

Empowering technicians to work in extended clinical roles

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Pharmacy technicians at the Queen Elizabeth Hospital in Gateshead are working in a variety of new clinical roles. This article describes these new roles and their impact on service delivery and patient care



Clinical pharmacy technician Mandy Nagra reviews a patient's medical notes on the medical admissions ward

The pharmacy department at the Queen Elizabeth Hospital (QEH), Gateshead, has employed three pharmacy technicians to work in extended roles and support the clinical pharmacy service. Medicines management technicians at QEH have supported the role of the ward-based clinical pharmacists effectively for several years. However, within the current “lean thinking” NHS agenda, there is a drive to empower technicians with more responsibility to enable a greater contribution to patient care.¹

The pharmacy department at QEH has been quick to develop a cohesive and innovative strategy for integrating technicians into the clinical pharmacy team. The clinical technicians work in the following settings within the trust:

- Medical admissions ward
- Inpatient medical wards
- Discharge planning teams
- Anticoagulant clinics
- Medicines information

Medical admissions ward

Clinical technicians support the medical admissions staff by taking drug histories from each of its patients and documenting

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this in the patients' medical notes. Any issues identified are discussed with the medical team, who then review and amend the prescription as appropriate. The technicians also identify patients who are likely to require a high level of pharmaceutical input. These patients are referred to the specialist pharmacist for further review and monitoring during their hospital stay. This has proved to be a challenging but rewarding aspect of the role.

Inpatient medical wards

Clinical technicians are responsible for identifying (and following up within one working day) patients who have been transferred to a medical ward before a pharmacy review has taken place or drug history is confirmed. Weekly audits during the past year have shown that over 90 per cent of patients admitted to a medical ward at QEH are reviewed by the clinical pharmacy team within one working day.

Clinical technicians also have an important role in identifying and reporting adverse drug reactions. This requires good analytical and decision-making skills, combined with holistic clinical knowledge.

Discharge planning

Clinical technicians facilitate discharge planning by identifying patients who use medication compliance aids (eg, dosette boxes, Venalinks). For these patients, timely communication between secondary and primary care is important, so clinical technicians

are responsible for informing GPs and community pharmacies (by telephone and fax) of any medication changes that have occurred during the patient's hospital admission.

Clinical technicians also help to identify patients who may require a high level of pharmaceutical care following their discharge. Referrals are then made to the intermediate care pharmacist, who can arrange to visit the patient after he or she returns home.

Anticoagulation clinic

The pharmacy-led anticoagulation outpatient clinic at QEH monitors more than 3,000 patients. Clinical technicians are fully involved in delivering this service. Along with a team of pharmacists, they provide near patient testing (using capillary blood sampling) in both GP and hospital-based clinics. The technicians have also been trained to:

- Calculate warfarin doses
- Identify patients who require treatment with low molecular weight heparin
- Determine when patients should be referred for high INR (international normalised ratio) reversal treatment
- Identify “red flag” (dangerous or worrying) symptoms, such as excessive bleeding or bruising, and coordinate a patient's subsequent hospital admission (if required)

In addition, clinical technicians help to coordinate follow up appointments at the

anticoagulation clinics for inpatients. This requires an assessment of the patient's recent INR results to determine a date for the next blood test.

Ongoing audits, examining adherence to local and national standards in the anticoagulation clinics, have demonstrated that there has been no reduction in the quality of clinical service provided to patients since clinical technicians started this role. Benefits of the service are described below.

— Medicines information

An extended role for technicians has been identified in medicines information. Sonia Cross is currently undertaking the UK Medicines Information technician training course.

Currently, the medicines information service is provided by clinical pharmacists. In the future, it is anticipated that the service will be coordinated by clinical technicians, who could refer to specialist pharmacists for advice if required.

Other training that is available to clinical technicians is listed in Panel 1.

— Clinical governance

The pharmacy department at QEH fosters a culture of learning and career advancement.

