reducing HDD dependency on paper records and preventing storage issues recurring. This is being managed by the Operations Directorate.
- The provision of an Electronic Record Document Management System (EDRMS) to access the scanned documents. This is being managed by the Digital Directorate.

2.5 We note that the split of responsibility between different parts of the creation of a digitised record is unusual compared to other Health Boards within Wales who have moved forward with a digitisation programme.

2.6 We further note that the EDRMS solution will be required to support the use of e-documents, i.e. complete replacement of a paper record with an electronic form completed and processed as part of a digital process solution. This functionality will be necessary if the Health Board is to achieve its digital response.

Objective 1: Appropriate project governance is in place.

2.7 We have noted that there is no single overarching programme which describes how projects relevant to records digitalisation will be synchronously delivered, how their key delivery indicators will be coordinated and when it will be ready for sign-off as a complete digitalisation solution.

2.8 We have found two specific instances where communication between the current projects was inadequate.

- The scanning project requires an NHS network connection. This was not shared with the digital directorate when it was first identified resulting in delays in it becoming available.
- The estimated cost of the EDRMS in the proposal to the executive team in November 2021 was £283k. This figure was not supplied by the digital team, and we note that the system procured in March 2022 cost £703k.

2.9 We further note that although e-forms were included within the contract for EDMRS, there is no project currently underway to progress this. Without this strand the Health Board will continue to produce paper which will need scanning. Lessons from other organisations show that identifying the forms to digitise takes time, and this need not wait until full EDMRS implementation.

2.10 The scanning project documentation is contained in a Microsoft Teams library 'HDD_Digital_Health_Records/General/Documents'. We have reviewed the documentation in this Teams library and note that the project documentation reflects there has been no progress on the scanning solution since the project manager left in October 2022. The project is currently stalled due to the building selected needing repairs and improvements to be made by the landlord to make it fit for purpose.

2.11 The only evidence of a full delivery schedule and budget for the digitalisation solution is a pipeline document 'Digitisation pipeline v2.24' from November 2021. This document shows an EDRMS cost of £283k, the full 227500 documents digitised

by November 2022, with internal scanning 'commencing in earnest' in March 2023. This has been proven inaccurate and has not been recast. **See Matter Arising 1**

2.12 The EDRMS solution was originally also managed through the HDD_Digital_Health_Records Teams library. However, it is now being managed through the Digital Directorates proprietary project management system Microsoft PACE. This is a comprehensive project management tool for managing any project from a small standalone project through to a large programme containing multiple independent projects. It has the necessary functionality to support all aspects of project management from individual task listings through budget control to management reporting. We note that use of PACE is new, and the project documentation is still in transition between the systems.

2.13 We were advised that the EDRMS solution has been commercially procured with a three-year support package. There are no ongoing financial costs to be tracked as part of its development and commissioning. The staff working on the solution are permanent digital team members and not temporary staff engaged just for the project: as such their costs are not being reported against the project.

2.14 There was an implementation plan prepared by Civica (the chosen EDRMS provider) to deliver CITO (the chosen product) with an original target date of 21/10/2022. This has now been updated with the project finish date set as 25/10/2023. We note that the EDRMS project has issued regular (9) highlight reports on progress; these have evolved into the EHR Digital Highlight report, the most recent of which was issued for January 2023.

2.15 We noted the absence of financial and final delivery indicators in the highlight reports. There was a Steering Group update on 16/01/2023. This was a high-level document focused on immediate matters, again there was no financial or final completion projections. **See Matter Arising 1**

2.16 An EDRMS steering group was established in October 2022, and its Terms of Reference agreed in November 2022. These confirm the SRO and chair as the Director Digital and confirms the group will report to the sustainable Resources Sub-Committee, although as noted the detail in reporting is lacking. The groups purpose of is 'to provide assurance to the Sustainable Resources Sub-Committee that the delivery of the Digitalising Health Documentation EDRMS project is aligned to the strategic direction of the Health Board and is delivered at pace. It has only met once (November 2022) so we cannot comment on its effectiveness.

2.17 The Project is following a project specific risk management process which is consistent with the HDUHB Corporate Risk Management Process. A risk register is being maintained following a standard template and risk measurement criteria. There is evidence of regular review and liaison with the risks relevant to both projects identified.

Conclusion:

2.18 There is evidence that both projects have been planned and there has been some co-ordination and communication between the two project owning directorates. However, the lack of a single co-ordinated programme confirming synchronized

delivery of a fully operational scanning and EDRMS digitalisation solution, and the lack of a full and up to date cost prediction means we consider **limited assurance** appropriate for overall digitalisation delivery governance at this time.

Objective 2: The project has been subject to appropriate initial scrutiny and approval.

2.19 The Health Board Executive Team were advised of the 'storage emergency' with a written paper 'Health Records Storage Pressures – Short and Longer Term Strategies to Resolution – Planning Objective 5M' at their meeting of 28th July 2021. This paper contained a comprehensive description of the problem, why it had 'gone critical', the risks that were being faced, and an outline for a scanning solution.

