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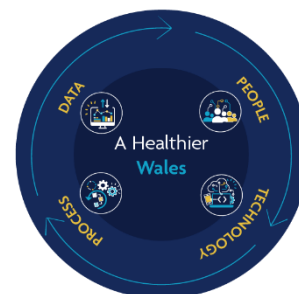Digidol Cymru
Digital Health
and Care Wales

Our Integrated Medium
Term Plan

Summary

2022-2025

Digital Health and Care Wales

Integrated Medium Term Plan

2022 - 2025

OUR VISION…. To provide world leading digital services, empowering people to live healthier lives

OUR PURPOSE…. To transform health and care for everyone in Wales

This is a summary of our Integrated Medium Term Plan. It sets out our main priorities for the next three years.

While Wales has one of the best healthcare systems in the world, we know that digital and data can help save lives, deliver safer care and support high-quality services now and into the future.

Digital Health and Care Wales (DHCW) is an expert national delivery body within the NHS Wales family, providing the leadership, digital skills, infrastructure and operational services to transform health and care.

We do this by placing the patient at the heart of all we do, and by working in collaboration with health boards and trusts, healthcare professionals, Welsh Government, industry and academia. We also focus on better use of data, using it drive improvements and help improve outcomes.

Our input is evident in nearly every area of healthcare, highlighted during the pandemic when we played a major role in the NHS Wales COVID-19 response, including the rapid development of Test Trace Protect and the Welsh Immunisation System.

Our role is to develop, deliver and manage connected technology products and services that allow health and care to share information quickly and easily. We want digital solutions for Wales that make a difference to care, support clinical governance and safety and enable modern care pathways.

As digital is now a mainstay for transformation and innovation, our plan is informed by collaboration with stakeholders, needs of the service and Welsh Government priorities. Our strategic objectives are aligned to the Welsh Government Strategy, 'A Healthier Wales' and the Well-Being of Future Generations (Wales) Act 2015.

OUR STRATEGIC MISSIONS

Now in our second year, these strategic objectives are taken forward within our Integrated Medium-Term Plan (IMTP) as five key missions – guiding principles to support patient-centred and accessible health and care. They are:

1. Enabling digital transformation
2. Delivering high quality technology and data products and services
3. Expanding the content and functionality of the digital health record
4. Driving value and innovation
5. Becoming the trusted strategic partner and a high-performing, inclusive organisation

OUR DIGITAL HEALTH AND CARE LANDSCAPE

The digital health and care landscape

People in Wales use digital services to shop, bank, watch TV and connect with family and friends. The use of apps is now an accepted way for many to manage their lives and people have expectations for similar online healthcare services.

The COVID-19 pandemic not only accelerated digital adoption for citizens but created a new appetite for digital from healthcare professionals. Both factors have informed our IMTP for 2022 – 2025, with the recognition that connected care is vital to support recovery and to meet the growing needs of citizens and the demands placed on Wales frontline services.

As we build on existing digital foundations and a modernised infrastructure, we remain proud of our single digital health record that means core patient information is available where and when it's needed in Wales, delivering better care and supporting new virtual models for outpatient and GP consultations.

We also continue to evolve, develop and support over 100 national products and services used daily by thousands of health and care staff. And this three-year plan includes a continued programme of maintenance and upgrades to keep systems running effectively 24/7.

KEY PRIORITIES

Key priorities

Over the next three years we intend to build on and expand our technology and data achievements and increase the reach and range of technology impact.

While we have made significant progress patient data can be held in different formats and can also be incomplete, siloed in a departmental system, bound by organisational boundaries and not communicating with other systems.

Clinicians can have a bewildering array of technology to use, with different log ins and different user interfaces from one hospital to the next. This does not support an increasingly mobile workforce or new models of patient care. Some patients may travel across several

health board borders on a single course of treatment and care. Adding in social care and professional boundaries and the border with England, makes it a highly complex landscape.

Where data doesn't join up, key information is lost, decisions may be mis-informed and patients can potentially be harmed.

Our ambition is to close the gaps and ensure digital provides an electronic front door to all data, so it is available when needed at any location on demand.

The Welsh Clinical Portal is a key enabler which is already providing access to millions of care records, with data protected in national and local repositories, and called up by simple to use systems available to appropriate healthcare professionals. Next steps are the expand and enhance data available through the portal to further streamline data flow.

Key areas include development of digital forms for support workflow, prompts and decision support to help with consultations and provide a comprehensive standard collection of diagnosis, tests orders, referrals to other clinicians, treatment records, including medications and discharge details. The data can be linked to events and appointments along the patient pathway. It can bring data locked in specialist systems to the wider clinical community.

