Introduction
This briefing has been produced for Assembly Members in preparation for the debate on the Public Accounts Committee report on the NHS Wales Informatics Services (NWIS) taking place on Wednesday the 30th of January 2019.

Key points to consider:
- We welcome the Public Accounts Committee’s (PAC) report which fairly reflects the current digital challenges the NHS in Wales face and provides a focus where improvements will be needed in the future and the role of the NWIS.
- The Committee and the Wales Audit Office (WAO) reports clearly set out the need for greater collaboration between Welsh Government (WG), NWIS, Health Boards, Trusts and other organisations and reflects the areas where improvements are required and will inform the future governance arrangements.
- The PAC report highlights the frustration that exists across the NHS over delays in delivering an electronic patient record as well as concerns about the resilience of core systems and reinforces the need for change while recognising some improvements that have already been made.
- Currently the NWIS has responsibility for the technical infrastructure that keeps NHS Wales digital services running. This includes 70 all-Wales systems, all designed and built to populate the electronic patient record, and two international-standard data centres, managing the connections to more than 60,000 devices across seven health boards, two trusts, 87 hospitals and over 420 GP Practices 24/7.
- At the heart of digital transformation is the understanding that the more information available to the clinician, the more accurately they are able to diagnose a problem and make an informed decision on care.
- As the Parliamentary Review highlighted the digital agenda provides significant opportunities to transform the health and social care services of the future.
- We are pleased the WG’s long-term plan for health and social care commits to a fully integrated national digital architecture, supported by significant investment, stronger national digital leadership and strengthened delivery arrangements. Our members have been proactively involved in engaging with the WG NHS Wales Informatics Governance Review and the NHS Wales Digital Architecture Review.
- We will continue to work with the WG to implement A Healthier Wales and to determine the governance and architecture we need to ensure our IT systems are fit for purpose and support new models of integrated care.
**Why investing in IT infrastructure is so important**

Investment in new technologies and IT is important in creating a safer, more accessible and more sustainable health and social care system. Health care analytics provide an opportunity for sustainability and disease prevention. The approach is three-fold:

1. **Know and predict what will happen within a population**: If care team members are to improve health and care, data must flow freely across health care providers and the community. When combined, this data creates a comprehensive view of a person or population’s health and care experiences. This helps inform the care team, enabling them to make the best health and care decisions based on all available data.

2. **Engage the person, their family and care team to take action**: Health and care is personal. Consistent, connected engagement, tailored to each person’s unique needs and drivers is essential. This will empower people to be active participants in their health and care.

3. **Manage outcomes to improve health and care**: To improve and maintain outcomes at a person, population, clinician and organisation level you must continually identify areas of opportunity, measuring and monitoring performance through data-driven analytics and real-time surveillance.

**NHS Wales Informatics Service (NWIS)**

The NWIS was established on the 1st of April 2010 and has responsibility for the design, deployment and management of digital services for health and care across NHS Wales. Its work includes in-house software development and the procurement of commercial products, to best meet the needs of NHS Wales. It also has responsibility for the collection and analysis of health data.

NWIS’s key business areas include:

- Designing and developing integrated digital services for the improved quality and outcome of care;
- Supplying and managing more than 70 operational technology services covering both primary and secondary care;
- Providing the technology infrastructure and architecture to support national systems;
- Analysing NHS data and making it available to support planning and decisions;
- Setting the direction for robust and integrated primary and community care systems; and
- Setting the standards for health informatics professional development.

The NWIS has a lead role in delivering the aims of Informed Health and Care, a digital health and care strategy for Wales, and provides support for more than 70 all-Wales systems - all designed and built to populate the electronic patient record. Significant digital progress has taken place over the past decade and Wales is the first nation where test results and clinical notes are available wherever the patient receives care – creating a seamless patient record. The national systems in use across Wales are built on modern, industry-standard software and designed by clinicians for clinicians, allowing innovation to be introduced incrementally.

NHS Wales infrastructure is supported by NWIS. NHS Wales has a robust approach to cyber security on par with global standards. Email services are managed centrally using a national directory service that allows users to log on to systems and services regardless of where they access a computer.
Underlying systems that support the digital platform
The following list covers the major areas of responsibility managed by the NWIS.

