Bwrdd Iechyd Prifysgol Hywel Dda University Health Board

PWYLLGOR ADNODDAU CYNALIADWY
SUSTAINABLE RESOURCES COMMITTEE

DYDDIAD Y CYFARFOD: DATE OF MEETING:	28 June 2022
TEITL YR ADRODDIAD: TITLE OF REPORT:	Digital Health Record (DHR) Programme – Progress to date and indicative direction of travel
CYFARWYDDWR ARWEINIOL: LEAD DIRECTOR:	Andrew Carruthers, Executive Director of Operations
SWYDDOG ADRODD: REPORTING OFFICER:	Gareth Rees, Deputy Director of Operations

Pwrpas yr Adroddiad (dewiswch fel yn addas)
Purpose of the Report (select as appropriate)

Er Sicrwydd/For Assurance

ADRODDIAD SCAA
SBAR REPORT

Sefyllfa / Situation

This report provides a progress update on the Digital Health Record (DHR) Programme and an indicative direction of travel.

The Executive Team, at its meeting on 22nd June 2022, considered the direction of travel proposal summarised within this report.

The proposal, if supported by the Executive Team, would shorten the strategic conversion programme from paper to digital, which was approved in July 2021 by a further 1.6 years. An indicative budget of £1,700,000 (includeing £200,000 for notes preparation and packaging and materials) is noted to convert a further nominal 210,000 non-active records into a digital scanned format.

The Sustainable Resources Committee is asked to note DHR Programme progress to date and acknowledge the suggested/ potential direction of travel that may in due course be approved by the Executive Team.

Cefndir / Background

Previous reports provided on this subject have highlighted the need to move away from paper based clinical records and progress toward the digital form. The storage of 1.2 million records, with ongoing destruction embargoes, has over time created further storage challenges. Aggregated, these invariably identify the requirement to develop and adopt a different approach to clinical records management if a sustainable service remains a key aim.

The transition towards a paperless, or paper-light, organisation is an integer element of the Health Board's Digital Response, and the advancement of the Board towards digital maturity. It is also a key enabler to many other elements of the Digital Response and the Health and Care Strategy, 'A Healthier Mid and West Wales: Our future generations living well', which was approved by the Health Board in November 2018 and the 20-year vision for population health outcomes set out in the Health and Wellbeing Framework, 'Future Generations: Living Well'.

Routine hand-over of information between health care professionals, different specialties/services and administrative staff is predominantly achieved through paper form filling and faxing. This is considered time consuming and sharing information is complex with paper forms getting lost, paper notes having to be physically transported or faxed, notes being illegible, and pages missing. Paper notes pose a logistical challenge for records to be maintained in good order and require significant resources to ensure that they can be consistently located in the right location at the right time, especially across the various clinical teams. Episodes of care may not be apparently obvious with the multiple separate medical records files that exist across the Health Board and pose a risk to patient safety as a result.

To this end, the DHR Programme was established in November 2021 with the overriding aim of mitigating as many of the service risks as was considered practicable, a consequence of being an inherently 'paper heavy' organisation and to transform approaches to a new way of working that is paperless or at a minimum paper-light.

The commencement of the transformation journey, which involves conversion of paper heavy clinical records over to a paper-light model involving several key enabling actions, is marked by several recent key actions as follows:

1) Acquisition of new premises to establish a Health Board scanning bureau (Unit 3, Dafen);
2) Commencement of the procurement of three air scanners offering sufficient capacity (when paired with the establishment of an internal scanning team) to match expected demand arising from new cases generated annually in addition to capacity to deliver a programme of backlog conversion in the timescales indicated later in this report;
3) Commencement of the establishment of a scanning team;
4) Bulk despatches for digital conversion following the engagement of three contractor partners of 227,500 inactive patient records.

These not only initiate a programme of service modernisation but also help deal with a number of acute operating pressures manifested by chronic records storage limitations. Tackling these issues will also bring inherent clinical safety benefits and operating cost improvements in the longer term.

