

Changing roles for pharmacy technicians

By LYNN BEVERIDGE, HNC, KAREN DRURY, HNC, PATRICIA BLAIR and PATRICIA MURRAY, MSc, FRPharmS

In Scotland, technicians working in clinical pharmacy services and medicines information have been thin on the ground. As this article shows, change is happening

For the past few years, in the United States, technicians have been working in clinical pharmacy services where they have performed such tasks as collecting clinical data and managing clinical projects.¹ Similarly, in England and Wales, there are a number of technicians working in clinical pharmacy services and medicines information.^{2,3} Surprisingly, despite the number of major teaching hospitals and large medicines information centres, there are few holders of equivalent technician posts in Scotland. There is a need for change and to make further use of pharmacy technicians, and recently, this was highlighted in "The right medicine — a strategy for pharmaceutical care in Scotland."⁴

Opportunities exist for pharmacy technicians to continue to develop their skills in other areas.⁵ For the past four years, Lothian Primary Care NHS Trust (LPCT) has employed three pharmacy technicians working in clinical pharmacy services, medicines information and medicines management. One post (a job-share) is based at the Royal Edinburgh Hospital (REH) and the other at the State Hospital, Carstairs (SH).

EDINBURGH

The REH is the base site for the provision of general and specialist inpatient and outpatient psychiatric services for adults and the elderly, in Edinburgh and its environs.

The general psychiatric service covers 165 beds and is divided into five geographical sectors, coterminous with the Local Health Care Co-operative boundaries.

Other inpatient beds include those at the department of rehabilitation, resettlement and continuing care (108 beds), intensive psychiatric care unit (12 beds), forensic medium secure unit (50 beds), the Robert Ferguson unit for patients with acquired brain injury (18 beds), alcohol problems

Miss Beveridge is principal pharmacy technician, State Hospital, Carstairs, Mrs Drury and Miss Blair share the post of principal pharmacy technician, medicines management/medicines information, the Royal Edinburgh Hospital, and Mrs Murray is chief pharmacist, Lothian Primary Care NHS Trust



Karen Drury (left) and Patricia Blair who enjoy the challenge of a job-share in medicines management and medicines information at the Royal Edinburgh Hospital

clinic (12 beds), young people's unit (12 beds) and psychiatry of old age (211 beds).

Other specialties include services covering community drug problems, cognitive behavioural psychotherapy, sexual problems, learning disabilities and community services.

Although the technicians are based at the REH, they provide information to the whole of the LPCT. They liaise with primary care pharmacists, community-based staff and work with pharmacy staff based at the three other hospital pharmacy departments in the LPCT. The other pharmacy sites within the LPCT provide medical, psychiatric, care of the elderly and community services to areas within Lothian.

Medicines information The systems of operation for medicines information (MI) at the REH were redesigned and an MI database was established to record all enquiries received by the department. Books and journals were reviewed and grouped under specific topics. A core list of current issue tertiary reference sources was established. Files were reorganised with duplicate information discarded. Standard operating procedures were written in order for the section to achieve accreditation to British Standard ISO 9002.

In-house training for technicians was provided by the principal pharmacist, clinical pharmacy services. Assessment included the

use of the UK MI Pharmacists Group manual training programmes plus background reading. Part of the HNC in pharmaceutical sciences course for technicians involves lectures on MI which provided a good baseline.

Technicians answer enquiries under the supervision of the MI pharmacists and are required to document their own search strategy. Pharmacists, before relaying answers to enquirers, must authorise and approve all answers. Technicians also accept enquiries but inform enquirers that a clinical pharmacist may get back to them for further details. More complex enquiries requiring knowledge of pharmacology and pharmacokinetics are referred to a pharmacist. Examples of enquiries that a technician can answer are shown in Panel 1 (p44).

Technicians maintain the MI database and ensure all enquiries are completed within the agreed timescale where possible. Clinical pharmacists are responsible for answering MI enquiries specific to their area of work. It is the responsibility of technicians to ensure that enquiries are passed to the appropriate pharmacist. A daily list of outstanding enquiries is produced and the technician follows up any enquiries that are due.

Other duties which the technician carries out in MI are shown in Panel 2 (p44).

An MI pharmacist has recently been

Panel 1: Examples of queries that technicians can answer

- Stability of medicines
- Drugs in pregnancy and lactation
- Dosage and administration
- Tablet identification
- Drug interactions
- Supply of patient information leaflets
- Dose equivalencies
- Adverse effects

appointed at the REH. Previously, MI was covered by the principal clinical pharmacist and her team. It is hoped that through this new appointment an area-wide MI service and database will be developed with which technicians will assist. Approximately 80 enquiries a month are answered at the REH. It is uncertain how many enquiries are actually answered by pharmacy staff and the figures may increase when the service has been reviewed.