Secondary Care IT Services

**Welsh Clinical Portal:** The Welsh Clinical Portal, designed by clinicians and developed by the NWIS, is used daily by 17,000 doctors and supports 800,000 annual hospital admissions. It gives doctors access to test results, regardless of where the test was taken originally, 12 million clinical documents and a view of the patient’s GP-held medical records.

**Welsh Patient Administration System (WelshPAS):** The WelshPAS is used by the majority of Welsh hospitals and is at the heart of patient management in the hospital. WelshPAS holds patient ID details, outpatient appointments, letters and notes. It is used to record details of patients’ hospital visits, including list management, medical records, inpatient treatment, outpatient appointments and emergency visits. In one year it processed:
- 1.8 billion transactions;
- 4.5 million letters for patients;
- 3.9 million outpatient attendances;
- 1.7 million referrals.

**Welsh Radiology Information System:** Supports the management of imaging technologies and performs functions such as patient scheduling, clinical reporting, resource allocation and management reporting. Annually the Radis2 handles over two million radiology test results.

**Welsh Laboratory Information System (LIMS):** LIMS is used by pathology staff for storing, recording and exchanging information such as blood test results. It also links to the machines, which conduct the tests and analyse the samples. Annually the Welsh LIMS handles 31 million test results.

**Electronic Master Patient Index:** An index of patient records that can intelligently find and safely bring together the multiple records from multiple sources for each patient.

**National Data Resource:** Data is collected from numerous sources with over 50 million episodes of care held in the Patient Episode Database Wales. NWIS maintain a range of other national databases covering secondary care, births, deaths, child health and the NHS Wales Administrative Register. To give Health Boards and the WG access to the information they need in the way they want it, NWIS produce a range of web apps including dashboards, data quality indicators, health maps, online reporting tools and tailored e-portals.

Other secondary care services
- Welsh GP Record
- Welsh Results Reports Service
- Welsh Emergency Departments System
- Welsh Patient e-Referral Service
- Welsh Imaging Archive Service
- Medicines Transcribing and e-discharge
All Wales Accelerating Cardiac Informatics
Welsh Information System for Diabetes Management
Cancer Informatics Solution
Hospital pharmacy
Diagnostic Services including the Welsh Laboratory Information Management System, Point of Care testing and the Welsh Radiology System
Welsh Newborn Hearing Programme
Digitisation of nursing documentation

Primary Care IT services

All 420 GP practices in Wales receive digital services and support from NWIS.

**GP2GP records transfer:** In 2017, all GP practices became able to send patient records electronically to other Welsh practices using a GP2GP transfer.

**Skype for GPs:** Skype for business supports communications and links with wider communities.

**New GP computer system contract:** Early in 2018, a new framework contract to supply GP IT systems and services to NHS Wales for five years, from January 2019, was awarded to Vision (InPractice Systems Ltd) and Microtest Ltd. This gives practices the latest digital solutions designed for primary care. As part of a national five-year GP Computer Refresh programme, GP practices throughout Wales are in the process of upgrades to their computer operating systems - from Windows 7 to Windows 10. Primary care is given access to feedback from data within their computer systems relating to National Audits, Quality and Performance measures.

**Choose Pharmacy:** Choose Pharmacy, now available across Wales, is enabled by a digital platform developed by the NWIS through allowing the pharmacists to keep a pharmacy record for each patient making it possible for pharmacists to provide services for common ailments reducing demand on GPs.

**My Health Text:** The My Health Text appointment reminder service is being enhanced to allow patients to reply, view and cancel appointments, which is reducing the number of patients who do not attend for appointments. A case study undertaken by the Isca Medical Practice in Caerleon reported that the practice has seen its “Did not attend” (DNA) rate fall by 36.6%, or roughly 60 appointments a month, as a result of being able to text patients (aged 16 and over) 24 hours before their appointment.

**Welsh Community Care Information System:** Collaborative working with Health Boards and Local Authorities is driving forward roll out of the Welsh Community Care Information System to ensure joined up care.
GP Test Requesting: enables GPs to send test requests to the laboratories in the Health Boards electronically and view the results online.