Focusing on the conversion of 227,500, records made possible through the engagement of three commercial sector partners, the Health Board made available a one-time allocation of £1.613 million in November 2021 to facilitate the first step in this process. This move has effectively shortened what was a >10-year conversion programme to closer to 8 years. At the same time an electronic document records management system (EDRMS) has been procured; a feature being led by colleagues in IM&T, which is currently undergoing commissioning preparations. The CIVICA CITO system procured will provide the access portal for the digital health record in the future.

A number of future actions will need close attention and are critical to commissioning of a scanning bureau. These will need to be resolved and the first batch of block scanning ingested before any future commitments can be made with the private sector. They are as follows:

1) Provision of a health network at Unit 3, Dafen (site for the scanning bureau)
2) A fixed IP address/ location for scanned records to be transferred to from the scanners (located at Unit 3)
3) Resolution of handshaking/ scanning and record ingestion protocols between the CIVICA CITO system and the three scanning providers

4) The presence of sufficient cloud storage to facilitate ingestion of the records already removed from Llangennech and together with a projected future requirement which is likely to be staged up over time.
5) More certainty over Digital Health and Care Wales's (DHCW) plans for modernisation where there is an impact on the digital health records would also help avoid abortive or duplicated effort

In anticipation of these risks, a contingency arrangement has been made with the three scanning providers in the event that these matters overrun. This involves the extended storage of 227,500 records for longer that the current contract allows. The rate will be circa £2000 plus VAT per month per provider (3 providers) for paper record storage.

Whilst the recent removal of 227,500 records from the Llangennech store has eased storage pressures considerably and hence significantly mitigated the underlying fire and health and safety risks prevailing at the site, it is important to remember that there remains nearly one million paper patient records stored at the facility. To add context to this number it is worth considering the storage impact that one hundred million pieces of paper presents – all of which will eventually need to be converted into scanned format unless either or both of the Government destruction embargoes are removed in the meantime.

Removal of either or both embargoes would offer opportunity to redirect a proportion of the records library, at least, directly to destruction.

Additionally, it is guesstimated that a further 500,000 records under the accountabilities of various Information Asset Owners not linked directly with the accountabilities of the central health records management team and associated clinical record governance processes are being held in third party storage or in discreet internal storage areas under Health Board control. This unknown quantity will invariably need to be added to the total scanning requirement, which could move the gross challenge close to 2 million records. In response to this and with the support of various Information Asset Owners involved it is planned that the space created recently at Llangennech, once reorganised will provide capacity to transfer this unknown quantity of records held in third party storage. This is in readiness for preparation for processing into digital scans whilst freeing the Health Board of avoidable storage cost burdens. If the central proposal presented in this report is supported, this will extend the opportunity even further by doubling the capacity gain to date. However, it should be noted that this opportunity has a time imperative attached, which effectively ends in March 2026 – at which point the 5-year break clause at Llangennech ends. To go beyond this point without completing the digital conversion of a large part of the remaining 970,000 records will mean a further commitment to the Llangennech store until at least 2031, incurring costs of no less than £200,000 per annum with a contract commitment of 5 years. To default into this situation would seem perverse, notwithstanding being cost inefficient given what has already been achieved and what is likely to be gained between now and 2026 if further inroads into backlog scanning can be made as planned.

It should also be noted that the proposal that follows incorporates and builds upon several actions already in train, which are aimed at limiting the amount of paper being produced by the organisation as a result of documentation for new and follow up cases already being available on Welsh Patient Administration System (WPAS). The figures and calculations presented are based on expected residuals after the impact of these actions have been taken into account.

Asesiad / Assessment

Acceleration Proposal and Rationale

The first phase of block scanning, involving 227,500 non-active records, is being undertaken by private sector scanning partners and completion of this phase of work is expected in October 2022 provided the actions listed 1-5 in the section above are completed. To successfully ingest the digital records that have been scanned as a result of outsourcing will need the Health Board to have its handshaking/ scanning and record ingestion protocols and accompanying cloud storage in place with a functional EDRMS.