Medicines management Medicines management at the REH also involves pharmacy technicians who are responsible for providing financial reports to various personnel within the trust each month or quarter. Information is supplied in the form of ward or directorate expenditure reports, and top 20 drug items or group reports. Technicians also provide any *ad hoc* information, as required, for more specific requests.

Recently, a medicines management pharmacist for hospital services within the LPCT was appointed. The technician works closely with the medicines management team and is involved in various working groups as shown below.

Drug use review and research group The remit of the drug use review and research group is to: lead the development and implementation of clinically focused strategies for medicines management throughout the LPCT; progress the development and implementation of prescribing policies and systems; and maximise the information reported to prescribers and managers on the use of medicines.

Lothian joint formulary implementation plan for secondary care The remit of the Lothian joint formulary implementation plan for secondary care is to distribute and implement the Lothian joint formulary (LJF) across the LPCT.

Technicians are providing systems administrator support in the upgrading of the current pharmacy computer system. This involves such things as checking all items linked to the old system to provide historical data, entering British National Formulary codes, matching each cost centre to the appropriate directorate, setting up templates for new report layout and validation of reports. When the reporting system is near completion the technician will write standard operating procedures for the new reporting mechanism and assist with the compilation of the user manual.

Research and audit Technicians may also be

Panel 2: Other duties of technicians in MI

- Collation of workload statistics
- Development and review of standard operating procedures (ISO 9002)
- Supply of customer satisfaction questionnaires
- Renewal of journal subscriptions
- Retrieval of information
- Maintenance of files/journals/books
- Journal dissemination
- Induction of preregistration pharmacy trainees/other staff members

required to be involved in various audits with the trust. Audits have been undertaken on the safe and secure handling of medicines, an evaluation of an atypical antipsychotic, the use of medication compliance devices and the use of depot antipsychotics.

Medication history review Pharmacy technicians collect information for patient medication histories which pharmacists then assess and make recommendations on the patient's medication regimen. A patient medication history is a chronological review of all prescription medicines taken by a patient. This includes their response to therapy, level of compliance and experience of side effects. This can be an onerous task as mental health patients often have copious medical notes. By carrying out this process the technician has freed the time of the pharmacists.

Other duties Other duties performed by technicians at the REH includes work with medication incident reports, collation of workload statistics, involvement in a trust-wide review of compliance devices, participation in regular clinical team meetings and ward ordering which involves initial Kardex screening and providing stock to agreed levels. Any anomalies on the Kardex or unusual requests are referred to the clinical pharmacist.

CARSTAIRS

The State Hospital (SH), Carstairs, provides treatment and care in conditions of special security for individuals with a mental disorder who, because of their dangerous, violent or criminal propensities, cannot be cared for in any other setting. Patients are received from Scotland and Northern Ireland and are referred from prisons, courts and other NHS hospitals. The average stay for patients in the hospital is 4.5 years.

There are 11 wards with 257 beds. The male admission ward has a maximum of 20 beds, two of which are intended to be used only in emergency circumstances. There is only one female ward and it has 20 beds, five of which are high dependency, and caters for admissions and continuing care. There is a dedicated learning disability service for male patients who are catered for in a 26-bedded ward and a four-bedded flat. All other wards pro-

vide continuing care and rehabilitation for male patients and comprise between 24 and 26 beds.

The hospital employs about 550 staff, including a full range of clinical professionals.

Medicines information As at the REH, the technician is responsible for putting information into the established database. Future developments will include the compiling of medication history reviews by technicians after completing some in-house training.

Audit The technician is also involved in various audits. Recent audits that have been undertaken include an evaluation of ward stock medicines and storage facilities, consent to treatment forms, monitoring patients on high dose antipsychotic therapy, and an audit on prescription writing.

Monitoring patients on high dose antipsychotics In 1994, the Royal College of Psychiatrists produced a consensus statement on the use of high dose antipsychotic medication. This was because of some sudden deaths and their relation to medicines which had been prescribed in doses above those recommended in the British National Formulary. It was felt that patients receiving high-dose antipsychotics should be monitored to safeguard them against the risks associated with high doses. The technician identifies patients prescribed high dose antipsychotics using the following guidelines:

1. For monotherapy — the dose is in excess of the product license for that drug
2. For a combination of antipsychotics — when the sum of percentages of the recommended maximum dose for each antipsychotic equals or exceeds 100 per cent

The technician circles the high dose box on the patient's prescription sheet to alert nursing and medical staff. The patient is then referred for three-monthly electrocardiograms, urea and electrolyte tests, blood pressure, pulse and temperature checks.

