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# **CSW in the NHS – Summary Case Studies**



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The NHS Plan, the government's blueprint for the health service, sets out a vision of a modern networked service in which patient information is shared electronically between different parts of the local health community to deliver improved patient care.

Following the successful implementation of a number of such e-record prototypes, starting in 1998, CSW Health now has its Case Notes product installed at major NHS sites including the Oxford Radcliffe Hospitals NHS Trust; South Staffordshire Health Authority; Wrightington, Wigan & Leigh NHS Trust and Doncaster & South Humber Healthcare NHS Trust.

These NHS sites have recognised that traditional information systems are not effective in delivering automated healthcare records. The solution needs to be dynamic and innovative to achieve the desired results.

CSW Case Notes has been designed in alignment with the Government's Interoperability Framework (eGIF), which has been shaped by three key policy decisions for implementation of information systems in the public sector:

- Alignment with the Internet
- Adoption of XML
- A web browser as the user interface

Case Notes has been built from the ground up using the eXtensible Markup Language (XML) and other open standards technology, and is fully extendable through a system of plug-in modules. These modules can be linked to data in existing clinical systems and to CSW's own XML-based clinical repository. The authorised clinical user, and even patients themselves, can view relevant patient history, current treatments and planned activities from any browser-enabled terminal, such as a PC, a handheld device, or digital TV channel.

By making use of XML and XSLT technology, the Case Notes solution is capable of integrating clinical information from large, disparate sets of departmental systems. *"Case Notes is basically a toolkit for building electronic records, which enables you to access information from a range of systems using the same environment",* explained Dave Nurse, Director of Research at CSW, *"It's a modular system that lets you join up lots of different health care organisations in a local community. Because it's built entirely on open standards technology, it provides a platform that can be adapted and extended easily as data structures and clinical requirements change."*

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At **Wrightington, Wigan & Leigh NHS Trust** the Coronary Heart Disease data and scanned ECG reports are already being transferred to the CSW Case Notes system to be viewed as electronic case notes. Their system also holds diabetes records, pathology results, and patient alerts which, when viewed as a single integrated electronic patient record, provides clinicians with a very powerful National Service Framework information resource.

According to Philip Firth, IM&T strategy implementation manager at the Trust, one of the key benefits of the Case Notes system is the improvements in efficiency that it creates, *"Clinicians are impressed with the major reduction in the time it takes to get hold of the vital medical records and patient information they need. The EPR system not only speeds up the patient assessment and administrative processes, it could also prove to be life saving in emergency situations."*

Security of the CSW Case Notes system is managed through the Access Control Framework (ACF), providing NHS-approved security and encryption as well as real time audit of user activity and links to Caldicott management. At each of the NHS sites, every individual junior doctor, consultant or other authorised care professional is provided with a unique individual password, ensuring the security of patient information whilst also providing audit trails of the information they have accessed. Hospital doctors only have access to information for patients they are treating; GPs only have access to information on patients from their particular practice; social workers only see information that is relevant for them.

At the **Oxford Radcliffe**, guidelines and protocols have also been built into the new system, enabling clinicians to reference supporting information for Evidence Based Medicine at the same time they access laboratory results. *"Using this business technology now means that GPs get results an hour after they come off the analyzer rather than days later,"* said Dr Jonathan Kay. *"GPs can now see investigations they called for in the surgery, providing a much more patient-centred approach."*

Local Oxfordshire GP, Dr Andy Chivers, says the ability to view results on screen during a patient consultation is invaluable. *"It gives a much better opportunity to discuss the results and future treatment options with the patient."*

The ability of CSW Case Notes to bring together disparate software and information systems was truly tested at **Doncaster and South Humber Healthcare NHS Trust**. The system here covered information sourced from Doncaster Social Services and acute care at Doncaster Royal Infirmary, in addition to the services provided by the Trust.

Ian White, Head of IM&T at Doncaster says *"I believe we have succeeded in developing a concept that enables Health and Social Care organisations to fully exploit their historical investment in Information systems, and without any pre-requisite need to replace, upgrade or modify them."*

He believes that the system's design is innovative and yet simple. *"Because the concept exploits current web-browser technologies without the need for any other specific client software, it makes implementation and support very straightforward."*

At **South Staffordshire**, one of four NHS ERDIP sites asked to pilot electronic health records, CSW Case Notes provides support to health professionals including ambulance paramedics, A&E departments and GP Out of Hours services, by enabling immediate access to up-to-date clinical information, regardless of their location. The project was managed by Wally Gowing, Director of Information Technology and Modernisation at South Staffordshire Health Authority, who says that,

*"CSW was chosen because the team of IT specialists had significant knowledge and experience of the NHS and the problems we were trying to solve. Additionally, CSW use XML technologies as required by the Government Interoperability Framework (e-GIF) which we knew would form the basis of NHS Technical Standards"*

With the publication of the new plans for "Delivering 21st Century IT Support for the NHS" it has become more important than ever for local e-records implementations to adopt an approach that brings real benefit to patients, delivers savings in time and efficiency to NHS staff and is in alignment with the National Strategic Programme.

All four of the NHS sites featured here, have used innovative, eGIF compliant technology to achieve faster transmission of data and greater accessibility to information which enables treatment and support services to be more efficient and effective. This results in better and more appropriate care for patients and better use of valuable NHS resources.