Testing is currently underway to clear the route to commit to record digitisation (at scale) whilst limiting risk and applying a metatag to test patient record retrieval (by EDRMS). Progress has been made providing a comprehensive understanding of the specification requirements for scanning, associated metadata links and the method of ingestion into the EDRMS.

The pipeline diagram, attached at Appendix 1, shows the estimated timeline that the programme can be expected to follow without any further investment into third party scanning. With system design capacity offering approximately 126,000 record conversions annually, when at full output levels, it can be expected to take 8 years from the time that systems are fully operationalised - current information points to this starting in April 2023. When the guesstimate of a further 500,000 records held in third party storage and elsewhere is added this extends the programme by a further 4 years to 12 years.

However, the pressure point in the default programme impacts in March 2026 when the bulk store at Llangennech comes to its agreed break clause milestone. Without any level of acceleration of the scanning programme, there will remain in all likelihood 600,000 records awaiting conversion.

As such it is the proposition that investment take place to ensure that all records are converted prior to this agreed break clause milestone – the alternative position is that circa >£1 million of NHS resources is expended over the remaining lease period and the need to spend the sums identified in this paper converting paper to digital still being required.

The pipeline also shows the estimated points in time that cost improvements will emerge and it follows that a shortened programme will release these yields sooner than indicated.

Aggregating the unscanned residual of 600,000 records to the guesstimated 500,000 records held in third party and other storage produces a revised requirement for storage of 1.1 million records at March 2026. The physical storage capacity available at Unit 3 can offset this by approximately 550,000 records if saturated, leaving an unmet balance of 550,000 records. However, it is not considered good practice to saturate Unit 3 with paper records whilst there is a scanning programme to accommodate of this scale and whilst there remains an unknown quantity of records that exist in third party storage and at discreet premises within the Health Board. Including these factors would point to a take-up of no more than two-thirds as a sensible level. This means that Unit 3 can offer accommodation for 366,000 records, leaving a revised unmet balance of 734,000 records. It can therefore be seen that some investment in programme acceleration is key to avoidance of a further lease term of the Llangennech store, notwithstanding the broader benefits noted later.

Using rates tendered in 2022 as a benchmark (£1.7 million converts 210,000 records and shortens the programme by 1.6 years) the cost of converting 734,000 records to digital format would require investment of £5.95 million. This would require 3.5 batches of further bulk scanning through private sector partnership at a cost of £5.95 million. Extrapolating further the cost of converting the entire remaining library including the unknowns held in third party storage less what can be processed in-house by March 2026 would require £9 million.

To take this analysis and the options one stage further, the following should also be considered. The business of scanning records in bulk quantities into digital format is a new area of expertise and hence risk that the Health Board is embarking on. To ease pressure on the in-house service and to accelerate the overall programme considerably, so that proper attention can be devoted to the conversion of new cases as a priority, if resources allowed then the entirety of remaining backlog should be considered for block scanning using commercial sector resources and expertise including the balance outstanding. This being circa 972,500 records at Llangennech and the unquantified records held in third party storage (guesstimated at 500,000 records) less those records that can be accommodated at Unit 3 (366,000 records). This amounts to a total of estimated 1,106,500 records for further block scanning on either a one off or incremental basis to conclude before March 2026. The estimated cost of conversion would be in the region of £9 million and, whilst this is a significant figure, would conclude the work in 4 years on the basis that expenditure is limited to £1.7 million per annum. The advantage in the short term would mean the requirement of fewer scanners and therefore fewer staff.