Monitoring of consent to treatment The Mental Health Act (Scotland) 1984 requires that for detained patients, the use of medication or electroconvulsive therapy (ECT) to treat a mental disorder should be subject to restrictions and monitoring procedures. A consent to treatment Form 9 (patients consent) or Form 10 (mental welfare commission consent) is required for patients who are detained if either treatment with medication continues beyond three months from when the medication is first given during the period of detention, or ECT treatment is planned

Drugs that should be included on Forms 9 and 10 include hypnotics, anxiolytics, anti-

depressants, drugs used in psychosis, anti-manic drugs and drugs used to reduce sexual drive. Anticholinergics and anticonvulsants do not need to be included.

Consent to treatment Forms 9 and 10 are monitored by the pharmacy technician on site at the SH. If a patient is admitted with a current Form 9 or 10, a copy is sent to the pharmacy department where it is filed for reference. Prescriptions are checked regularly for compliance with Forms 9 and 10; if a treatment is prescribed and not stated on Form 9 or 10, a discrepancy reminder form, highlighting which area requires attention, is sent to the responsible medical officer (RMO) for action. For example, prescribed items not on Form 9 or 10, BNF category not specified or maximum dose not specified. The RMO completes and signs the discrepancy reminder and sends it back to the pharmacy office for filing, along with a new copy of the amended Form 9 or 10. The technician prints out reports for the medical director showing which RMO has been sent a discrepancy reminder, whether it has been actioned and the number of discrepancies still outstanding.

At ward level, the Form 9 or 10 box on the prescription sheet is circled and a red flash sticker attached to alert nursing and medical staff of their current Form 9 or 10 status. This prompts them to consult the treatment plan before prescribing or giving drugs.

Prescription sheet checks At the SH, the technician covers six wards and checks each patient's prescription sheet for discrepancies. There are agreed criteria which she follows incorporating numerous different checks. For example, making sure the prescription is correctly written; that medicines have the correct dose, route and strength; that there are stop dates on general medicines, that prescriptions are signed and have the correct spelling; and that the prescribed drugs are in the medicine formulary. All this information is then updated on the hospital FOCUS computer system — the only one of its kind in Scotland. This means all the patient's medication details are kept up-to-date and can be accessed to print off various reports, if necessary. The computer also highlights all patients who are on high dose antipsychotic therapy and their current consent-to-treatment status. The technician will then make recommendations for changes, which are overseen by a designated pharmacist and reported back to either the RMO or GP for action.

Other duties Other duties performed by the technician at Carstairs include providing a top-up service to all 11 wards and ordering all the required stock for them on a weekly basis. Workload statistics and non-formulary requests are collated and the information is transferred to a database. The technician co-ordinates nicotine replacement therapy for patients at the hospital and will be partic-

ipating in patient counselling and education for this group in the future. The technician attends clinical team meetings and was involved in the initial set-up and launch of the safe administration of medicines document and The State Hospital medicine formulary. Future developments for her role include the possible set up of a clozapine clinic, the taking of medication histories and more involvement in patient education and counselling.

TRAINING

The technicians at the REH work through a training plan for medicines information with any preregistration students or new members of staff to the department. One of the technicians has also lectured on the role of the technician in MI, in the first year of the Higher Nation Certificate (HNC) in pharmaceutical sciences course at Edinburgh's Telford College. The technician at SH has assisted with the senior house officer induction training course.

QUALITIES AND SKILLS

The technicians working in clinical pharmacy services at the REH and the SH have each had over 15 years experience working in most aspects of hospital pharmacy at various locations. Two technicians have attained their HNC in pharmaceutical sciences, which has provided good background knowledge for these posts. They all have comprehensive computing skills attained through evening classes and in-house training.

The essential qualities for technicians doing such work would be good communication and interpersonal skills, organisational skills, ability to work on their own initiative as well as in a team, to be responsible and professional, ability to work well under pressure and work accurately and efficiently.

The posts created at the REH and the SH are innovative and release pharmacist time in order to provide a high standard of pharmaceutical care. By attaining a better skill mix the service is more cost-effective.

REFERENCES

1. Koch K, Weeks A. Clinically orientated pharmacy technicians to augment clinical services. *Am J Health-Syst Pharm* 1998;55:1375–81.
2. Dosaj R, Mistry R. The pharmacy technician in clinical services. *Hosp Pharm* 1998;5:26–9.
3. Edwards C. Competency and one extended role of pharmacy support staff. *Pharm J* 2000; 265:103–4.
4. Scottish Executive. The right medicine — a strategy for pharmaceutical care in Scotland. 2002 Edinburgh.
5. Rogers A. How to extend technicians' roles. *Pharm in Pract* 1997;7:589–92.