



**CYFARFOD BWRDD PRIFYSGOL IECHYD
UNIVERSITY HEALTH BOARD MEETING**

DYDDIAD Y CYFARFOD: DATE OF MEETING:	30 November 2023
TEITL YR ADRODDIAD: TITLE OF REPORT:	Electronic Prescribing and Medicines Administration Outline Business Case (ePMA)
CYFARWYDDWR ARWEINIOL: LEAD DIRECTOR:	Huw Thomas, Executive Director of Finance
SWYDDOG ADRODD: REPORTING OFFICER:	Anthony Tracey, Digital Director

Pwrpas yr Adroddiad (dewiswch fel yn addas)

Purpose of the Report (select as appropriate)

Ar Gyfer Penderfyniad/For Decision

**ADRODDIAD SCAA
SBAR REPORT**

Sefyllfa / Situation

Hywel Dda University Health Board (HDdUHB), along with all the other health boards and trusts across Wales, will be required to adopt and implement an Electronic Prescribing and Medicines Administration Solution (ePMA), which will replace the current paper-based systems. Welsh Government requested that Digital Health and Care Wales (DHCW) undertake a national scoping exercise, in addition to developing an All-Wales Commercial Framework of suppliers who could supply such a solution, of which there are now three established suppliers on the framework.

HDdUHB is now required to undertake a procurement exercise to secure a supplier based upon the agreed framework and a locally agreed specification.

In summary:

- A Full Business Case for implementation and adoption post procurement will be provided once supplier costs are known. Currently the Health Board is out to tender with a closing date of November 2023.
- The programme will utilise the All-Wales Commercial Framework and run a local Mini procurement Competition, publishing the HDdUHB specification requirements and to receive responses from the 3 suppliers on that framework should they wish to respond.
- Responses from the 3 suppliers will be used to refine the Full Business Case to present to HDdUHB governance structures and to Welsh Government for investment/funding.

Cefndir / Background

In September 2021, following an independent review, a Ministerial statement was published regarding e-prescribing in Wales. Subsequently, Digital Health Care Wales was mandated by the Welsh Government to establish a portfolio to deliver digital medicines transformation across NHS Wales.

The aim of this portfolio is to fully digitalise the electronic prescribing environment across all care settings in Wales, and associated processes to increase efficiency and safety, as

described in the recommendations from the Strategic Review on The Future of Electronic Prescribing in Wales, 2021. The portfolio comprises of four elements:

1. Seamless primary care e-prescribing capability

Establishing a seamless digital communication and sharing of prescription information between prescribing and dispensing systems from GPs and non-medical prescribers to a community pharmacy of choice, including the necessary business change to adopt new ways of working. This capability will be delivered via the Primary Care Electronic Prescription Service (EPS) programme.

2. Seamless secondary care e-prescribing capability

Procuring and implementing hospital e-prescribing and medicines administration (ePMA) systems across all secondary settings in NHS Wales that build on a set of common open standards and principles that provide end-to-end e-prescribing secondary care capabilities together with interoperability with other care settings in Wales and the Shared Medicines Record. The capability to transfer Outpatient prescriptions electronically to community pharmacists is included. This capability will be delivered via the Secondary Care electronic Prescribing and Medicines Administration (ePMA) programme.

3. Patient Access development

Provision of a patient application that allows data sharing from GP, community pharmacy and hospital systems to patients. This is to support patients to understand which medicines to take and when, to record their choices, record any problems they are experiencing with medicines, and how and when their medicines are supplied. This capability will be delivered via functionality within the NHS Wales App. The project is working closely with the Digital Services for Patients and the Public programme.

4. Shared Medicines Record

Provision of a Shared Medicines Record, supported by a centralised medicines repository that allows access to the list of medicines a patient has previously or is currently taking, regardless of where these originated from or are managed, (e.g. GP, homecare, mental health services, over the counter or other source). This will enhance patient safety and streamline the delivery of care, particularly at the interface between primary and secondary care. This capability will be delivered via the Shared Medicines Record Project and where the project is working closely with the National Data Resource Programme.

