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A career as . . . an A&E department pharmacist

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Accident and emergency departments have had little input from pharmacy in the past. That situation is changing and this article reviews the role of one emergency department pharmacist

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Pharmacists can help A&E departments achieve the four-hour target for dealing with patients

Roles for hospital pharmacists have expanded in recent years, with pharmacists working in more specialties and regularly attending ward rounds, as well as working on medical admissions wards and in accident and emergency (A&E) departments.

The A&E department is traditionally an area that has had little pharmacist input compared with that for other hospital departments. However, it is the department with the highest turnover of patients in a hospital and is where substantial quantities of medicines are administered. A&E departments are chaotic places at times and, for example, the use of verbal orders in the resuscitation room may increase the risks associated with the use of medicines. Thus, there are many challenges for pharmacists in providing a service to these departments.

This article describes the contribution made by a pharmacist working in the emergency department at Queen's Medical Centre (QMC), Nottingham, and gives a brief overview of some of the ways other hospitals are using pharmacists in their A&E departments. The QMC re-named its department an emergency department following a recent re-build.

Background

QMC is a teaching hospital with approximately 1,200 beds. Its emergency department is one of the busiest in Britain, with 131,581 patients attending in 2004. A recent £6m development has enabled a new emergency department to be built at QMC and the redesign has allowed for a full-time specialist emergency department pharmacist post to be created. The new post is completely funded by the emergency department itself and the post holder is jointly accountable to both the clinical pharmacy services manager and the clinical director for the emergency department.

The job description summary for the specialist pharmacist's post at QMC is: "To provide and develop pharmacy services to the emergency department. This will include helping to bridge the gap between the emergency department and the admitting wards in the hospital, and improving medicines management in the emergency department."

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Key areas of work

Government targets are driving change in emergency care. Current targets for treatment in the A&E departments, introduced in December 2004, specify that 100 per cent of patients attending the A&E must be admitted, transferred or discharged within four hours.[1] These targets have led to a hospital-wide redesign of processes and to changes in skill mix, with nurses and other health professionals (including pharmacists) expanding their roles. Among the pharmacist's roles in the emergency department is to look at initiatives to help achieve the four-hour target.

Drug history taking

Taking a drug history has been found to be a key role for pharmacists working on medical admissions wards.[2] It has also been acknowledged and well documented that pharmacists are more accurate than doctors at taking drug histories.[3,4,5]

The practice of pharmacists taking drug histories in A&E departments, before patients are admitted to medical admissions wards, may have several benefits. For example, it enables better judgements to be made by doctors about adjusting patients' treatments on ward rounds as accurate drug histories are already known. It also means that any drug-related issues on admission, or potential drug-related problems, may be highlighted early on in a patient's stay as recommended by the Audit Commission.[6]

In addition to improving the quality of drug histories for patients on the medical admissions ward, this service also helps to reduce junior doctors' workload and speeds up the admissions process, reducing the amount of time patients spend waiting for assessment and review.

At QMC, the emergency department pharmacist takes a drug history for those patients being admitted to the medical admissions ward. The pharmacist uses information obtained from speaking to patients about the medicines they are taking or, as appropriate, from referring to the patient's GP, nursing or residential home staff, relatives and previous notes. The pharmacist then reviews the patient's medicines in light of the reason for admission.

Any drug-related issues that may be important to the patient's treatment are brought to the attention of medical staff. The pharmacist may suggest a simplification of a medicine regimen if necessary. A full drug history and any relevant comments are documented in the patient's medical notes and the pharmacist informs ward-based pharmacists of any patients that may need to be followed-up. The pharmacist is also involved in completing drug charts, which are then reviewed and signed by a doctor.

Ward rounds

At QMC, there is a consultant ward round every morning for patients that have been admitted to hospital under the care of the emergency department. This is a small ward round with up to 14 patients and is attended by the emergency department pharmacist.

