

New IT demands new ways of working

Electronic prescriptions and automated dispensing will have a major impact on the way pharmacy services are delivered. **Jonathan Buisson** reports

Information technology must allow for the re-engineering of pharmacy working practices, conference chairman Sean Brennan said opening the meeting. "Otherwise, all you get is expensive working practices."

Mr Brennan, who is chairman of consultants Clinical Matrix, pointed out that IT has to support the way in which doctors, pharmacists, nurses and other clinicians work. Without such support, clinicians will not use the new technology.

Will Willson, deputy chief pharmacist, Addenbrooke's Hospital, Cambridge, described his experiences with installing an electronic prescribing (eP) and medicines administration record (eMAR) system on an acute medical ward.

"Nurses are the key to installing a system like this successfully," he said. "They have most to gain if it is successful, and most to lose if it is a failure. Projects will fail without involvement buy-in from nursing staff." Like most hospitals, Addenbrooke's has significant recruitment and retention problems with nursing staff and this would be made worse by installing a poorly functioning system, Mr Willson said.

The formal and informal process that operate at ward level need to be understood before any new system is installed, Mr Willson advised. "Then you have to ask: 'Are we prepared to change and is this reflected at the highest level?'"

Pharmacists will also have to respond to the changes brought about by IT, Mr Willson said. "We need to move away from being seen as policemen or accountants."

Anthony Madden, consultant anaesthetist, described the installation of an eP and eMAR system at Southmead Hospital, part of North Bristol NHS Trust. Dr Madden noted that the trust had the worst budget overspend in the NHS (£44m on a budget of £300m) and that "this colours what we did and do now".

Initially, the plan was to install the system within the surgical directorate and theatres as a pilot, followed by a roll-out to the rest of the hospital at a cost of £1m. Changes in senior management and trust priorities had seen the scheme capped at a three-month pilot.

Speaking about overcoming resistance to the new system, Dr Madden said that the solution was: "Plan, plan, plan and communicate, communicate, communicate; you can't



Will Willson: nurses are the key to installing electronic ward systems

have too much communication." Project meetings to plan the new system took up about 10,000 person/hours — "equivalent to five people working for a year".

The results of the pilot were that a totally paperless eMAR system is feasible, as long as there is a commitment to delivering it. It probably contributes to patient safety by increasing completeness of key parts of the pre-

scription chart (such as patient name, dose and prescriber's signature) by making these mandatory entry fields, but it probably does not save either time or money.

Keith Farrar, chief pharmacist, Wirral Hospital NHS Trust, said that installing a dispensing robot at Arrowe Park Hospital had reduced dispensing errors by half and saved around 30 per cent of technician time allowing them to carry out ward-based duties.

"Do not get a prescribing system that has grown out of a dispensing system," he advised. If such prescribing and dispensing systems are linked then prescribers learn to use common dispensing short-cut keystrokes. This can lead to errors that can be difficult to spot in the pharmacy, such as where pharmacy staff correctly pick medicines that were inaccurately prescribed.

He also advised that electronic prescribing terminals on wards should be linked wirelessly to the hospital network. "Prescribing should take place at the bedside, not from notes later."

Looking ahead, Mr Farrar said that further developments in automation will include labelling by machine — saving even more technician time — and the delivery of dispensed items directly to wards by air tubes.

He predicted that all hospital pharmacy staff could eventually be ward-based, delivering a 24-hour pharmacy service.

Lessons that we have learnt from the pilots of electronic transmission of prescriptions

The first lesson from the recent pilots of electronic transmission of prescriptions (ETP), and from other trials run in the 1980s and 1990s, is that "if it were easy, it would have been done by now", according to Martin Strange, then operations director of TransScript. TransScript was involved in one of the three ETP pilots earlier this year, but has now closed down (*PJ*, 20/27 December 2003, p835).

Mr Strange said that it is crucial to understand both the formal and informal processes used in the current prescription system before introducing new technology. For example, the right-hand page of a computer-printed prescription form is not part of the prescription against which payment is made, but it plays a big part in most repeat prescription ordering schemes.

The messages being sent by the system need to be defined after analysis of business processes, not before. He said that it has been suggested that a message should be sent back from the pharmacy to the prescriber as a dispensed medicine is handed over ("issued") to

a patient or representative. This would be in addition to messages sent when the prescription is "dispensed" and payment is claimed.

He pointed out that most community pharmacies do not have computer equipment at the point where prescriptions are issued. If such an "issued" message was required — current processes do not — then it could increase the costs of installing ETP.

The National Programme for Information Technology is now having meetings with the pilot consortia — "six months after the pilots finished", Mr Strange said. Many areas of how a national ETP scheme might work still need to be clarified, he said. Foremost among these is how and where to connect community pharmacies to NHSnet.

Looking to the future, Mr Strange said that successful ETP could lead to major changes in pharmacy services. He cited as examples the possibility of dispensing through vending machines, of centralised dispensing services, and of localised pharmacy payments rather than having a central prescription payment authority.

The conference, entitled "Advances in reshaping pharmacy services fit for the 21st century", was organised by the *British Journal of Healthcare Computing* and took place in Birmingham on 4 December 2003.