The Secondary Care e-Prescribing and Medicines Administration (ePMA) Programme, as part of the Digital Medicines Transformation Portfolio (DMTP), has being established to deliver the second element of the wider strategy.

The Welsh Hospital Electronic Prescribing Pharmacy and Medicines Administration (WHEPPMA) Project Board supported the formation of an All-Wales commercial framework for health boards and trusts to use to purchase an 'approved' e-prescribing solution. It was agreed at the July 2021 NHS Wales Leadership Board that Digital Health and Care Wales would manage the framework establishment process, whereby suppliers who meet the agreed clinical and technical threshold requirements and standards for an ePMA solution are made available on the framework for health boards and trusts to enter into a contractual arrangement with. Suppliers must be able to meet the requirements in relation to the defined data and architecture standards to ensure interoperability. Health boards and trusts will be responsible for the contractual agreement with their preferred ePMA supplier.

When ready, after undertaking local scoping and development of the national software requirement specification to fit local needs, health boards can call off services from the

framework (i.e., Mini Competition). Health boards have also had to sign up to a National Minimum Viable Product which meets national requirements.

To ensure the appropriate governance, an ePMA Project has been established within HDdUHB.

Asesiad / Assessment

As a result of the ePMA pre-implementation scoping undertaken by a Procurement Subgroup, a core team of Subject Matter Experts have been recruited to undertake the scoping, specification development, and evidence base for the Business Case. This has been overseen by a comprehensive Steering Group, led by a Clinical Lead/Senior Responsible Officer, with members that include senior representatives from Pharmacy, Nursing, and Digital. This programme is also reporting to the Operational Quality, Safety and Experience Sub-Committee for the purposes of assurance and oversight, which has thus far looked favourably on the development of the system and the progress of the programme to date.

A draft Outline Business Case has been developed and is included within Appendix 1 for information. However, as ePMA has only been partly implemented in one other health board in Wales to date, the Business Case has been modelled on those lessons learned from this and from information gathered from those who have implemented ePMA in other parts of the UK. It must also be noted that DHCW has developed, as part of the National ePMA Board, a national benefits framework for the programme. The benefits framework will be required to be implemented locally and reported on nationally both to DHCW and the Welsh Government, in addition to any local benefits the Health Board wishes to identify and report.

The Strategic Case

The development and implementation of ePMA aligns with a number of national and local strategies and plans:

1. A Healthier Wales: Long term Plan for Health and Social Care
2. Pharmacy: Delivering a Healthier Wales
3. Welsh Government ePrescribing Review
4. All Wales Medicines Strategy Group (AWMSG) Five-year Strategy (2018-2023)
5. Statement on the ePrescribing Programme (2021)
6. Informed Health and Care – a Digital Health and Social Care Strategy for Wales
7. HDdUHB Clinical Strategy – A Healthier Mid and West Wales
8. Digital and Data Strategy for Health and Social Care

The key local drivers for change include:

1. Increasing patient safety
2. Improving patient centred care and associated outcomes
3. Staff experience and efficient use of resources
4. Maximising the use of digital tools and innovation
5. Access to health intelligence data
6. Having appropriate audit and governance process in place

These drivers were identified through the interviews conducted with stakeholders from across the organisation and analysis of existing documentation. Over 340 staff were engaged via 1-1 interviews, in-person drop-in engagement sessions, virtual group engagement sessions across clinical, operational, technical, and administrative staff across HDdUHB.

Investment in a Health Board wide integrated secondary care ePMA solution will enable HDdUHB to transform our prescribing and medicine administration processes. It will enable HDdUHB's hospital sites to work together more efficiently both within sites, and across community sites. It is anticipated that this will provide our patients with better access to medicines and care within the Health Board. Additionally, ePMA implementation will help realise HDdUHB's digital maturity ambitions.

Economic Case

The options, benefits, and risks were developed collaboratively through workshops and engagement with stakeholders from across the Health Board. As the national direction of travel and mandate was clear, HDdUHB did not revisit a longlist of options and instead undertook a shortlist appraisal locally. The shortlist options were appraised based on a strategic, risk and benefits appraisal. These appraisals considered the extent to which each option is likely to meet the secondary care ePMA Programme's objectives and the outcome is the identification of the preferred option for the secondary care ePMA.

