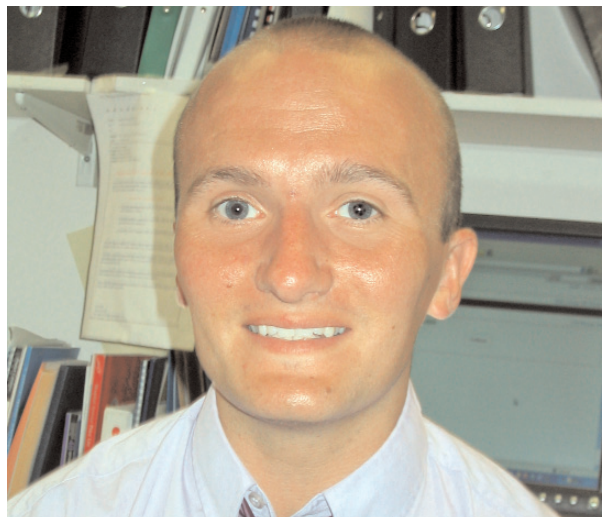


Developing a database to manage use of unlicensed medicines

By Paul Townsend

When an unlicensed medicine is prescribed, various administrative requirements need to be met before the drug can be dispensed. To manage these, a database has been developed at Birmingham Children's Hospital, which is described in this article



Paul Townsend, developer of the database that won one of the AAH Hospital Pharmacy Technician of the Year awards for 2005

Unlicensed medicines account for a large number of the drugs used at Birmingham Children's Hospital, a 300-bed hospital that treats over 140,000 children each year from Birmingham, the rest of the Midlands and beyond. This situation is common in a paediatric setting, but is not always straightforward. For example, a document from The Royal College of Paediatrics and Child Health states: "The informed use of some unlicensed medicines or licensed medicines for unlicensed applications is necessary in paediatric practice. Health professionals should have ready access to sound information on any medicine they prescribe, dispense or administer, and its availability".

To enable prescribers and dispensers to comply with these requirements, a large amount of information needs to be obtained and stored so that it is readily accessible. Rather than use a paper-based system, staff at Birmingham Children's Hospital decided to set up a database, which is described in this article.

Paul Townsend is a senior technician at The Specials Laboratory Ltd, Northumberland. At the time of the project, which won the supply chain category of the 2005 AAH Hospital Pharmacy Technician of the Year award, he was the unlicensed medicines pharmacy technician at Birmingham Children's Hospital NHS Trust.

Database design

The first step in designing the database was to decide what information about the drugs it should contain. The information fields were taken from paper copies of the product monographs that had already been drawn up by pharmacy staff over the years to help them decide when they could release an unlicensed medicine from the pharmacy bond store or quarantine area. These were:

- Generic drug name
- Strength and formulation
- Brand name and pack size
- Supplier, manufacturer and country of origin
- Detailed description of the product and packaging
- Contact details for the supplier
- Whether a certificate of analysis is needed
- Storage conditions and location in pharmacy department
- English translation of any information written in a foreign language, such as the summary of product characteristics or patient information leaflet
- Hospital formulary status
- Shelf-life
- Excipients
- Other specific details, such as a shortened expiry date once opened

The database uses Microsoft Access. This software is available on all of the pharmacy department's computers, making the database easily accessible. Inputting the data was a very large task since over 440 different lines of unlicensed drugs are used at Birmingham Children's Hospital.

After all of the initial information had been inputted (by myself) and checked (by the formulary pharmacist), the forms and display details were developed for each drug. To help with the identification of the products, a digital image of each item was added to the database.

To make the database more user-friendly, I designed a menu (see Figure 1, p300) that opens as soon as the database is accessed. From this menu all of the options within the database can be accessed. To enable the user to find a certain drug quickly, the database has a search facility, which allows the user to search by generic drug name, brand name or manufacturer.

I added several other functions to the database. These include a link within each drug record that, once clicked by the user, will open up more information such as the product datasheet, patient information leaflet, English translations of this information for foreign drugs, or any other information provided by the supplier about the drug.

The database also has a facility to record details about incoming medicines, such as

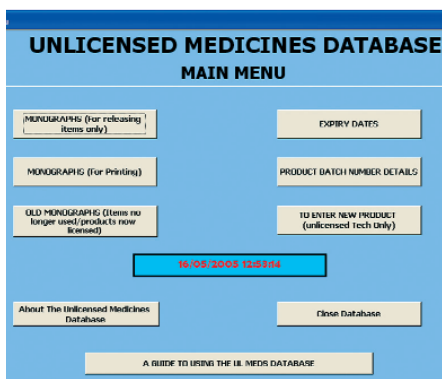


Figure 1. Screen showing the main menu for the unlicensed drugs database

batch numbers and expiry dates. This is useful because this information needs to be stored for five years to comply with the trust's policy for unlicensed medicines. Moreover, many unlicensed medicines that are made by special manufacturers have a short shelf-life and, because of the quantity of these medicines used, it can be difficult to keep track of expiry dates. The database includes a function to print a list of all medicines that will expire during a specified period.

Patient details can also be stored on the database. Because so many unlicensed medicines are used at Birmingham Children's

Hospital, patient details are not recorded for all unlicensed medicines that are dispensed, unless the unlicensed medicine is put into a high-risk category or the details are required for the supplier. However, even this level of recording has produced several folders of papers that are stored in the dispensary, so the ability to store and access the information on a computer is useful.

Using the database

The unlicensed medicines database is fully operational and is used as a reference source by all pharmacy staff, especially those in the medicines information department.

It is used on a daily basis by pharmacy technicians when releasing drugs from the bond area or quarantine. All certificates of analysis are scanned and are linked to the relevant batch number of the product. This enables the paper copy to be archived straight away, saving dispensary space.

To make sure that all staff know how to use the database, I wrote a comprehensive user guide and a copy was given to all staff. The initial database launch was done using a PowerPoint slide show, with animations demonstrating how easy it is to use the database. Training sessions are now provided to all new staff and others who request them.

The database is backed-up daily and is updated with details of any supply issues and formulation, expiry or packaging changes. If a drug becomes licensed, the date this occurred and the marketing authorisation and product licence numbers are added.

Future developments might include putting a restricted copy of the database on the trust's intranet. Perhaps after this, after researching the legalities, the database could be put on a website so that other hospitals could also use this reference source.

ACKNOWLEDGEMENTS Staff at Birmingham Children's Hospital, Megan Smith, former formulary pharmacist, and Carol Norton, former summer student.

References

1. Royal College of Paediatrics and Child Health. The use of unlicensed medicines or licensed medicines for unlicensed applications in paediatric practice. Policy statement produced by The College and the Neonatal and Paediatric Pharmacists group standing committee on medicines. The College: London; 2000.

AAH Technician of the Year Awards 2006

The closing date for the 2006 awards has been extended to 31 January 2007. Further details from manpreet.chana@aah.co.uk