ENABLING DIGITAL TRANSFORMATION

Information Availability and Flow

A significant barrier to the appropriate sharing of information between systems and organisations has been a lack of technical standards relating to how systems talk to each other or interoperate, their security, infrastructure and system development.

To truly enable digital transformation, we are developing an 'open platform' approach to digital innovation, based on standards for how data, software and technologies work together across the entire range of patient care, sharing information safely and accurately.

Reflecting observations from NHS Wales Digital Architecture Review 2019, we have developed a new data strategy to inform future architectural building blocks and introduce new APIs. This involved working collaboratively with external partners to ensure they can work with the national digital platform and national data resource, promoting a collaborative sharing of standardised data enabling faster, more innovative digital solutions from multiple suppliers.

We are hosting and programme managing the National Data Resource (NDR) initiative working with colleagues in Welsh Government, Public Health Wales, Health Boards, Trusts, academia and more.

The National Data Resource is a strategic programme to deliver a more joined up approach to data sharing enabling

- Innovative modern use of data to drive decisions
- Research, Data Sciences and AI
- For clinicians, carers and other decision makers to use data to provide recommendations and insight
- To improve patient experience and service outcomes
- Big Data capability, using cutting edge solutions
- More automated, more open, linked data

Protecting Patient Data

Safety and assurance is a key component across all digital services and critical to an effective connected healthcare system in an age of increased cyber-crime. To ensure health professionals and citizens trust in the safety of their data and our systems we are developing an Information Governance and Cyber Security framework, using the standards and mechanisms that prioritise patient and service user safety and confidentiality, protecting data from external and internal threats.

Sustainable Infrastructure

On-going development of the national infrastructure is essential to maintain high quality services and support the increased use of mobile platforms. It is the framework of network connections and services, datacentres, support systems, maintenance and upgrades that provides strength, security and stability to health and care systems across Wales.

Following recommendations from the All-Wales Infrastructure Review in 2020 investment in modernisation to replace ageing infrastructure has begun and will continue over the timescale of the plan.

We have adopted a Cloud-first strategy, transitioning services incrementally to the Cloud for better availability, reliability, safety, security, speed and agility and 24/7 availability.

EXPANDING THE CONTENT, AVAILABILITY AND FUNCTIONALITY OF THE DIGITAL HEALTH AND CARE RECORD

Digital Healthcare Professional Empowerment

We will continue to work with healthcare providers and professionals to improve and expanding the content, availability and functionality of the Digital Health and Care Record, agnostic of health board and geographical boundaries. This includes the use of mobile services to allow professionals to access information and evidence-based decision making when they need it most. Our plans include connectivity using NHS Wales e-library and the Microsoft 365 suite

Digital Patient Empowerment

Through our new Digital Services for Patients and Public (DSPP) programme we will provide digital services and the NHS Wales app making it easier to access better healthcare and support health providers to deliver care more efficiently.

The goal is for patients and the public to:

- personalise their health journey
- monitor health conditions more easily
- share and receive important health information
- take an active part in their own health and wellbeing
- plan for and take control of their health and care journey
- stay healthy for longer
- request repeat prescriptions
- book appointments

The Welsh Government set up the DSPP in March 2021 and we are responsible for delivering and running the programme.

DELIVERING HIGH QUALITY TECHNOLOGY, DATA PRODUCTS AND SERVICES

Public Health

To support Public Health prevention and early intervention programmes we will develop, operate and maintain a set of high quality national digital and data services.

This builds on the established services we have in place including systems recording data from screening programmes such as bowel and new-born hearing. We also provide the tools and infrastructure to make digital content available for health promotion campaigns.

During the pandemic we increased our role in public health with the development of systems to support the Covid-19 response, adapting the Welsh Clinical Portal to allow electronic requesting of Covid tests on a national basis. We built links with other clinical systems and with other parts of the UK so the test results were available to clinicians, strategists and the

wider health service, put in place a digital contact tracing system and developed the new Welsh Immunisation System to book and record vaccinations.

Going forward our work to support Public Health Wales will focus on supporting existing systems and using their functionality for other public health challenges such as flu vaccinations.

Primary, Community and Mental Health

In primary care GPs will adopt incrementally the next generation of GP computer systems as part of our plan to enhance the digital infrastructure across primary and community. This includes a strategic review and roadmap for the Welsh Community Care Information System and the development of a mental health data set.

Primary care has always been at the forefront of digital adoption and this will continue with real time information exchange with prescriptions sent electronically to the pharmacy and on-going enhancements to the existing data flows for electronic referrals and access to the single digital health record.