Options considered:

- Option 0 - Do nothing: Existing paper-based systems are not replaced.
- Option 1 - ePMA implemented across acute hospital sites only, in priority specialties only. This has been defined to exclude Emergency Departments, Paediatrics, Outpatients, Maternity and Mental Health.
- Option 2 - ePMA across acute hospital sites only, in all in scope specialties.
- Option 3 - ePMA across all of secondary care in HDdUHB, in all in scope specialties.

Appraisal of the options identified Option 3 as the Preferred Option, in alignment with the national direction. It was also agreed that this addresses and prioritises the prescribing and medicines administration needs in secondary care in the health board.

The shortlisted options appraisal highlighted that Option 3 was not only the Preferred Option but the only viable option.

DHCW has been working on a set of benefits intended to be measured nationally. Work still continues on the benefits tracker nationally and the outline business case will be updated accordingly in developing the full business case.

The evidence that a Secondary Care ePMA system provides an important foundation for safe, effectively, timely, efficiency, patient-centred and equitable provision of care is well documented nationally. However, translating these quality benefits to cash-releasing savings is not straightforward. Productivity savings and the longer-term cash releasing savings that can be achieved post implementation are only beginning to emerge within other health boards and trusts around the UK.

Whilst the majority of benefits are likely to be quality and efficiency benefits, initial analysis has identified potential cash-releasing and avoidance benefits:

1. Reduction in drug spend as it is assumed that over time, the improved information available via the Secondary Care ePMA system will support review and the optimisation of prescribing and administration practice, for example by identifying where high-cost drugs are being used despite a lower-cost equivalent being available.

2. Reduction in medicines-related litigation costs as it is assumed that the introduction of a Secondary Care ePMA system could help mitigate future litigation costs related to medicines.

Further work will be undertaken to quantify local benefits, following completion of the national set of benefits.

Total Economic Cost

Preliminary cost estimates have been identified from external examples and supplier indications via the National ePMA Framework. Preliminary cost estimates vary widely from £7m to £13m. These costs will only be known once a tender process has been completed and suppliers submit their full and final costs.

Commercial Case

Using the All-Wales Procurement Framework is a pre-requisite to releasing the national funding available from the Welsh Government and so HDdUHB will be required to undertake a mini competition to call off and award the secondary care ePMA contract off the All-Wales Framework.

The benefits associated with this approach is that a mini competition provides the potential to drive better value for money whilst retaining the benefits offered under the Framework agreement, enabling HDdUHB to secure the optimal secondary ePMA solution.

The timeline for the procurement process is outlined in the table below:

Milestone	Estimated Timeline
Mini competition via framework: Prepare and Issue ITT, Evaluate Responses Tender Process <ul style="list-style-type: none"> ➤ Tender Issue Thursday 26 October 2023 ➤ Tender Closing noon 22 November 2023 ➤ Tender return reading time 23 November 4 December ➤ Tender evaluation Start W/C 4 December 2024 1 Week ➤ Supplier Demonstrations W/C 11 December (Monday, Tues, Wed) ➤ Confirmation scoring post demonstration 14 & 15 December 2024 (Thurs, Friday) 	October-December 2023
Preferred supplier selected	January 2024
Final Governance and Approvals (incl. FBC Sign Off) to Board (Late Submission) <ul style="list-style-type: none"> ➤ Board Submission January Board ➤ Notification of Bidders February 2024 ➤ Standstill Period February 2024 	25 January Board
Submit the Full Business Case to Welsh Government for Approval	20 February 2024
Post approval process <ul style="list-style-type: none"> ➤ Completion of Contract Award March 2024 ➤ Drafting and contract signing April 2024 	March 2024
Contract Starts	April 2024

Financial Case

A financial appraisal based on a number of assumptions has been undertaken to illustrate the estimated affordability of the Preferred Option.