The benefits of the programme in its default form along with any level of acceleration would include the following:

1) Each additional component of 210,000 ‘non-active and do not destroy’ patient records converted will provide further mitigation of the health records storage burden across various departments.
2) The process of streamlining health records storage locations and centralising all health records into a single location (Llangennech and Unit 3 initially and ultimately Unit 3 only) under the control of the health records department would further minimise the risk of patient records being misplaced, lost, stored in inappropriate conditions or following an inappropriate filing system.
3) There will be a significant de-escalation of data breach risks and potential for fines approaching £18 million per episode.
4) Patient records that are ‘retrieved’ from the various locations across the Health Board can be more easily reviewed and catalogued in preparation for scanning via the Health Board’s internal resource or external outsource.
5) Cost improvements will be seen to work through the system after an initial spike in costs which reaches its highpoint at March 2023 if the programme is not accelerated. Acceleration of the programme to whatever extent will release monies sooner and this can be profiled once the Executive indicates a preference. The net overall change in costs is estimated to move from £3.365 million to £2.65 million annually.
6) Mitigates all site-specific safety risks at the Llangennech store i.e. fire safety, health and safety and overburdened storage spaces issues.
7) Creates ‘movement’ space at Llangennech in order to relocate all locally stored patient records to one location (under the control of the health records department)
8) Offers a solution to the broader scanning requirements and information storage needs of the Health Board and beyond.
9) Wider benefits to add to the above would include:
    - Reduction in patient records transport needs and dependencies
    - Less annual documentation purchases
    - Cost reductions in racking and racking maintenance
    - Reduced stationery costs
    - Cost efficiencies in medical secretaries, ward clerks and portering time
    - Release of working and car parking spaces associated with the above
    - Reduced aborted clinics
    - The ability to establish clinics more reactively and hence improve performance

Argymhelliad / Recommendation

The Sustainable Resources Committee is asked to accept this report as assurance that the Digital Health Record Programme is progressing and acknowledge the suggested/ potential direction of travel that may in due course be approved by the Executive Team.

