

DISCHARGE PRESCRIPTION EMAIL PROJECT WINS AWARD

The national programme for IT was the theme of the Guild of Healthcare Pharmacists IT interest group seminar, which took place in Warwick, 28 April. Gareth Jones reports

Discharge prescriptions at Aintree Hospital are scanned and emailed to GPs, to ensure that a legible list of the patient's medicines is received immediately on discharge. The system was developed by Alex Jennings and Joe Bilborough, who received the First DataBank Guild of Healthcare Pharmacists Information Technology Award 2004 for their work. The system does not require additional staffing, and the set-up costs were just £1,200.

The National Service Framework for older people states that there is poor two-way communication between hospital and primary care, and suggests that systems should be put in place to improve both the quality and speed of this transfer of information. Trusts in many parts of the UK have not addressed this issue, said Mr Jennings, because they are waiting for electronic prescribing and the single patient record. It is not known when that is going to be available and whether in fact it will solve the problem of discharge information being delayed, he added. However, these problems have been around for years, and a solution is required.

The challenge that had been set was to find ways of transferring information from discharge prescriptions to the GP quickly, accurately and reliably. At Aintree, as with most other hospitals, the discharge prescription consists of a top copy with several carbon copies beneath. The legibility of the writing on the carbon copies will depend on how hard the prescriber presses on the top copy.

GPs often find that the carbon copy that they receive is illegible. They are, therefore, often unaware of changes made to a patient's medication in hospital. Forms are sent out by post and often arrive after the patient has been into the surgery to request a prescription, or they may be lost in transit.

Faxing prescriptions to GPs was one solution suggested, but this was found to be time consuming, not secure and would require employing additional staff. Another potential solution was developing electronic prescriptions that the doctors would complete on the ward; however, the training time involved in this was too long. Therefore, it was decided that the prescription should be scanned, and then sent immediately to the GP in an auto-



Alex Jennings and Joe Bilborough, University Hospital Aintree, with Robin Glasspole, First DataBank Europe, after receiving their IT award

mated electronic process. The e-mail would be encrypted for security.

The automated process developed involved a scanner with a document feed. This allows up to 50 prescriptions to be put on the feeder at a time. A readily available document scanning programme was then installed onto a computer attached to the scanner. The software is able to identify the patient's bar-coded hospital number which is applied as a sticker to the prescription on the ward. The image of the prescription is then saved, with the patient's hospital number as the name of the file. The computer links the hospital's patient number to a GP, using the hospital's patient information system. A further simple database maintained in the pharmacy lists GPs and their e-mail address.

An e-mail is automatically constructed and encrypted with the image of the prescription attached, and the GP's e-mail address. At the end of the process, a report is provided of the number of e-mails sent, and whether any errors occurred. During the process, the prescriptions are moved on to the hard drive and are stored in files for successful or unsuccessful transmissions. The mailbox in the GP surgery is set up with an auto-reply. This means that the number of prescriptions sent can be compared to the number of successful messages returned. Any differences can be investigated.

The system works quickly, and 150 prescriptions can be scanned and sent in about 8

minutes. The encryption is specific to each GP, so only the right GP can access the patient information.

Eight practices agreed to be involved in a pilot of the system. During the first two months of the trial, over 400 prescriptions were sent out, with between 10 and 20 prescriptions being scanned every day. No prescriptions were classified as illegible by the practices receiving them. Four were sent to the wrong practice, but this was due to an error within the hospital's information system. All practices provided positive feedback at the end of the pilot. They wanted the new system to continue because it worked far better than the previous one, and meant that the practice of calling the hospital to clarify prescriptions could stop.

The pilot showed that this was a safe and efficient method of transmitting information to GPs, and the pilot practices suggested that other hospital communications could be sent this way. The next stage was to liaise with the IT department and a project implementation group from the primary care trust (PCT). They arranged a designated e-mail address at each practice. Previously e-mails had been sent to the practice manager, but sending them to a central e-mail address meant that they could still be accessed if the practice manager was away. The PCT requested a further pilot, and it is hoped that by the summer all practices in the area will be included.

Mr Jones is editor of Hospital Pharmacist

Progress with IT services in the NHS has been slow

IT services in the NHS have developed slowly, said Sean Brennan, director, Clinical Matrix and a consultant on IT in the NHS. Twenty years ago, it was predicted that electronic prescribing would be used widely in practice by now. Some trusts do have electronic prescribing, but most do not. In 1992, 48 different books were produced on the NHS information management and technology strategy, but again, it has not moved on a great deal since then. "The biggest problem is apathy with the clinicians — they are reluctant to change the way that they work," said Mr Brennan. The fear that clinicians have is that clinical IT systems will take away their control, as the system will tell them what to do.