2.20 There was a further written proposal presented at the executive meeting of 10th November 2021 entitled 'In Year Financial Slippage Opportunities – Progression of Digital Health Record (DHR) Programme - Business Justification Case'. This paper proposed and the acceleration of the scanning solution and the procurement of an EDRMS solution.

2.21 The paper explained the background, assessed the situation, made an investment case strategically aligned to the Health Board objectives, outlined high level benefits and costs and made a recommendation for approval of the requested spend.

2.22 Funding for the longer-term digital solutions was approved by the Executive team on 10th November 2021. An EDRMS solution procurement exercise was begun in January 2022 with the chosen supplier (Civica) being appointed in February 2022, with a procurement request for the chosen solution (CITO).

2.23 The chosen solution includes an e-documents module which can further support the Health Boards digital ambition of a fuller e-document solution to further reduce paper and storage demands. This can be developed and progressed after the initial digitisation projects are completed.

Conclusion:

2.24 We are satisfied that the requirement for management scrutiny of the proposals has been properly met and can award **substantial assurance** for this objective.

Objective 3: Costs and benefits defined within the business case are appropriately supported

2.25 The further executive proposal of November 2021 contained a high-level description of both the quantifiable and non-quantifiable benefits of an EDRMS solution Given that the board had to react to the records storage situation (P2.2) it is reasonable that at the project inception detailed benefits were not fully identified and quantified at that time.

2.26 We note that since then, neither project has developed a full cost-benefit analysis to support the benefits claimed. Additionally, the original project pipeline 'Digitisation pipeline v2.24' from November 2021 does contain high level costs and benefits, though as noted above the document is inaccurate. **See matter Arising 2**

2.27 We note that the Digital Directorate is working in a benefits plan for a full Electronic Patient Record (EPR), though this is not yet complete, and the current projects are not proposing a full EPR solution at this time.

Conclusion:

2.28 Basic benefits have been identified. Given the project was in reality in a 'we must do something' position owing to the critical situation regarding records storage, this was acceptable at that time, however as detailed cost estimates and a fully developed benefit delivery plan have not been produced since then we consider only **reasonable assurance** appropriate for this objective at this time.

Objective 4: The benefits are tracked and the structure ensures that these are achieved, with actions taken if issues are identified which would prevent them being accrued.

2.29 We note that although the Health Board has established a benefits realisation approach, this was not enacted during the project initiation. As a consequence the structure for benefits realisation for the digitisation project is not finalised.

2.30 There was no completed benefit tracker for the digitisation project at the time the audit was carried out. We note there is a draft benefit plan for the Electronic Health Record (a.k.a EPR) which outlines all key benefit areas in line with the Digital Services Benefits Realisation Approach. It recognises that benefits will fall into 2 categories, quantifiable and non-quantifiable. **See Matter Arising 3**

Conclusion:

2.31 Although high level benefits have been identified the benefit plan for the current digitisation project is incomplete, baselines have not been established nor appropriate measurements agreed; as such we can only award **limited assurance** for this objective.

Objective 5: Digitised records are securely held and are of suitable quality and availability for clinical use

2.32 The EDRMS system is not yet live and operational so final quality and security cannot be commented on. We noted the Invitation to Tender required answers to a comprehensive set of questions on the security of the solution and the quality of the scanned documents. We are satisfied that these key aspects are being properly considered as part of the acquisition and development of the solution.

2.33 We note that the scanning project has not yet procured any scanners. As a result, the User Acceptance Testing (UAT) of the solution in the test environment has been carried out on scans of legacy records supplied by each of the (3) third party legacy record scanning partners. This was a limited test with a small number of testers and documents. We have seen a feedback report on this testing and noted the testers comments. **See Matter Arising 4**

Conclusion:

2.34 Given the stage of the digital solutions at the time of this audit we cannot comment on the quality and security of the full solution. However, we are satisfied that these

key aspects are being properly considered and tested as the solution development progresses so can give **reasonable assurance** on the process so far.

Appendix A: Management Action Plan

Matter Arising 1: Programme improvements (Design)		**Impact**
There is no overarching programme for records digitalisation. The two digitisation projects are being managed by different directorates without a single plan listing all the projects interdependencies with deliverables timescales synchronised to ensure complete delivery of the final digitisation solution. We also note no project for development of e-forms. The project reports and updates seen do not contain any up to date data on a project budgets, total expected costs, financial tracking of spend against that budget, nor key delivery schedules with updated project closure dates. This information is a necessary and important part of overall delivery, it should inform the projects overall RAG status and be included as part of all Steering group reports.		Potential risk of: • Project cost overrun • Project delivery overrun
Recommendations		**Priority**
1.1	A single, overarching programme should be created for digitalisation. It should include all projects with an outline delivery schedule and key milestones to facilitate progress and measurement. Financial projections should be included for all projects, and combined as necessary to indicate total programme cost. Project and programme progress reports should accurately report: • all costs to date, comparison against budget/plan. • Progress against milestones, interim objectives. • Immediate risks • Next steps • RAG status on achieving overall objective	**High**

