

Clinical governance and the dispensary computer: a natural alliance

By Simon Whitaker

It is often stated that pharmacists were early innovators in IT, adopting electronic dispensary systems long before many other professions transferred their operations to computers, but that we have now slipped behind. In many respects this is true. In community pharmacy we still use our patient medication record systems as glorified typewriters, albeit typewriters that can remember and repeat the labels we typed last month. One reason for this may be that the producers of community pharmacy software already have enough on their plates just keeping up to date with changes in the core areas that their software covers (new drugs on the market, new additions and alterations to the phenomenally complex National Health Service remuneration arrangements, etc), and innovation inevitably has to play second fiddle to currency.

It is perhaps no surprise then that clinical governance has yet to have a discernable impact on the way we use our computers, at least from this end-user's point of view. This is a shame, because many of the obligations that the clinical governance agenda introduces lend themselves to elegant IT solutions.

CLINICAL GOVERNANCE LEADING PHARMACY SOFTWARE DEVELOPMENT

Many aspects of clinical governance have a bearing on pharmacy software, either directly or indirectly. As a simple example, the Royal Pharmaceutical Society's professional standards directorate suggest that, as a matter of good clinical governance, pharmacists should label prescriptions before collecting the items from the shelves. If this is the case then PMR systems should make it as straightforward as possible to relabel an item, to take account of owings or the stock on the shelf being in a different pack size to that on the label. Unfortunately, the process of relabelling a prescription on many of today's PMR systems involves a protracted series of cryptic key strokes, and this can act as a significant deterrent to compliance with the Society's requirement.

Another obvious role for computers in clinical governance is in helping to create an auditable dispensing process. In "clinical governance heaven", there is a complete audit trail for every prescription that leaves the pharmacy, detailing who dispensed it, who checked it, who made any relevant interventions with the prescriber, what the outcomes of those interventions were, which batch was dispensed, and so on. Here on Earth, these details take time and effort to record, and so we tend not to record them. However, there is no reason why IT cannot give us a helping hand. A system commonly used in bars and restaurants requires till operators to insert a key-

fob or smart card into the till to identify themselves before registering sales. The same system could work just as well on a PMR system, allowing all PMR transactions (labelling, confirming interaction warnings, etc) to have a specific user associated with them. Recording interactions should be as straightforward as labelling a prescription and it should be as easy to refer back to an interaction as it is to refer back to a previously dispensed prescription. Using a recording form such as that in the Royal Pharmaceutical Society's "Interventions audit — prescriptions" document as a starting point, it would be relatively straightforward to produce an intervention recording system that does a comprehensive job of the record keeping with the minimum number of key presses.

In these examples, clinical governance requirements inform the software development process. PMR houses should take these kinds of requirements into account when designing their software or, more likely, when planning software updates. But there are plenty of other examples where computers can make our obligations under clinical governance much easier to manage.

COMPUTERISED RECORDS AND DOCUMENTATION

As a locum I spend a small but significant portion of my life searching for things in pharmacies that should be under my nose. (On occasion, that is exactly where I eventually find them.) On some days I suspect that pharmacists are descended from squirrels; we hide things compulsively. One pharmacy I worked in had a PMR system that required me to agree to some terms and conditions before use — a commendable use of the technology. However, one condition was that I would adhere to the pharmacy's standard operating procedures and, try as I might, I could not find them anywhere. How much more impressive that system would have been if it had included a button labelled "click here to read the SOPs".

Keeping documentation such as SOPs on the PMR computer has a number of advantages. If properly highlighted (an icon on the desktop is all that is needed), they are easy for pharmacists not familiar with the pharmacy to find. Because they are stored electronically, they are easy to update when required. In the case of records (eg, significant event logs), storing the data electroni-

cally has significant advantages over paper systems when it is time to audit the data.

Although it would be convenient to have this function directly incorporated into the PMR software, there is no reason why documentation and records cannot be kept separately. No special software is required; a standard word processor and spreadsheet are sufficient for almost all tasks of this nature.

INTELLIGENT AGENTS: THE DISPENSING ASSISTANT OF THE FUTURE?

Imagine the scenario: you start to label a prescription, and as you type the drug name the information panel on the PMR screen is highlighted. The text reads "Warning: there have been 45 significant events in pharmacies across the UK this year involving this drug. Ninety-three per cent were in the category 'Wrong strength dispensed'. Take care!" You look down at the bench and realise that you have indeed selected the wrong strength.

In computer science, much research is currently being done in the field of intelligent agents. Intelligent agents are software tools that have a high level of "knowledge" in a particular domain. This knowledge might be programmed into the agent when it is developed, or typed in by the user, but the most effective way for an agent to learn is through a combination of observation and collaboration with other agents. The analogy often used is that of a personal assistant. On his first day at work a PA might need a lot of help and may not confer much benefit on his boss. Over time, however, he learns the habits of his employer and also picks up tips from other, more experienced PAs, eventually becoming an invaluable asset. Intelligent agents work in the same way, networking with other agents to acquire knowledge that they can then impart to their own users. With the internet now ubiquitous, and the advent of broadband internet access meaning that an increasing number of businesses are permanently online, the idea of intelligent agents collaborating over a wide area is becoming much more feasible.

The intelligent agent I envisage specialises in risk management. Built into the PMR software, it monitors the interventions and significant events recorded by its own user and also collaborates with other PMR systems via the internet to learn about interventions and significant events recorded elsewhere. Over time it becomes an invaluable aid, warning of likely significant events before they happen, with its warnings based on actual events recorded by pharmacists across the UK.

Pharmacy still has the potential to be a breeding ground for exciting, innovative software, and clinical governance may provide the impetus to produce it.

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