



## Introduction

Digital technologies are having a profound effect on how NHS Wales organisations deliver care and treatment for their populations. Opportunities to innovate, upscale and deliver digital healthcare are increasing the support we can provide people to maintain their independence and their health and wellbeing; stay up to date with the latest information relating to their care and treatment plan; and access a wide range of healthcare services from their homes. For NHS organisations, effective use of digital technology is easing demand on services; reducing costs in some areas; and supporting professionals to treat patients with the greatest and most urgent needs first.

The NHS Wales Informatics Service (NWIS) is at the forefront of delivering these innovations to the people of Wales. Their role is to work in partnership with all NHS Wales organisations to modernise, enhance and provide the best technology for our nation's health service and support a responsible digital future for NHS Wales.

The COVID-19 pandemic has again evidenced the case for digitally-provided services and digital-first strategies in the future, as social distancing and infection control measures have meant the NHS have seen the benefits of connecting with, and supporting, patients digitally. From the outset, it was clear that technology would have a major role to play in NHS Wales' response to the pandemic. It has the potential to save lives, enable remote working and provide the information needed to deliver the best possible care for patients and service users.

Infection control measures introduced to tackle the COVID-19 pandemic have meant NHS Wales is carrying out around 3,000 video consultations a day across all Health Boards. The public has responded well to the video consultations service, with 85% of users rating the service as good, very good or excellent.

Care homes have benefitted from the recent transformation too. There are now over 500 care homes in Wales which have devices enabling video consultations, enabling care home residents to stay in touch with family members, and training for users continues to increase at pace. Digital services introduced during the pandemic are here to stay.

However, implementing changes enabled by new information systems and technology are often not just a case of deploying new technologies – they require changes in culture, behaviours and working practices across organisations. For this reason, responsibility for delivering improved digital healthcare services for Wales does not lie exclusively with NWIS or Health Boards' and Trusts' informatics services – it is a shared goal that can only be realised with wider organisational leadership across the entire public and private sectors. In short, there needs to be a shared vision for digital technology in Wales that supports inclusion and service change and improves data quality across the system.

## Ten facts about digital care in Wales

- ❖ There are currently more than 20,000 clinicians using the Welsh Clinical Portal across Wales.
- ❖ 26 million clinical documents and 151 million test results are available to view digitally.
- ❖ More than 26 million documents are stored in the Welsh Clinical Portal via the Welsh Care Records Service, including referrals, letters and operation notes.
- ❖ Two international-standard data centres manage the connections to more than 60,000 devices across 87 hospitals and more than 420 GP practices 24/7.
- ❖ The Choose Pharmacy application is live in 97% of community pharmacies in Wales. It includes the Common Ailments Service, the Discharge Medicines Review Service and the Seasonal Flu Vaccine, which has been rolled out to more than 400 commissioned community pharmacies.
- ❖ In one year, the Welsh Patient Administration System managed 1.8 billion transactions, including 4.5 million letters for patients, 3.9 million outpatient attendances and 1.7 million referrals.
- ❖ GP2GP record transfers are used in all 426 GP practices across Wales.
- ❖ The Welsh Radiology Information System has been rolled out across all parts of Wales and generates more than 2 million imaging reports per year.
- ❖ The Welsh Clinical Portal supports 800,000 annual hospital admissions.
- ❖ The Welsh Laboratory Information Management System handles over 31 million pathology tests per year.

## **NHS Wales Informatics Service (NWIS)**

NWIS was established in 2010 and is the national organisation responsible for the design, deployment and management of digital services for health and care in NHS Wales. NWIS' work includes in-house software development and the procurement of commercial products to best meet the needs of patients and health professionals in Wales.

NWIS' vision is to deliver first-class digital health and care services for Wales that enable more effective, efficient, and safer decision-making by providing access to content-rich, person-focused health and care data and information.

Every day, NWIS' systems support health professionals to provide the best possible care, now and in the future, in hospitals, GP practices, community settings and in patient's homes. NWIS is connecting existing services and working with health professionals to create new digital services that are tailored for the NHS in Wales.

Wales has set its own distinctive approach to digital service provision. Integration and co-operation between health organisations has been a key part of the country's healthcare policy, along with a commitment to avoid duplication and to do things on a 'once for Wales' basis. NWIS works in partnership with all NHS Wales organisations to modernise, enhance and provide the best technology for Wales' healthcare and support a responsible digital future for NHS Wales.

NWIS' key business areas are to:

- Design and develop integrated digital services for the improved quality and outcome of care.
- Supply and manage more than 70 operational technology services covering both primary and secondary care.
- Provide the technology infrastructure and architecture to support national systems.
- Analyse NHS data and make it available to support planning and decisions.
- Set the direction for robust and integrated primary and community care systems.
- Set the standards for health informatics professional development.

At the heart of NWIS' digital transformation work has been the understanding that the more information available to the clinician, the more accurately they are able to diagnose the problem and make an informed decision about the mode of care that is best for the patient. To support and ease the pathway to adoption, NWIS has introduced a team of 'Change Agents' who work shoulder to shoulder with healthcare professionals as new digital services are implemented.

