

## An Electronic Health Record (EHR) for Doncaster

Doncaster & South Humber Healthcare NHS Trust provides a wide range of services to a population of more than 600,000 people across Doncaster Metropolitan Borough and North Lincolnshire, as well as mental health and learning disability services in North-East Lincolnshire. Services are offered by the Trust in more than 60 community-based locations and nine hospitals. These include primary and community care, mental health, respite care and disability care services amongst others.

Following the requirements set in the Government's *'Information for Health Strategy'* and the need to develop a Computerised Case Register for People with Psychotic Illness, the local health and social care community at Doncaster decided to work with CSW Health Ltd to develop and implement an Electronic Health Record (EHR).

### The Challenge

The project was led by Ian White, Head of Information at the Trust, with the aim to provide a 'cradle to grave' EHR containing information derived from a wide variety of sources. Although ultimately the EHR will incorporate Primary Care, it was decided to initially cover information sourced from Doncaster Social Services and acute care at Doncaster Royal Infirmary in addition to the services provided by the Trust.

In particular, it required health and social care organisations to work in partnership to identify the ultimate information requirements and to supply the necessary data from their own systems.



*Ian White*  
*Head of Information*  
*Doncaster & South Humber Healthcare*  
*NHS Trust*  
&  
*Alan Jones*  
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*CSW Health Ltd*

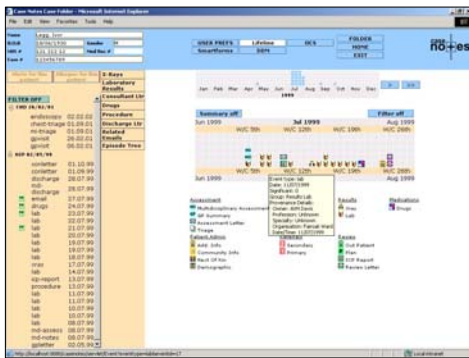
Between these organisations a large number of different software and information systems are currently in use, supporting patient and social care across a wide geographical area. The challenge was to bring information together in a controlled manner so that it could be accessed by authorised personnel 24 hours a day, seven days a week from any standard PC terminal connected to the NHS-Net, without the need for any additional application software.

The logo for CSW Health Ltd, consisting of the letters 'CSW' in a bold, blue, stylized font.

## The Solution

CSW Health and the Doncaster health and social care community worked together to develop a solution using CSW Case Notes™, an XML-based product suite for operational health records management. Case Notes has been designed in alignment with the Government's Interoperability Framework (e-GIF), which has been shaped by four key policy decisions:

1. Alignment with the Internet
2. Adoption of XML
3. A web browser as the user interface
4. Using metadata for content management



Case Notes uses open standards technology such as the eXtensible Markup Language (XML) and is fully extensible through a system of plug-in modules. These modules can be links to existing clinical systems or to CSW's own modules such as Discharge Letters, In-tray and Order Communications. At Doncaster, Case Notes layers seamlessly over the existing Patient Administration System (PAS) and also sources data from word-processed documents including Referral, Clinic and Discharge Letters. XML is used to convert the Word documents created by the staff at Doncaster, so that the information can be entered into the EHR. This data is then available to clinicians with the added functionality that they are now able to conduct intelligent searches for items such as discharge drugs.

CSW Case Notes™ uses a multi-tiered architecture that allows for rapid scalability on the server-side and reduces the client configuration to zero. All that is then needed for authorised user access is a PC with a standard web browser connected to the NHS-Net. This allows access to the patient information from any NHS location, while requiring the minimum of technical support from Doncaster community's IT team.

The sophisticated Access Control Framework in Case Notes ensures that access to medical records can be authorised and audited at both application and clinical event level. A different 'view' of Case Notes is provided according to the user's access level, such as Administrator, specified A&E Doctors, or Consultants.

By implementing CSW Case Notes™, the Doncaster health and social care community now has an EHR that provides its professionals with consistent, up-to-date information to ensure that patients receive the most appropriate care and treatment in the fastest time possible. Users, whether they be in a hospital ward, in the community, in GP practices or anywhere else within the NHS, do not need any specially installed software, just a web browser and access to the NHS Net.

## The Next Steps

The project has been a huge success and the system currently has a selected user-base of authorised professionals that cover a range of mental health and social care services. Ian White, Head of IM&T at Doncaster says "*I believe we have succeeded in developing a concept that enables Health & Social Care organisations to fully exploit their historical investment in Information systems, and without any pre-requisite need to replace, upgrade or modify them.*"