

CASE STUDY

Shrewsbury and Telford Hospitals NHS Trust working in secondary care to increase efficiency and improve patient safety

The Royal Shrewsbury Hospital has developed an electronic transcribing system, eSCRIPT, which is designed to ensure safer medical practice. The eSCRIPT project grew from the need to speed up processes in the pharmacy, to provide a step towards electronic prescribing and to increase patient safety across the Trust.

In the absence of a prescribing system, the pharmacy and IT departments started to develop software designed around an electronic patient record, where clinical information could be recorded and which would permit the electronic transfer of medication requests from the ward to the pharmacy. The hospital chose to use the Multilex Drug Data File within eSCRIPT to improve clinical functionality.

SECONDARY CARE

“The benefits of using Multilex DDF are clear. The drug data is comprehensive and regularly updated. The format of the data has allowed for an efficient introduction of an intuitive prescribing and transcribing tool.”

Peter McGinness,
Senior Clinical
Pharmacist and
Medicines Information
Specialist, Royal
Shrewsbury Hospital

The History

In 1999, the team started work on eSCRIPT - based on the principle of electronic transcribing by pharmacy staff, rather than electronic prescribing by doctors. The software was designed so that the patient medical record could be set up on patient admission when pharmacy technicians note the patient's drug history and current medication.

When a doctor later prescribes on the ward, the technician transcribes the drug detail and the order is automatically sent down to the dispensary using wireless LAN technology via a handheld application. The technician's transcription is clinically approved by the pharmacist to ensure patient safety and security.

When the order is sent down to the pharmacy, the urgency of the order is flagged, allowing the pharmacy to prioritise work more effectively. In addition, pharmacists can access the list of drugs which are outstanding for the dispensary, as well as any drugs waiting to be dispensed. Doctors and nurses can also access patient orders from the ward and check whether urgent orders have been processed.

Working in Partnership

When the pilot had been running successfully for some time, the team identified a need to incorporate a drug knowledge base into eSCRIPT. Although the team had added their own list of formulary drugs into the system, it was agreed that a complete drug knowledge base would provide more clinical information and checking which would in turn improve patient safety.

In 2003 the team selected the Multilex Drug Data File (Multilex DDF) from First DataBank Europe to enhance eSCRIPT. Multilex DDF includes comprehensive and coded information on all UK drugs and appliances and allows the team to add patient allergies, sensitivities and conditions to the patient medical record.

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First DataBank Europe is the UK's leading provider of drug knowledge bases and active clinical decision support.

Through the effective integration of our products into clinical systems, we enable safer prescribing, dispensing and administration.

NHS Connecting for Health has chosen First DataBank Europe to provide drug-related clinical decision support.

In addition, Product Set functionality within Multilex DDF allows a pharmacist to type in the prescribed drug, choose the route, base formulation and dose and eSCRIPT will bring up all associated products. Extra patient safety is assured as interactions, sensitivities, duplicate drug therapy and contraindications are flagged up as warnings and must be acknowledged. Warnings and cautions are displayed in red in the 'clinical warning' box, and complete information on potential interactions, licensed indications, side effects, precautions, warnings and contraindications can be viewed by clicking on the appropriate buttons at the side of the screen.

The Benefits

eSCRIPT provides numerous benefits which are recognised inside and outside the Trust. Nurses', doctors' and pharmacists' time is used more efficiently, and communication is significantly improved across the whole hospital environment.

The developments have been introduced at minimal cost and with a relatively minimal controlled training requirement. The hospital now has the hardware structure and a software package that has given them significant knowledge and practical experience – an interim solution easing the transition to eventual electronic prescribing. Users have found the information contained within the pharmacy system extremely valuable, work in the pharmacy can now be prioritised more effectively, and patients are discharged promptly with all appropriate medicines and with correct drug summaries.

In addition to the clinical checking that takes place, patient safety is enhanced by using the "Clinical Risk" button. Users of the system can add comments in free text in relation to any clinical risks that they identify. This function includes an advice summary for audit purposes and includes a grading scale and Clinical Risk Team notification.

Peter McGinness, Senior Clinical Pharmacist and Medicines Information Specialist, said: "The benefits of using Multilex DDF are clear. The drug data is comprehensive and regularly updated. The format of the data has allowed for an efficient introduction of an intuitive prescribing and transcribing tool.

The associated clinical decision support relating to interactions, cautions, contraindications and drug sensitivities are of immense value in guiding quality patient specific care and reducing the potential for drug errors."

The Future

The team is planning to roll out the system as a prescribing tool for day surgery and clinic prescribing.