

Is electronic prescribing a Holy Grail?

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All the indications are that the future of the NHS is electronic. The overarching National Programme for Information Technology (NPfIT) now dominates the agenda for both NHS staff and health care IT suppliers. The IT industry — or, at least, those organisations that have won bids to be local service providers (LSPs) — have now started the long and gradual development process to make their software solutions “spine compliant”, ie, able to communicate with other applications elsewhere in the NHS. This involves, among other things, the ability to connect to a single patient data spine (PDS) for patient demographic data, the formulation of a comprehensive electronic booking service (EBS) function and the introduction of integration engines and data messaging standards to ensure that all of this can take place. The ultimate goal of all of these developments is the electronic health record — a cradle-to-grave medical record for each citizen which may be accessed from anywhere in the UK.

Electronic revolution

The electronic ordering and supply of medicines can, and should, be part of this electronic revolution. There is clear evidence that the use of electronic systems can be of benefit in the process of ordering, supply and administration of medicines. Such systems rationalise the use of pharmacy staff time, thus freeing staff to undertake more patient-focused clinical roles. Furthermore, IT can be a significant factor in the reduction of medication error rates.

In 1991, the Audit Commission's “Spoonful of sugar” report indicated that pharmacy automation was a key factor in re-engineering hospital pharmacy services for a modern working environment. Since then, the benefits of automation, such as a reallocation of staff time and a reduction of dispensing error rates, have been demonstrated by leading pharmacy centres.

More recently, the chief pharmaceutical officer's report on medication errors, “Building a safer NHS: improving medication safety”, has indicated specifically that IT has an important role to play in the reduction of medication-related errors, and that “where possible electronic prescribing systems should always be used”. The report cites research evidence from the US indicating that the electronic prescribing process reduces medication-related errors. If electronic prescribing is so important for reducing error rates, why does the documented evidence for this have to come from sources in America? Why is there not more published research on electronic prescribing systems for centres in the UK?

My experience is that, although there are one or two places in the UK that have con-

siderable experience of electronic prescribing — the Wirral Trust is an oft-quoted example — most NHS hospitals have made little progress in this area. Some hospitals have introduced electronic prescribing successfully in a single, well-defined clinical specialty. Others have had a electronic prescribing pilot which has been of limited scope, or has run into difficulties. But a well-publicised, general roll-out of electronic prescribing in an NHS hospital seems to be as elusive as the Holy Grail of Arthurian legend.

This is reflected in the IT agenda as well as in the pharmacy agenda. Electronic prescribing in secondary care is not a single, distinct entity in the National Care Records Service initiative of the National Programme for Information Technology; it mainly subsumes to requirements for patient administration systems and messaging standards. Electronic transfer of prescriptions (ETP) in primary care fares only slightly better: the discontinuation of the three ETP pilots last year has jeopardised the overall timescale for the introduction of ETP. Nevertheless, it is a key part of the National Care Records Service and the messaging standards to enable this are currently being devised by the HL7 organisation (www.hl7.org). It also has the advantage over secondary care electronic prescribing in that there are important commercial considerations with ETP in the community, relating to the reimbursement of pharmacy contractors.

Sidelined in secondary care

Despite its importance to prescribers and pharmacists, secondary care electronic prescribing remains sidelined in the NHS IT agenda. There may be a number of good reasons for this. First, NHS managers rightly identify a number of major clinical and political issues with electronic prescribing. Although a successfully implemented electronic prescribing system will reduce medication error rates, as has been suggested by US research, paradoxically there is an increased clinical risk associated with the process of implementation, pilot and roll-out of such a system.

This risk is inevitable for a new computer system involving new working practices, and project managers will naturally want to evaluate and address this risk. This will involve careful quality and benefits testing of new software and formulation of appropriate working procedures and a due diligence review process to deal with the medicolegal implications. Furthermore, as electronic prescribing is a new venture and will affect a number of professional groups in the NHS, consultation with the various stakeholders involved before implementation is essential. Moreover, those who have introduced electronic prescribing successfully agree that a sys-

tem of training for all potential users is crucial to a successful implementation. This training should include all the professional stakeholders — doctors, pharmacy staff and nurses — so that an ethos of ownership is cultivated across an organisation. The training should also include all types of staff, including locum medical staff and bank nurses, to ensure maximum user orientation and maximum data capture, thereby reducing clinical risks associated with non-capture of data. All of these processes take time and cannot in any way be short-circuited.

Perception of difficult implementation

Secondly, among IT professionals, there is a perception that, because it is specialist and there are various risk areas, electronic prescribing is difficult to implement. Consequently, in industry product strategies, electronic prescribing tends to be put in second place behind older and commercially proven solutions, such as patient management systems and order communications. Companies may perceive that they do not have the budget, the expertise or the time to deliver such projects. It is interesting to note that, at present, the one IT supplier that appears to be making significant progress with the development of an electronic prescribing solution is JAC, with its specialist pharmacy knowledge gleaned through its role as market leader in pharmacy systems.

However, with the National Programme for IT agenda and the increased public expectations of appropriate use of IT in health care, there is a growing imperative for widespread adoption of electronic prescribing. Not only are there benefits in terms of error reduction and appropriate use of staff time, there is now evidence that electronic prescribing can speed up the patient discharge process — an issue that is of crucial logistical and political importance to the NHS at this time. Nevertheless, further publication of formal research evidence of the benefits of electronic prescribing in the UK health care environment is necessary to persuade NHS managers that electronic prescribing is a risk worth taking and IT industry managers that electronic prescribing is a technology worth investing in.

Such research evidence is required to form the basis for a sound business case for electronic prescribing implementations. When such evidence is available and knowledge is shared for the good of all who would benefit from a truly national electronic prescribing initiative, supported by National Programme for IT developments, then prescribers, pharmacists and IT providers will be greatly helped in their quest for the Holy Grail of electronic prescribing.