Agreed Management Action		Target Date	Responsible Officer
1	We will aim to establish an overarching programme to provide the necessary governance and assurance to the Board, and would enable the bringing together of the two current workstreams in a more formal approach.	July 2023	Lead: Anthony Tracey, Digital Director Support: Gareth Rees, Deputy Director of Operations

Matter Arising 2 : Cost Benefit Analysis (Operation)			**Impact**
There has been no full and detailed cost benefit analysis for the overall digitalisation programme. The digital solution expenditure pipeline estimated the EDRMS cost as £283k in November 2021 The solution and support procured cost £703k in March 2022. The revised cost has not been used to update all relevant financial projections.			Potential risk of: • overestimate of net benefit. • Significant overspend
Recommendations			**Priority**
2	Once costs are projected (MA1) a full Cost Benefit Analysis should be prepared to include the projects effect on the boards cashflow and overall financial effect. It should be updated accurately with the latest 'known' information and realistic estimates included as necessary. This process should be constantly maintained and reported through all appropriate channels regularly as considered appropriate		**Medium**
Agreed Management Action		**Target Date**	**Responsible Officer**
2	In order to comply with Recommendation 1, a full review of the costs will be undertaken, which will include the on-going revenue costs for the continued roll out of the digitalisation of health documentation across the Health Board	September 2023	Lead: Anthony Tracey, Digital Director Support: Gareth Rees, Deputy Director of Operations

Matter Arising 3 : Benefit tracker (Operation)			**Impact**
There is no complete benefits tracker for the current projects. The digitisation benefit tracker is incomplete.			Potential risk of: • Failure to identify and baseline measurements can result in missed opportunities for further benefit identification weakening the case for further system improvement and development
Recommendations			**Priority**
3	A benefits tracker for the current project(s) should be completed showing expected realisation dates and effects/values. (Either for each project separately, or a combined one for the overall digitalisation programme.) There should be clarity as which part of the whole digitisation programme the benefits are attributable to so as to avoid double counting, and the tracker should include the following: • Benefit owners should be identified • Current baselines should be established and recorded. • Measurement criteria should be clarified and agreed. • Measurement methodology and monitoring, (kpi/automation as appropriate) should be agreed. • Expected benefit delivery schedule should be agreed.		**High**
Agreed Management Action		**Target Date**	**Responsible Officer**
3	To fulfil Recommendation 1, the current digital benefits realisation framework will be retrospectively applied to the new overarching programme, and it will detail a full benefits plan with associated metrics for tracking said benefits.	September 2023	Lead: Anthony Tracey, Digital Director Support: Gareth Rees, Deputy Director of Operations

Matter Arising 4 : UAT (Operation)			**Impact**
CITO UAT document testing criteria are relevant and appropriate and the Methodology appears sound; however, testing only done by two testers on a very small sample (6) in the test environment.			Potential risk of: • Insufficient testing: resulting in potential issues in the final solution not being identified and rectified before go-live
Recommendations			**Priority**
4	Feedback from the tests (reported February 2023) should be used to refine/improve the processes and address any issues raised during testing. Larger scale UAT with testers representative of all groups and grades of users from all disciplines and areas should be repeated on the final proposed system prior to going live.		Medium
Agreed Management Action		**Target Date**	**Responsible Officer**
4	As we have only undertaken a soft launch of the product (specifically in Medical Records) a limited number of staff were used to UAT the system. For assurance purposes, during the quality assurance of the ingested records, 15 staff were accessing the system routinely, both from medical records and digital, to validate the records. Before full roll-out across the Health Board a full UAT test plan, and wider stakeholder engagement will be undertaken.	Proposed wider Rollout December 2023	Lead: Anthony Tracey, Digital Director Support: Gareth Rees, Deputy Director of Operations

Appendix B: Assurance opinion and action plan risk rating

Audit Assurance Ratings

We define the following levels of assurance that governance, risk management and internal control within the area under review are suitable designed and applied effectively:

	**Substantial assurance**	Few matters require attention and are compliance or advisory in nature. **Low impact** on residual risk exposure.
	**Reasonable assurance**	Some matters require management attention in control design or compliance. **Low to moderate impact** on residual risk exposure until resolved.
	**Limited assurance**	More significant matters require management attention. **Moderate impact** on residual risk exposure until resolved.
	**No assurance**	Action is required to address the whole control framework in this area. **High impact** on residual risk exposure until resolved.
	**Assurance not applicable**	Given to reviews and support provided to management which form part of the internal audit plan, to which the assurance definitions are not appropriate. These reviews are still relevant to the evidence base upon which the overall opinion is formed.

Prioritisation of Recommendations

We categorise our recommendations according to their level of priority as follows:

Priority level	Explanation	Management action
High	Poor system design OR widespread non-compliance. Significant risk to achievement of a system objective OR evidence present of material loss, error or misstatement.	Immediate*
Medium	Minor weakness in system design OR limited non-compliance. Some risk to achievement of a system objective.	Within one month*
Low	Potential to enhance system design to improve efficiency or effectiveness of controls. Generally issues of good practice for management consideration.	Within three months*

* Unless a more appropriate timescale is identified/agreed at the assignment.

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