The costs presented in this case are preliminary estimates. The basis of ePMA solution costs is based on two pricing options:

1. Composite of relevant ePMA implementation case studies outside of HDdUHB.
2. Initial supplier costs submitted through the National ePMA Framework.

It is important to emphasise that there remains a wide potential range of programme costs before the preferred supplier is selected and therefore, the estimates presented here are subject to change, as the preferred option is developed further.

The estimated total life cost of the ePMA Secondary Care Programme (7 years) is c.£10.6m (using the mid-point of the estimates) of which c.£3.5m are capital costs and c£7.1m are revenue costs. The Health Board will require funding of c£5.5m, of which c.£2.2m to support capital costs and the remaining c.£3.3m for implementation revenue costs.

The remaining c.£5.5m will need to be funded using internal HDdUHB funding and cash releasing benefits over the life-cycle of the project.

As part of the Full Business Case, a full risk assessment will be undertaken to evaluate whether the benefits outlined will be realised.

The summary of proposed internal and external funding for capital and revenue costs aligned to the preferred option is shown in the table below.

The overall affordability is constrained, and the funding sources identified at this stage will not be able to fund this programme in isolation, it is therefore essential that:

- Welsh Government funding is secured to at least the levels of the initial indications.
- HDdUHB can identify and repurpose capital spending to deliver this Programme.
- The HDdUHB can track and deliver the cash releasing savings identified in this business case.

All required hardware and devices will be looked at in a separate Health Board level programme. A decision will need to be taken around the contribution of the HDdUHB Secondary Care ePMA Programme to these costs.

Management Case

The delivery of this programme will be challenging. Whilst the case for change for a secondary care ePMA solution across HDdUHB is compelling, careful planning for the design and implementation phases will be required to deliver against HDdUHB's strategic ambitions. This will need to be supported with a robust resourcing plan and alignment with enabling programmes such as a HDdUHB Network Upgrade Programme, to ensure that the underlying infrastructure is robust.

Implementation

Implementation will be conducted on a ward-by-ward, site-by-site basis and the implementation will be phased across the Health Board. The initial implementation plan will be a phased over a 24–36-month period, centred around a targeted 18-24 month roll out period. To ensure that there is transition to business as usual (BAU), we will also be applying a 6-month handover.

Change Management

The level of change associated with the secondary care ePMA programme in HDdUHB is high. It is recognised that effective change management, staff engagement and communications and visible clinical leadership will be critical to the success of this Programme.

Training

It is also recognised that a robust training plan and approach will need to be designed and approved in collaboration between HDdUHB (including representation from all relevant clinical and hospital staff user groups as well as digital and technology staff) and the chosen system implementation partner.

Digital, data and technology

As part of the preparation work for this programme, the ePMA Programme Team has been working with the Network Upgrade Programme to understand equipment and end user device needs. This is happening at health board level and the cost will be revised to agree what will be funded by the ePMA Programme versus by other programmes. Once the chosen vendor is awarded, the ePMA Programme Team will work in collaboration with the vendor to complete an in-depth end-user technology review which will aim to highlight the type, number and requirements for end user devices needed by the staff and clinical teams.

Benefits realisation

As outlined in the Economic Case, DHCW has been working on a set of benefits intended to be measured nationally. At the time of writing this Business Case, the national benefits work is still underway. The HDdUHB Secondary Care ePMA Programme team, with the support of the Benefits Realisation Manager, has identified and reviewed the provisional set of benefits, which will continue to evolve over time. It is important that the ePMA Programme Team applies a benefits management approach that enables benefits realisation to be monitored and benefits to be proactively managed across the organisation.

Programme evaluation

HDdUHB is committed to ensuring that a thorough and robust post-programme evaluation is undertaken at key stages in the process to ensure that lessons are learnt. The Health Board will need to continue to obtain and assess baseline data in the years prior to and post implementation. This will enable the Health Board to compare current processes with post-implementation processes and identify which benefits have been achieved and which have not.