On the ward round, the pharmacist's role is to clarify drug histories, add any new medicines that are required to the drug chart, provide advice to medical and nursing staff and write discharge medication forms. As well as ensuring the appropriateness of medicines for patients, having a pharmacist complete discharge medication forms speeds up the discharge process. For patients who are discharged during the ward round, medicines are dispensed by the pharmacist, or discharge technician, immediately after the round has finished. The majority of discharge prescriptions can be dispensed on the ward using pre-packs. This enables patients to be discharged promptly and helps to clear beds ready for new admissions from the emergency department, activities which help meet the four-hour target for the emergency department.

Risk management

The emergency department pharmacist at QMC is part of the department's risk management group. This group meets bimonthly and reviews all incidents. Any trends are studied and practices altered if appropriate. The pharmacist liaises with members of the hospital's drug incident group regarding any drug incidents that may have a hospital-wide impact. Examples of hospital-wide risk management issues have included the introduction of colour-coded syringe labels in line with national guidance and reviewing the use of lidocaine and sodium chloride ampoules in view of similar packaging.

Specific risk management problems identified for the emergency department at QMC are discussed below.

Documentation Incidents on medical wards highlighted problems in identifying exactly which medicines had been administered while patients were in the emergency department. Incidents were analysed using the hospital's Datix programme for reporting incidents and drug errors. The multicopy self-carbonated drug charts used in the emergency department were sometimes hard to read and this resulted in patients on the wards either not receiving their medicines or receiving duplicate doses.

Frank Coffey

Gail Foreshew (right) advises registrar Dr Sue West-Jones

In conjunction with the emergency department's risk management group, the department's pharmacist developed new drug charts to rectify the problem. These new drug charts have been successfully piloted and implemented in the department.

Intravenous drug therapy A second issue that the Datix programme highlighted was errors with intravenous medicines. This led to the emergency department pharmacist organising training for all adult and paediatric nursing staff and developing standardised intravenous infusion guidelines.

Guidelines

There were relatively few specific drug guidelines in place in the emergency department at QMC when the pharmacist's post was created. Since this time, new guidelines have been developed for treating illnesses and infections only applicable to the emergency department, and the emergency department pharmacist has taken a lead role in their development. These guidelines have included emergency department-specific antibiotic guidelines for the treatment of animal and human bites, and guidance for the treatment of patients who have received intravenous morphine and midazolam. In addition, for paediatric patients, guidelines have been introduced for the dose-rounding of analgesia, as well as a treatment algorithm for patients presenting with anaphylaxis.

Intravenous infusions can involve complicated calculations. A set of standardised infusion guidelines for the administration of aminophylline, amiodarone, naloxone and salbutamol have been developed and are available for use by both medical and nursing staff. The guidelines contain essential information on administration of these drugs, any dosage calculations that are required and dosing regimens.

Teaching other staff

Teaching can be an important part of the A&E department pharmacist's role. This aspect of the job has been developed at QMC by the pharmacist working alongside the emergency department training and education team. Informal educational input is part of the pharmacist's daily work and formal teaching sessions are also undertaken by the pharmacist.

Doctors receive training by the emergency department pharmacist at their induction to ensure that they are aware of trust and national guidelines. Topics covered include accurate prescribing, antibiotic guidelines and guidelines specific to the emergency department. Nursing staff receive training on various subjects including intravenous drug administration and patient group directions (PGDs).

PGDs

PGDs were introduced in August 2000 with the aim of maximising benefits to the National Health Service through the increasingly flexible use of workforce skills. The Crown report highlighted that PGDs can be invaluable and that even when extended prescribing becomes widespread, there will still be times when PGDs will be the best way to meet patients' needs.[7]

At QMC, the emergency department pharmacist is involved in writing new PGDs and reviewing and updating the old ones. The pharmacist is also involved in reviewing trust-wide PGDs to ensure these are applicable to the emergency department.

Source of advice

The pharmacist is a source of advice and information to all medical and nursing staff.