The NHS now has the National Programme for IT (NPFIT). For this to work, clinicians need to be engaged, and have chief executive support, said Mr Brennan. Currently in hospitals and GP surgeries there is a mixture of information that is either on computer or on paper. When services are reshaped so that patients can be treated on more than one site, records should be available at all sites. The only way that this can be achieved is electronically.

One of the main criticisms of the NHS is the lack of communications between different health care professionals. New systems will allow seamless care with shared pathways. Mr Brennan said that the quality of discharge letters is currently poor, with many GPs receiving scribbled notes weeks after discharge. He suggested that in the future people will look back and wonder why this situation was tolerated for so long. The other benefit of supporting clinicians with IT is that they can be given real-time warnings, for example, high dose or potential drug interaction. There is a danger, however, that people become blasé, and ignore the warnings. Therefore it is important that the warnings are relevant to the clinician, to prevent warning overload.

Mr Brennan asked, "What are the potential barriers to clinicians using clinical support IT systems? These systems have to be simple — if staff need to think about how to use them, they will be left aside. The technology must be mobile and available at the bedside for clinicians to use during consultations with patients, or it will not work."

Some people see electronic prescribing as a threat, others as a great opportunity as



Sean Brennan: Clinician and chief executive support must be secured for IT to be successful

pharmacy is re-engineered to provide a more clinical service. "Pharmacists are in an ideal position", he said, because they are at the core of delivering clinical care. When you look at modernising delivery of clinical care, pharmacists' role will be key.

— ELECTRONIC PATIENT RECORD

The electronic patient record (EPR) was a misnomer, said Mr Brennan. It implied that only an electronic record was being produced — this could have been achieved much more easily by simply scanning paper records. In fact, the EPR programme also intended to support the clinicians in their clinical activity — this would automatically generate an electronic record. Each active system, such as a hospital, would produce a record which could be placed on the national electronic health record (EHR). The systems in the hospitals could be different, but the outputs would be the same, and form a passive record on the EHR. The EHR would contain blood group, allergies and personal clinical characteristics and links to other information, eg, inpatient medical notes, wherever they were stored. The principle of the EPR systems was that IT supports the practice, and the records are a by-product of this. The local systems were necessary before the EHR was implemented, so that there was something to feed the EHR.

The EPR programme required logical steps to produce the final goal of clinical decision support. These started with integration of different departmental systems at level one, moving up to ordering of tests and prescribing at levels three and four, to full clinical decision support at level six.

— INTEGRATED CARE RECORD SERVICE

Why did the concept of EPR become subsided by the integrated care record service (ICRS), asked Mr Brennan. The problem with EPR was that patients do not tend to go to just one organisation, they tend to move around. In addition, the National Service Frameworks require specific clinical data to be recorded, but with EPR, these systems were not being implemented until level five (a level higher than electronic prescribing). "There were too many different solutions, and the systems could not be integrated," he said. The procurement process was also too long — it could take six years to obtain a system, by which time trusts may have merged, and a new system would be required. There was also a doubtful business case for EHR, because 95 per cent of care is delivered locally.

If the EPR was just about a record, it would not matter that patients receive their care from different organisations, because the outputs could be standardised. You could have lots of different suppliers and systems, as long as the output was standardised. If it was just about data analysis, you could have different systems everywhere. But EPR was meant to be about supporting clinical care with IT. For example, a diabetes patient is on a clinical pathway, receiving care from both a hospital and a GP. Integrated pathways will not work if each organisation has a different clinical support system.

ICRS does not provide different systems for each organisation, but is a complete system for all of these elements in a geographical area. The clinical active system provides the same services as under EPR, but rather than be tied to one organisation is provided in a geographical area. Patients in that area will be able to visit their GP surgery and several local hospitals, and their records will be available on one system.

In England, 20 years of experience have shown that the computer companies find it difficult to deliver and implement these systems. Implementation has therefore been passed over to local service providers (LSPs). The LSP has a group of products that they will implement in one of the five English geographical clusters.

First DataBank and Guild of Healthcare Pharmacists Information Technology Award 2005

Entries are invited for the 2005 award. The prize is £2,500, which is intended for use within the pharmacy department to develop the project further or help to fund other IT-related projects. A 2,000 word description of the project should be submitted by the deadline of 1 November 2004. Further details available from www.gphp.org.uk