## How digital and data are supporting the NHS Wales response to COVID-19

From the outset, it was clear that technology would have a major role to play in NHS Wales' response to COVID-19. It quickly became apparent that testing, data, virtual consultations and remote working were key areas that would help ease the situation for NHS staff and for patients, so these were the areas where NWIS focused its attention.

Acting swiftly, NWIS provided the digital leadership needed to deliver remote working to GPs and hospital-based health staff. Working closely with Welsh Government, Public Health Wales and Health Boards across Wales, NWIS fast-tracked the developments that would make a difference. With the all-Wales technical platform already in place, NWIS had the integration and interoperability needed for new digital services and data flows and the underpinning capability needed to move services into a virtual setting. To make it easier for NHS staff to find out about the latest developments, NWIS made its [website](#) a focal point for information about digital services and the digital support available to NHS Wales care providers.

The following are some of the recent developments:

- NWIS rapidly developed the **NHS Wales COVID-19 data-hub**, giving decision-makers the tools to understand capacity and demand, with data available on GP appointments, bed and emergency department capacity, positive COVID-19 tests and calls to NHS 111.
- The adoption and roll-out of **Microsoft Office 365** and Teams across NHS Wales has kept information flowing, supporting collaboration and liaison.
- New **COVID-19 testing functionality** has been added to the Welsh Clinical Portal (WCP) for use at Community Testing Units, with 95% of tests now sent electronically to Welsh labs. Within 40 days, NWIS delivered an automated all-Wales system to help contact tracers monitor people who may have been close to an individual who has COVID-19.
- In primary care, NWIS gave **GPs remote access** to the clinical desktop to enable them to work from anywhere. NWIS also enabled an email at home service, allowing practice staff to access their NHS emails from any location. NWIS also put the WCP on the desktop so family doctors could view patients' hospital information.
- Patients are now able to use **video conferencing** for remote non-contact consultations with their GP, community nurses and mental health teams, providing social distancing benefits and contributing to the longer-term transformation of care.
- In secondary care, NWIS accelerated developments to **support remote clinical consultations**, adding features to the WCP to support virtual clinics. This is providing doctors with access to their clinic list and patient record wherever they are. They can also record details of the consultation and capture the decision.
- NWIS accelerated implementation of the **Fuji Mobility image** viewing software, which means secondary care clinicians in Wales can now view images across Health Board boundaries.

## How NWIS is improving outcomes for patients

The following pages provide an overview of some of the key initiatives that NWIS has led or supported to improve outcomes for patients.

### The Digital Health and Care Record

The Digital Health and Care Record is available through the WCP. It connects health information from patients across Wales in one place, allowing all health professionals to get a full picture of a patient's health and care, wherever and whenever it is needed. For practitioners, having instant access to a patient's health information allows them to make more accurate diagnoses and deliver better standards of care for the patient. For example:

- Clinicians in Welsh hospitals can view all radiology and pathology test results from across Wales in one place, saving time, informing clinical decisions, and leading to fewer duplicate tests and scans for patients.
- Pharmacists can see if a patient is undergoing other treatments or if they have allergies to any medications, allowing them to make more informed decisions about treatment.
- Paramedics can access patients' medical history while treating them, giving them a better insight into their current situation.

Patients have the assurance that their health information is available wherever they receive care, providing the data that NHS staff need to make vital decisions about care and treatment plans while also paying due regard to patient safety. This means:

- Medical notes will no longer get lost when patients move between hospitals or departments, delaying their treatment.
- Patients will not have to explain details of their chronic condition every time they see a new specialist.
- Patients will not have to experience repeat diagnostic tests or scans because the last set of results cannot be located.

### The Welsh Clinical Portal (WCP)

The Welsh Clinical Portal is a 'made-in-Wales' solution – it was designed by Welsh clinicians, to suit the needs of the Welsh NHS, and built by Welsh software developers. Wales is the first country in the UK, and one of the first in Europe, to implement a nationwide system of sharing and accessing patient data in this way.

The WCP shares, delivers and displays patient information from multiple sources with a single log-on, even if that information is spread across different Health Boards. With information in one place, clinicians always have access to up-to-date and accurate patient records, and it improves collaboration and clinical decision-making by providing access to the right information where and when it is needed, reducing error and duplication.

The main features of the Welsh Clinical Portal are:

- **Requests tests** - Creates test sets, bulk order tests for multiple patients and requests tests for a patient on selected days.
- **Prioritises referrals** - Sorts and displays electronic referrals into levels of urgency, places them on hold, or requests more information from the GP.
- **Creates patient 'watch' lists** – Keeps track of patients more closely by organising patient care, similar to how shoppers sort their lists on consumer websites.
- **View patient's GP record** - Accesses a summary of important information held on a patient's GP record, such as current medication, recent test and allergies.
- **Access results** – Views diagnostic test results and reports regardless of where they are produced in Wales.
- **Access radiology images** – Views patients' x-rays, ultrasound, CT and MRI scans taken anywhere in Wales.
- **View patients' medical history** – View patients' referrals, discharges, letters, outpatient assessments, clinical notes, care plans, contact lists and much more at any point in a patient's journey.
- **List medication and prescriptions** – Imports a pre-populated list of medicines from a patient's GP record.