Clinical technicians also actively participate in the department's programme of continuous professional development. This programme includes:

- A journal club
- Clinical workshops run by consultants and senior pharmacists
- Case study presentations

There is also a clinical supervision and peer review initiative within each clinical team, providing the technicians with a good clinical grounding to improve patient care.

Audit Regular audits ensure that these new initiatives are underpinned by robust clinical standards and governance. Weekly audits that assess the impact of clinical technicians have demonstrated:

Panel 1: Training and assessment offered to clinical technicians

- Regional medicines management course for technicians
- Regional accuracy checking competency assessment
- In-house drug history taking training course
- In-house anticoagulation training
- Capillary blood sampling training
- *BMJ Online* anticoagulation training

- Before clinical technicians were employed, about 50 per cent of patients admitted to the medical ward received a pharmacy review within one working day of admission — this has now increased to over 90 per cent
- A marked reduction in trust spending on antibiotics over the past 12 months
- Non-formulary drug spending on the medical division has reduced from £2,350 during May 2007 to £524 during February 2008

These results provide evidence that clinical technicians can operate in a variety of roles that optimise the use of pharmacy resources, without compromising patient care.

— Challenges

During the initial phase of implementing these initiatives, we were determined to demonstrate the skills of clinical technicians. However there appeared to be a lack of understanding from ward staff and GPs regarding the differences between the various grades of clinical pharmacy staff.

Over time, through the relationships that have been built with medical and nursing colleagues, clinical technicians have become an integral part of the hospital team.

Service delivery It has occasionally been difficult to get the correct balance between developing the clinical technician role and maintaining the effectiveness of the medicines management service that was already in place. We hope to overcome this problem by recruiting more clinical technicians to support this initiative.

Increased responsibility The new roles have required the clinical technicians to refine their skills in patient counselling, and develop clinical competencies, such as blood sampling and anticoagulant dosing. Consequently, the technicians are responsible and accountable for many of their clinical decisions. This concept has challenged some previously held mindsets and resulted in a more self-reliant attitude among the technicians.

— Future opportunities

The success of these posts has renewed the drive to expand clinical technician roles beyond the current remit. Several additional clinical technician posts have recently been commissioned at QEH. These will primarily consolidate the current service, but should also allow for admissions roles to be implemented in the surgical and orthopaedic directorates.

In addition, it may be possible to empower clinical technicians to provide a more comprehensive service to patients at the

point of discharge, with the aim of ensuring a smoother transition from secondary to primary care. This could include:

- Informing GPs of any medication changes
- Communicating with carers and community pharmacies about patient compliance issues
- Arranging referrals and follow-up appointments to pharmacist-led prescribing clinics

Within this agenda of expansion, there is an enthusiasm to develop the role of clinical pharmacists within the hospital. There is an emphasis on promoting the pharmacists' prescribing role within pharmacist-led outpatient clinics and on a referral basis to hospital inpatients. Currently, there are established pharmacist-led clinics in the diabetes and rheumatology pain management teams. Other areas that are being evaluated for pharmacist prescribing input are:

- Post-operative pain management
- Post-operative nausea and vomiting
- Critical care
- Preadmission clinics
- Haematology
- Rheumatology medication review

— Summary

The role of the pharmacy technician has changed significantly over recent years. Professional autonomy and recognition has enabled technicians to become more self-reliant, thus inspiring innovation and decision making in the new roles that they undertake.

At QEH, the decision to integrate extended-role technicians into the clinical pharmacy team has resulted in:

- More diverse skill mix within clinical pharmacy and ward teams
- Positive contributions to drug use reviews and cost saving programmes
- Improved job satisfaction and career development for technicians
- Consistent staff levels for ward services and outpatient clinics
- More cost-effective use of pharmacy staff and resources
- Encouragement to develop more specialist roles for pharmacists

The clinical technicians have earned the respect of staff and are now, more than ever, valued by patients.

— References

1. Carter K, Brewer C, Brewer S, Trodden J, Purdy S. Redefining hospital pharmacy roles in West Cumberland. *Hospital Pharmacist* 2005;12:281–82.