Our aim is to provide primary care with easy-to-use technology, enabling more time to care.

Planned and Unscheduled Care

To support recovery and new ways of working we will develop, operate and maintain a set of high quality national digital services for planned and unscheduled patient care and management.

A key priority will be to support the ambition to use digital and virtual services to reduce long waiting times for non-emergency procedures and treatment.

To support intensive care the new Critical System System will remove paperwork and provide staff with more time to care, eye care will be integrated with NHS Wales national systems and the Welsh Patient Administration System will move to a modernised single instance across North Wales and adoption by Velindre NHS Trust.

Enhancements to the Welsh Child Health System will support the aims of the Healthy Child Wales programme and there will be a focus on digital support for mental health services.

Many of the new developments over the next three years will be accessed or linked through the Welsh Clinical Portal (WCP), which is used across all hospitals and is available to GPs. The WCP is developed in Wales and co-designed by clinicians and technology experts within Digital Health and Care Wales. It shares, delivers and displays patient information from a number of sources with a single log-on, even if that information is spread across health boards, together with key electronic tasks.

With the need for the cancer patient record to be delivered on a modern resilient IT system the legacy national cancer system (Canisc) is in the process of being replaced by the NHS

Wales cancer informatics solution, underpinned by nationally optimised patient care pathways and integrated with the single digital patient record.

Following the successful roll out of the award-winning Welsh Nursing Care Record new functionality will be developed to add more nursing assessments, wound care records, mouthcare assessment, frailty score, food chart, repositioning chart, end of life care, fluid chart, infection prevention control risk assessment, IV and Cannula care bundles and care planning.

Diagnostics

When a diagnosis is accurate and timely it supports the best clinical pathway for the patient. With diagnostics essential for modern medicine we will develop, operate and modernise a set of high-quality diagnostic services including pathology, radiology and endoscopy. Results from these services will be available digitally.

> I can see where and when patients have had blood tests
>
> **Which means** I may not have to take more blood from the patient and can start treating sooner
> **Clinician**

Digital Medicines

New digital services are planned to transform medicines prescribing and management.

Through the Digital Medicines Programme we will improve and digitise the way patients, clinicians and pharmacists access and manage the provision of medicines across the health system. This will include patients' access to medicines, prescribing of medication by clinicians, the assurance and dispensing of prescriptions by pharmacists, and the auditing and pricing of medicines by monitoring authorities.

This is a major programme of work that will also introduce electronic drug charts and give patients better access to improved information about their medicines. Bew digital features developed by the Digital Services for Public and Patients programme, will allow people to use the NHS Wales app to order repeat prescriptions electronically and record when they have taken their medication, and potentially access instructional information on administering their medication.

All the above will be supported with a central medicines data repository and will mean data is available to clinicians across Wales whenever it is needed. Other parts of NHS Wales will be able to use anonymised data to review where medication is prescribed and in what quantities to allow proactive stock management and financial assurance.

Research and innovation

As digital adoption matures the role of digital to inform strategy, design, experience and better patient outcomes increases. Delivering research insights and innovation for service improvement is part of our role to further enable a digital future. In 2022 we will develop a research and innovation strategy based on consultation and collaboration with stakeholders, including Health and Care Research Wales. Priorities are to focus on predictive analytics, artificial intelligence based clinical support, natural language processing, machine learning algorithms and chatbots.

I can start to see where patients are on their journey through the health system, identifying trends and sub optimal activities

Which Means: we can focus on problem areas and optimise or redesign the patient pathway
Clinical Planners

Value from data

We are in the midst of a data revolution with artificial intelligence and data science playing an increasingly critical role. While the NHS in Wales already collects data from many different systems, capturing all patient data in one place using a common language and technology is where we will see the full potential of analytics and is the cornerstone of our national data resource programme.

The National Data Resource Programme and new health intelligence data dashboards will support this objective.

During the next three years we will accelerate the use of data analytics, exploit 'big data' and continue to work closely with the Welsh Value in Health Centre to improve patient's decision-making.