My Health Online: A major element of the digital strategy is to encourage citizens and patients to take a more active role in their own health and care. At the start of 2018, patients also became able to use My Health Online to view their medications and allergies. A pathfinder project to help patients view coded aspects of their personal health records is also under way. This is in addition to the existing functionality which enables patients to book GP appointments and request repeat prescriptions on line.

Other primary care services
- Eye care referral
- Dental Care Referral
- National GP Links
- Welsh Clinical Communications Gateway
- Data management and analytics

Patient consent and confidentiality
Citizens and patients in Wales can have confidence that their data is held securely and shared only when appropriate, to support their care. Safety and security across national systems is managed through:
- A single user ID for every member of NHS Wales’ staff;
- A cyber-audit that spots any unauthorised access to patients’ electronic records, or potential data breaches (National Intelligent Integrated Audit Solution); and
- An electronic master patient index (EMPI) to keep patient data such as name, address, date of birth and sex, up to date and accurate.

Whenever a doctor, who is not the patient’s registered GP, needs to access the patient’s Welsh GP record, the patient’s individual consent is sought.

Governance and accountability arrangements
Further work is required to strengthen the clarity and accountability of NWIS’s role in delivery of the digital agenda, in addition to local and national governance arrangements, in setting out priorities and expectations of NWIS in the future delivery of the National Digital Strategy. The Welsh NHS Confederation and our members have proactively engaged with the WG NHS Wales Informatics Governance Review, which is expected to report its findings in due course, and the NHS Wales Digital Architecture Review.

The current national informatics model is complex and the multidisciplinary role that NWIS fulfils from authority through to service delivery, together with its hosting arrangements, as highlighted within the Parliamentary Review, confuses lines of accountability. As NWIS provide services which Health Boards/Trusts are dependent upon for successfully discharging Health Board statutory obligations to their populations, it is therefore essential that Health Boards and Trusts can work effectively in partnership with NWIS and with clear objectives and leadership aligned to the ‘once for wales’ approach.
Parliamentary Review and Healthier Wales

A number of the issues and challenges within the WAO Report were also considered by the Parliamentary Review into Health and Social Care report, published in January 2018. The Parliamentary review and the WG Healthier Wales Plan have placed a clear focus on the role of digital as fundamental to the delivery of care to thousands of Welsh people every day. It has highlighted the need to maximize existing technology systems through on-going investment, and to ensure digital services are where they need to be. Given the considerable investment in the NHS Wales technical infrastructure to date, and the rapid advancement of new technology, informatics will continue to play a key role in the strategic transformation of services. A key concern is the need to maintain a pipeline of continuing and adequate investment in IT to manage both existing services and to develop new up-to-date applications.

Implementing changes enabled by new information systems and technology are often not just a case of deploying technology and require changes of culture, behaviours and working practices across organisations. As a result, responsibility does not lie only with NWIS or Health Boards’ and Trusts’ informatics services alone and are equally dependant on wider organisational leadership and engagement with staff and the public. We continue to work closely with the NHS, Local Authority and WG policy colleagues in agreeing and delivering these improvements.

Having IT infrastructure in place clearly aligns with the Welsh Government’s A Healthier Wales Plan and the quadruple aims of providing:

1. **Improved population health and wellbeing**: By using a data platform and population management to predict and prevent health and social care need and empowering patients to be involved in their own health care via a patient portal.
2. **Better quality and more accessible health and social care services**: Health and social care needs can be mapped and community services improved. Patients would have better access to care via electronic portals.
3. **Higher value health and social need**: With increasing demand on services, by predicting care needs and mapping this we can provide better value care. Also, by reducing Emergency Department attendances and admissions to hospital through better community care management and illness/disease prevention.
4. **A motivated and sustainable health and social care workforce**: A system that focuses on workforce wellbeing. A multidisciplinary team matched to the care needs of the area.

**Conclusion**

If you require any further information on any of the issues raised in this briefing, please do not hesitate to contact us: Nesta.lloyd-jones@welshconfed.org

---

**The Welsh NHS Confederation**

The Welsh NHS Confederation is the only national membership body that represents the leadership of all the statutory NHS organisations in Wales: the seven Local Health Boards, three NHS Trusts and Health Education and Improvement Wales.