

**Trevor Ludlam's organisation used the national programme for IT as a springboard for implementing a wide range of IT innovations. From integrated patient records to digital pens in A&E, here he explains what they did and how they did it**



The national programme for IT was established to deliver frontline systems and services that would bring major benefits for NHS organisations, staff and patients. Nottinghamshire Health Informatics Service has been steadily turning that vision of integrated information, communication and technology (ICT) into a reality.

Having just retired as director of Nottinghamshire Health Informatics Service, I look back and attribute our success to the enthusiasm and creativity of people who care passionately about improving patient care.

We have had the support of clinicians and senior management and have simply got on with developing an effective ICT strategy that does what it sets out to do. Above all, we have not been constrained by what we thought NPfIT should and should not be delivering.

We have always been innovative in Nottinghamshire. In 1995 I led the introduction of a community information system requiring palmtops to be issued to 500 community-based clinicians. Understanding the cultural change and how the people are affected by such a change was vital.

We placed great emphasis on obtaining support from all levels of the organisation, and key stakeholders were involved continually throughout the procurement and implementation. The benefits were clearly identified and disseminated, with a strong emphasis on training and support.

### Gaps in the portfolio

In today's rapidly changing NHS, ensuring that organisational strategies interface with, and support the work, of NHS Connecting for Health is essential. Nottinghamshire Health Informatics Service provides services to all the Nottinghamshire PCTs and Sherwood Forest Hospitals foundation trust and the mindset of NHIS has always been to consider the entire patient journey.

This has been apparent in our implementation of choose and book, where our health community has consistently done well nationally, in both primary and secondary care, in terms of the number of referrals sent and received.

We have endeavoured to take all elements of NHS CfH available to us that would bring benefits for patients, clinicians and NHS management. For example, TPP SystemOne is being used widely within Nottinghamshire and to optimise benefits we have piloted the use of mobile devices with community staff.

Within two weeks of Sherwood Forest Hospitals foundation trust implementing radiology and PACS, the trust was 99 per cent film-less. The trust has also recently implemented the CSC's theatre system, ORMIS, in response to its identified business requirements.

Clearly there are currently some gaps in NHS CfH's portfolio, notably in the acute setting and in mental health. SFHT is in the middle of a £320m PFI deal which will see the creation of a new state-of-the-art hospital. The first phase, which is a diagnostic and treatment centre, opens later this year. We needed to ensure that we had state of the art systems available for a state of the art hospital.

The innovations which we are implementing to support our new hospital are based on three key objectives:

- ▶ better communication between clinicians;
- ▶ improving the ease of data capture;
- ▶ doing things once and sharing them.

Most of our innovations are based around the implementation of a wireless network within SFHT. This has enabled significant new technologies to be implemented to support patient care, for example, the Vocera communication system which gives clinicians person-to-person communication wherever they are in the trust.

Other exciting technologies we are implementing include:

- ▶ An integrated patient record using the Orion system, which brings together information from multiple sources and is accessed by clinicians through a clinical desktop.
- ▶ A maternity system that midwives use via mobile devices using GPRS in the patient's home, enabling the real-time capture, retrieval and sharing of information.
- ▶ Use of bar-coded wristbands for patients, which support positive patient identification.
- ▶ Development of an accident and emergency service by which patient information is collected using digital pens.
- ▶ Sending urgent pathology results to Vocera badges, negating the need for clinicians to access systems.
- ▶ Development of electronic discharge letters, which are emailed to GPs at the time of the patient's discharge and can be attached to the patient record in the GP system.
- ▶ For patients admitted, who have a long-term condition, the recurrent admission patient alerts automatically sends an e-mail to named clinicians. This early warning enables the team to intervene early in the patients' care episode and significantly reduces admissions to the trust.

I strongly believe that IT can make a real difference to patient care. While we all look forward to an integrated solution in the form of Lorenzo, I hope that NHS CFH see the value in the innovations that are already being delivered in Nottinghamshire and allow the NHS to have the flexibility to innovate around the edges of the national programme.

*Trevor Ludlam retired as director of Nottinghamshire Health Informatics at the end of January 2008 after 17 years in the NHS.*