IN FOCUS

Cancer	Nursing	Patients & Citizens
Modernising cancer informatics to create an integrated cancer care record and retiring the existing legacy system	Adding functionality to the Welsh Nursing Care Record to transform documentation and free up time to care	Launch of the NHS Wales app and a suite of online digital services to help people have more control of their own well-being
Test Trace Protect	Community Care	Critical Care
Continuing to respond to the highest priority Test Trace Protect requirements and the transition from pandemic to endemic – managing COVID-19 alongside other respiratory viruses and vaccine preventable diseases	Publish the strategic review of the current Welsh Community Care Information System and deliver recommendations. Integrations with other national systems, create a Mental Health Dataset	Digitise the paper processes used in Critical Care units and roll out the new Critical Care System to modernise intensive care and free up time to care
Emergency Care	Welsh Patient Administration	Diagnostics
A new integrated Emergency Care System to improve A&E clinical outcomes and patient experience	Modernisation of this established system used for appointments and scheduling to support mobile working and remote outpatient clinics	Supporting technology-driven diagnostic services including the new national Laboratory Information Management System (LINC) Programme, the new Radiology Informatics Solution (RISP)
Digital Medicines	Microsoft 365	Value from data
Delivering hospital e-prescribing and medicines administration, electronic transfer of prescriptions from GPs to community pharmacies, shared medicines record and patient access	Establish a national Microsoft 365 Centre of Excellence for long-term sustainable support, development, and innovation. This will create a unique strategic capability within NHS Wales and reduce the reliance on external support going forward	Supporting the needs of GPs, health boards and Welsh Government, providing a wide range of analyses to benefit both direct patient care and service planning.
Cloud	Data	Open architecture
Moving more services to the Cloud, ensuring a 'Cloud-first' approach to the design and development of future services	Improving the way data is collected, shared and used across health and care organisations in Wales: driving forward interoperability	Creating an open platform approach to digital innovation, publishing national standards for how software and technologies work together, and with external partners
Information Availability and flow	Protecting Patient data	
Collaborative sharing of technical standards to enhance integration of services and support data flow enabling more innovative solutions from external suppliers	Continued focus on cyber security and development of a national Information Governance Framework for Wales to enable safe and secure data	

COLLABORATION AND ENGAGEMENT

During the pandemic we strengthened collaboration with our key partners and this will continue.

We aim to be a listening organisation and place frontline staff and service users at the centre of product and service design, with established programme and project boards providing oversight and feedback.

During 2021 we launched a Stakeholder and Engagement strategy to widen our feedback channels and provide effective opportunities for stakeholders to achieve a good level of awareness of our work and provide opportunities to influence our work. This will include new online engagement forums to allow us to actively seek views.

Our Business Change team will continue to work shoulder to shoulder with frontline staff to support the adoption of new services and to develop training materials.

And we will continue to maintain close working relationships with key stakeholders such as Welsh Government, industry, academia and UK-wide digital health bodies.

The next three years will see new relationships and collaboration with patients and citizens alongside user research in collaboration with the Centre for Digital Public Service.

AN INCLUSIVE EMPLOYER

Embracing difference and including everyone is a fundamental part of developing a future ready mind-set so we stay ahead of the game.

Our people are the core of our organisation with the expertise and knowledge to deliver our planned work programme.

The diversity of skills and backgrounds cover health informatics, healthcare, software development, data analytics, programme management, network management, project management, healthcare, business change, finance, service management and many more.

We will continue to build our workforce to ensure we have the capacity and capabilities to deliver the objectives in our plan. A number of schemes are in place to support recruitment in a competitive workforce market, including a recruitment task force.

As we aim to be a great organisation to work for, we have exceptional development opportunities for existing staff, management and leadership programmes, graduate and apprentice programmes and a partnership with the Wales Institute of Digital Information (WIDI) providing links with academia and new courses designed to support the skills for health informatics and a pipeline of homegrown talent.

Workforce planning ensures resource and demand are aligned and can identify gaps, as we expand our staffing over the next three years.

Hybrid working

The world of work is changing exponentially, as demonstrated during the pandemic when most of our staff worked remotely. Over the next three years we will continue to build on a model of flexible and hybrid working to optimise the opportunities that technology, innovation and digitalisation bring. We will also look to implement AI to maximise opportunities and reduce onboarding time.

A QUALITY ORGANISATION

Quality is at the heart of all we do. We have a robust Information Management System to control our policies, standing operating procedures, templates and guidance and reporting tools to enable measurement, analysis and improvement.

We maintain certification to International Standards for quality management and this will continue.

SUSTAINABILITY

As an organisation we are committed to a clear and ambitious decarbonisation plan over the next three years and aim to reduce our carbon footprint.

WELSH LANGUAGE

We will actively promote the use of the Welsh Language within our organisation and adopt the principle established in the Welsh Language Act 1993 that, in the conduct of public business in Wales, the Welsh and English languages should be treated on a basis of equality. We have developed a Welsh Language Scheme and are committed to provide a level of Welsh Language services equivalent to the Welsh Language Standards being adopted by similar public organisations in Wales.