Conclusion

The overall strategic intent for an ePMA revolves around leveraging technology to improve patient safety, healthcare outcomes, medication workflows, interoperability, and continuous quality improvement in the medication management process. Key components of this strategic intent include:

- **Enhancing Patient Safety:** The primary goal of the ePMA is to minimise medication errors and improve patient safety. By digitising the prescribing process, the system can help eliminate illegible handwriting, reduce the risk of medication interactions, allergies, and dosage errors, and provide real-time decision support to healthcare providers, ensuring accurate and appropriate prescriptions.
- **Improving Healthcare Outcomes:** The ePMA aims to contribute to improved healthcare outcomes by promoting evidence-based prescribing practices. It can integrate clinical guidelines, drug databases, and patient-specific information to support healthcare providers in making informed decisions, leading to better treatment outcomes, reduced adverse events, and enhanced patient care.

- Streamlining Medication Workflows: The strategic intent involves streamlining the entire medication management process, from prescription creation to dispensing and administration. The ePMA can automate prescription routing, electronic transmission to pharmacies, and refill requests, reducing administrative burdens, improving efficiency, and enabling faster medication access for patients.

Argymhelliad / Recommendation

The Board is requested to:

- **NOTE** the Outline Business Case, and the requirement to complete the Financial Case once the tender has been returned.
- **AGREE** to proceed to a Full Business Case, with the identification of a preferred supplier.
- **AGREE** that no commitment to a specific supplier will be made until a further review to confirm that the recommended investment decision is appropriate is conducted; before the contract is placed with a supplier or partner and **AGREE** due to the financial investment required this will need to be brought back to the Board for final approval.

Amcanion: (rhaid cwblhau)

Objectives: (must be completed)

Cyfeirnod Cofrestr Risg Datix a Sgôr Cyfredol: Datix Risk Register Reference and Score:	Risk Register Entry – 1761 (Risk Score 16)
Galluogwyr Ansawdd: Enablers of Quality: Quality and Engagement Act (sharepoint.com)	6. All Apply
Parthau Ansawdd: Domains of Quality Quality and Engagement Act (sharepoint.com)	7. All apply
Amcanion Strategol y BIP: UHB Strategic Objectives:	All Strategic Objectives are applicable
Amcanion Cynllunio Planning Objectives	All Planning Objectives Apply
Amcanion Llesiant BIP: UHB Well-being Objectives: Hyperlink to HDdUHB Well-being Objectives Annual Report 2021-2022	9. All HDdUHB Well-being Objectives apply

Gwybodaeth Ychwanegol: Further Information:	
Ar sail tystiolaeth: Evidence Base:	Included within the main body of the report
Rhestr Termau: Glossary of Terms:	Included within the main body of the report
Partïon / Pwyllgorau â ymgynhorwyd ymlaen llaw y Cyfarfod Bwrdd Iechyd Prifysgol: Parties / Committees consulted prior to University Health Board:	Digital Oversight Group Sustainable Resources Committee

Effaith: (rhaid cwblhau) Impact: (must be completed)	
Ariannol / Gwerth am Arian: Financial / Service:	The introduction of the ePMA system will have benefits not only the staff, patients, but will improve efficiencies of the wards and staff. Releasing more time for staff to treat patients.
Ansawdd / Gofal Claf: Quality / Patient Care:	The lack of an ePMA system presents a significant risk to patient safety and negatively impacts staff, who are working under extreme pressures. There is a clear need to improve efficiencies, particularly with regards to managing medicines management, and introducing technologies to support staff are a first important step in this journey
Gweithlu: Workforce:	The improvement in digital solutions will provide efficiencies for staff, who will be able to see the right information at the right time when treating the patient. The combination of approaches and system will also reduce the effort required to transcribe as system will be fully integrated.
Risg: Risk:	The patient safety risk from that lack of Automation of routine tasks. The provision of real-time data, which can help improve clinical decision-making and reduce the risk of harm.
Cyfreithiol: Legal:	The introduction of ePMA system could lead to a reduction in legal claims due to the reduction errors.
Enw Da: Reputational:	Having resilient and robust systems for the treatment of patients will enhance the reputation of the Health Board and will also improve opportunities to recruit.
Gyfrinachedd: Privacy:	Not applicable
Cydraddoldeb: Equality:	If the system is approved to progress a full equality approach will be adopted