Common tasks that the pharmacist may undertake include:

- Tablet identification
- Giving advice on drug choice, particularly antibiotics
- Providing dosage recommendations for elderly patients and those with renal impairment
- Providing information on the administration of intravenous drugs
- Providing compatibility information
- Carrying out dosage calculations

Counselling at discharge

The emergency department pharmacist selectively counsels patients on discharge, concentrating on seeing patients taking multiple medicines, the elderly and those patients referred to them by medical and nursing staff. Examples of patients that have been counselled on discharge include:

- A patient admitted with hypoglycaemia because they were unable to use their insulin device correctly
- Patients unable to remember to take their medicines
- Patients unsure about why they have been prescribed their medicines

Assessment and care team

The Front Door Assessment and Care (FACT) team at QMC is a multidisciplinary team based in the emergency department. The team consists of nurses, physiotherapists and occupational therapists. They assess patients aged 65 years and over to establish whether these patients will be able to manage at home after discharge and arrange intermediate care if this is unlikely. Intermediate care includes admission to residential or nursing homes for up to six weeks for rehabilitation.

The emergency department pharmacist at QMC plays an integral part in this process and patients requiring intermediate care are referred to the pharmacist for any medicines related issues they have and to organise their medicines if they are admitted to residential or nursing homes. For these patients, the pharmacist also clarifies drug histories and reviews medicines, advising on specific areas such as analgesia and fracture prevention.

UK Clinical Pharmacy Association Emergency Care Group

This group is planning to run a study day in October 2005 with the theme, "Emergency care — where are we now?" The day will be centred around pharmaceutical care and will include the following areas: the patient's journey through emergency care, the developing role of the emergency care pharmacist, the impact of the four hour wait on pharmacy and an update on key changes in emergency care. Further information will be available from the UK Clinical Pharmacy Association (**www.ukcpa.org.uk**)

Research

At QMC, the pharmacist is involved in the hospital's emergency department research group. In addition to undertaking audits, the pharmacist assists in research projects, helping with study design and pharmaceutical issues. At other hospitals, a number of pilot studies looking at ways in which the pharmacist can have an impact in the A&E department have already taken place.

One hospital has examined the role of pharmacists in the A&E department in seeing patients with minor illnesses.[8] Pharmacists saw patients who could have been managed by community pharmacists, including those with coughs and colds, allergic reactions, bites and stings, and reactions to the sun.

Another example of such work was that carried out at Guy's and St Thomas' NHS Foundation Trust, London, where the outcomes of patients presenting with requests for repeat medicines being seen by a pharmacist were studied.[9] The study showed that the pharmacist was able to supply a faster service compared to the previous service where patients waited to be seen by a doctor.

Although these two schemes have shown benefits for patients, some hospitals are discouraging the types of patients examined in the studies from attending A&E departments. At QMC, patients who attend for minor illnesses are being seen by the primary care nurse who redirects patients to the most appropriate health care service, which may include an emergency GP appointment.

Clinical decision units

Clinical decision units are attached to the A&E departments in some UK hospitals. They are designed for short-stay patients who need to be admitted for less than 24 hours, which may include patients who have taken overdoses who need monitoring for a few hours or patients admitted with cellulitis before continuing treatment under a homecare service. Because of the high patient turnover, a rapid and efficient pharmacy service for these units is required.

Training for the role

There is no national training scheme or mandatory qualification for A&E department pharmacists. Most training is "on the job", with training needs varying depending on the background of the pharmacist.

The UK Clinical Pharmacy Association (UKCPA) Emergency Care Group was started in 2004. The group aims to provide a link for all emergency care pharmacists and includes A&E department pharmacists. It ran its first series of workshops at the UKCPA autumn symposium last year and its first study day is expected to be held this year. Members of the UKCPA can also benefit from study days run by other groups, for example, the study day "Introduction to critical care" run by the UKCPA Critical Care Group.

Future developments

The role of the emergency department pharmacist is likely to continue to expand as emergency department staff and managers realise the benefits of having pharmacists as part of their teams. It is also possible that there may be new roles for pharmacy technicians in the emergency department as attempts are made to streamline a patient's journey through the health service.

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Paper on accident and emergency department pharmacists

A paper determining the incidence of drug related problems and comparing the extent to which complete medication histories are recorded by doctors and clinical pharmacists in an A&E department is set to be published in next month's issue of *Hospital Pharmacist*.