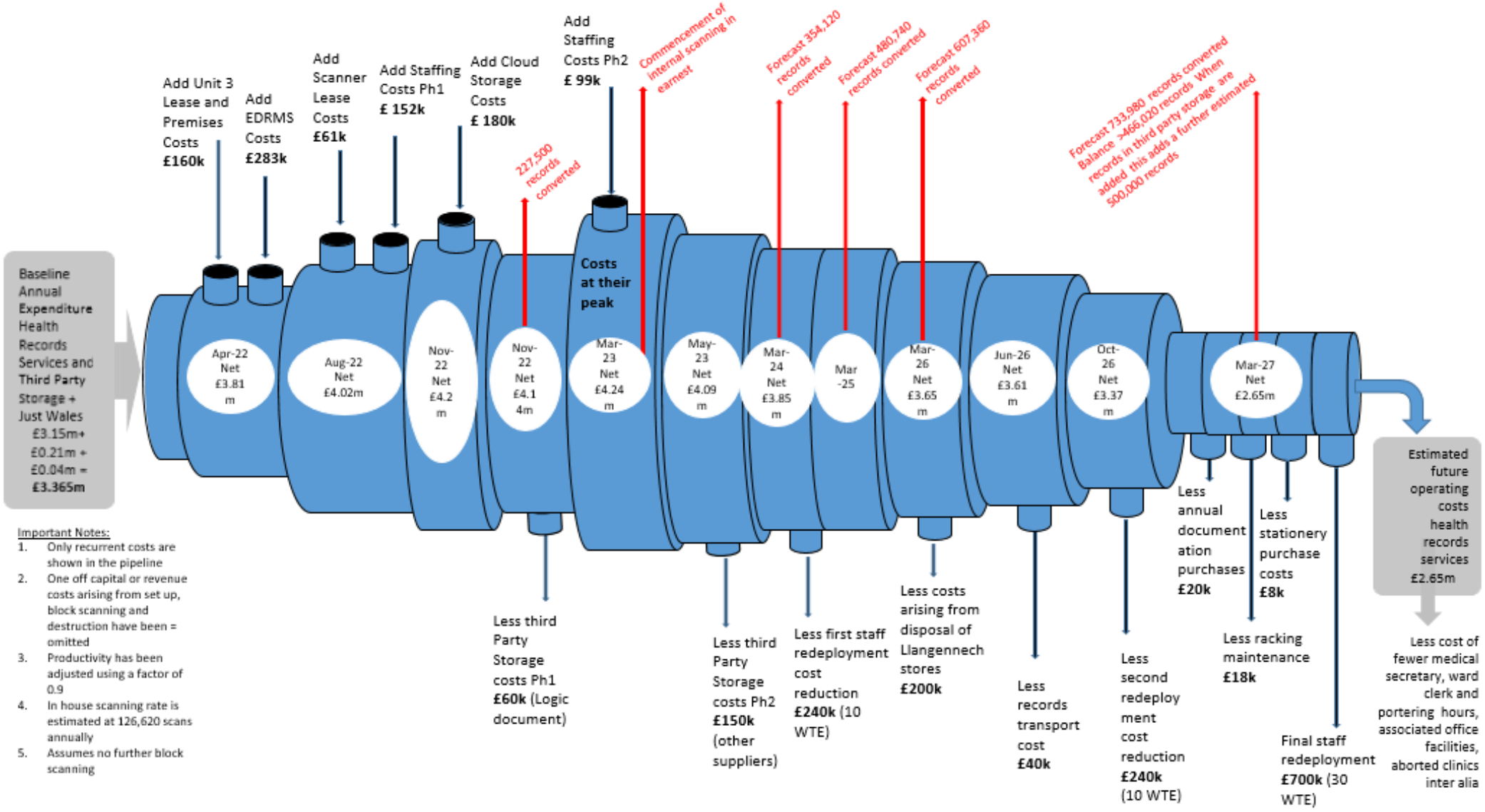
Amcanion: (rhaid cwblhau) Objectives: (must be completed)	
Committee ToR Reference: Cyfeirnod Cylch Gorchwyl y Pwyllgor:	3.10 Provide assurance to the Board that arrangements for information governance are robust. 3.11 Receive reports relating to the Health Board's Digital Programme to ensure benefits realisation from the investment made.
Cyfeirnod Cofrestr Risg Datix a Sgôr Cyfredol: Datix Risk Register Reference and Score:	1335 (score 12) 827 (score 6) 828 (score 9)
Safon(au) Gofal ac Iechyd: Health and Care Standard(s):	3.5 Record Keeping
Amcanion Strategol y BIP: UHB Strategic Objectives:	5. Safe sustainable, accessible and kind care 6. Sustainable use of resources
Amcanion Cynllunio Planning Objectives	Not Applicable
Amcanion Llesiant BIP: UHB Well-being Objectives: Hyperlink to HDdUHB Well-being Objectives Annual Report 2018-2019	10. Not Applicable

Gwybodaeth Ychwanegol: Further Information:	
Ar sail tystiolaeth: Evidence Base:	Contained within report
Rhestr Termau: Glossary of Terms:	Contained within report
Partïon / Pwyllgorau â ymgynhorwyd ymlaen llaw y Pwyllgor Adnoddau Cynaliadwy:	Executive Team

Parties / Committees consulted prior to Sustainable Resources Committee:	

Effaith: (rhaid cwblhau) Impact: (must be completed)	
Ariannol / Gwerth am Arian: Financial / Service:	Prudent use of resources
Ansawdd / Gofal Claf: Quality / Patient Care:	Improved patient care through easily accessible digital records
Gweithlu: Workforce:	Not Applicable
Risg: Risk:	Proposal to mitigate Risk Registers Reference: 1335, 827, 828
Cyfreithiol: Legal:	Not Applicable
Enw Da: Reputational:	Not Applicable
Gyfrinachedd: Privacy:	Not Applicable
Cydraddoldeb: Equality:	Not Applicable

Appendix 1: Expenditure forecast profile arising from health records transformation work



Important Notes:

1. Only recurrent costs are shown in the pipeline
2. One off capital or revenue costs arising from set up, block scanning and destruction have been = omitted
3. Productivity has been adjusted using a factor of 0.9
4. In house scanning rate is estimated at 126,620 scans annually
5. Assumes no further block scanning