### The WCP Mobile App

The WCP is also available as a mobile app on both iOS and Android devices. This innovative development helps clinicians complete their daily tasks more effectively. WCP Mobile provides several features to help clinicians:

- **Notifications** – Receives an alert when newly published results for patients (on the watchlist) becomes available. This saves time by not having to check for results on desktop machines.
- **Test results** – Views and signs off test results using a phone, replacing the need to find an available desktop to sign off results.
- **Notes** - Adds and edits notes and tasks for patients and enables clinicians to share with other users of the app.

### My Health Online

My Health Online is a web service that allows patients to book appointments with their GP, request repeat prescriptions, view personal medications, immunisations and allergies and update personal details, making it easier for patients to contact their GP practice and reducing administration and paperwork for practice staff.

All GP practices in Wales are able to offer My Health Online. However, the range of online services varies between practices to meet local working processes.

### **My Health Text**

More than 90% of GP practices in Wales now use a texting service to send appointment reminders and other messages to their patients. The service is provided by the GP Clinical System Supplier and their chosen message carrier. Since using the texting system, practices have reported a reduction in the number of patients 'Did Not Attends' for appointments.

### **Choose Pharmacy**

Community pharmacies are able to provide free NHS Wales services for a range of common ailments as well as emergency medicines provision and medication reviews, as part of Choose Pharmacy. 97% of pharmacies across Wales are now able to offer this service, which is reducing pressure on GP practices and giving patients a greater level of control over their health and wellbeing.

For GPs, Choose Pharmacy aims to free up their time to deal with patients with more complex needs. It is estimated that up to 18% of GPs' workload and 8% of Emergency Department consultations relate to minor ailments, such as coughs, colds, sore throat, earache, hay fever, conjunctivitis and head lice.

For patients, the service means they have more options for their healthcare. Rather than waiting for a doctor's appointment for a minor ailment, for example, they can seek advice, support and treatment at their local pharmacy at a time that is more convenient for them.

Choose Pharmacy relies on a digital platform, developed by NWIS, and integrated with the NHS Wales network. Pharmacists have access to the medication details within the patient's Welsh GP Record, so they will be aware of the patient's current medications, allergies and adverse reactions, which helps them make more informed decisions.

Pharmacists can also undertake medication reviews when a patient is discharged from hospital and provide an emergency supply of prescribed medicines at evenings and weekends.

Choose Pharmacy also includes a flu vaccine service and an emergency hormonal contraception service.

## Looking ahead

The rapidly changing health and care landscape in Wales is driving the need to adapt. Patients and other service users expect more and want more of a say in their own health and care. These factors will shape the direction of NWIS and the organisation's plans for the future.

There is a need to analyse big data to improve health and care outcomes, involving innovation partnerships in line with data governance and security standards. NWIS is supporting the establishment of the National Data Resource (NDR) - a flagship Welsh Government programme to use health and care data better, by enabling a data-driven NHS Wales. Adoption of Wales' integrated Digital Health and Care Record also places NHS Wales in a position to accelerate the use of existing data to achieve better value health and care, improve health outcomes and ensure access to data and insights that will meet the needs of future generations.

As NWIS transitions to become a Special Health Authority in Spring 2021, the organisation will continue to innovate and develop new digital technology systems and services to support patients and medical practitioners in Wales. Part of this process will involve working with the Welsh Government to develop a longer-term funding model that provides increased sustainability of services, enabling better and safer care.

Below are some examples of new services that NWIS is currently working on:

- **Digital nursing documentation**, which will support nursing staff to deliver safe, effective care and reduce time spent on documentation.
- **New digital dashboards** to provide insight into patient outcomes, identify variations in care and link condition-specific data at a national level for the first time. The National Lung Cancer Dashboard was released in 2019, and this will be followed in 2020 by dashboards for heart failure, knee replacements, stroke, cataracts and colorectal cancer.
- Increasing the level of **digitised healthcare** available to NHS healthcare professionals, including endoscopy, lung function and genetics results.
- **Partnering with the Life Sciences Hub Wales** on the Digital Health Ecosystem Wales. The collaboration will enable innovation within the Welsh tech sector. NWIS is at the forefront of many of the innovations taking place within NHS Wales, building on existing services to ensure they are joined-up and not separated by organisational boundaries.
- Developing an application in collaboration with NHS Wales and private sector providers that will **enable people to securely access, extend and share their information and make informed choices**. The application will also improve engagement between patients and their carers and put people in control of their health, care and wellbeing information.

### How can the Welsh NHS Confederation help you?

The Welsh NHS Confederation is the only national membership body which represents all the organisations that make up the NHS in Wales: the seven Local Health Boards, the three NHS Trusts and Health Education and Improvement Wales (HEIW).

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