

RE-ENGINEERING CLINICAL PHARMACY SERVICES FOR GENERAL MEDICAL WARDS

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In this article the authors describe the introduction of a new system for delivering clinical pharmacy services

Guy's and St Thomas' Hospital NHS Trust is a 1,400-bed teaching hospital and tertiary referral centre based on two sites. As part of the Tomlinson reorganisation,¹ acute medical services were centralised on the St Thomas' site at Waterloo, and the Guy's site was developed with a focus on planned care, renal disease and cancer services. Predictions for the site reconfiguration indicated that there would be a shortfall in the expected number of beds required for medical patients. New ways of working were required from all departments in order to improve the efficiency of patient management.

The clinical governance initiative required the pharmacy department to reconsider standards of care in order to ensure the best use of scarce manpower resource.²

As with many other hospitals, ward pharmacy services at the trust were provided to individual wards by an individual pharmacist.^{3,4} It was recognised that standards varied widely and that the level of pharmaceutical care provided depended on the individual ward pharmacist's experience and skills rather than the individual pharmaceutical care needs of the patients. Junior pharmacists were unable to operate at the same level as senior practitioners, and senior practitioners were often unable to provide pharmaceutical care at a higher level because they were busy meeting basic service needs.

Many pharmacists had a nominal 15 per cent of their time dedicated to ward pharmacy activities (see Table 1). These pharmacists provided other operational services within

pharmacy for the bulk of their time, generally because funding for the posts had been secured for the operational as opposed to the clinical role. There was potential conflict between time allocated to clinical duties and the need to meet other operational demands. This limited the scope for interaction with the patient, and pharmaceutical care input was often targeted towards discharge rather than admission (Figure 1). The quality of prescription monitoring, traditionally viewed as the ward pharmacist's prime role, was variable depending upon the skill of the practitioner and the time he or she had available on the ward.

CHANGES TO THE WARD-BASED PHARMACY SERVICES

A new system, based on a team approach, for delivering ward-based pharmacy services was proposed. Four pharmacy teams were identified that modelled the physician team structure. Wards were grouped, both geographically and clinically, for the purpose of providing ward-based clinical pharmacy services (see Table 2). A team of pharmacists was identified for each set of wards with the aim of ensuring basic pharmaceutical care was delivered to all patients, while identifying those patients with more complex pharmaceutical care needs who would have them met by appropriately skilled staff. The roles and responsibilities of members of the team were discussed with the staff involved. A document describing the expectation of each role was agreed and disseminated.

A system of mentoring, monitoring and teaching was introduced by encouraging

pharmacist ward rounds where the whole team would see individual patients to consider their pharmaceutical care needs.

Additional resources were secured to fund the service on the admissions unit. Other staff already within the existing budget were redeployed in the team structure as appropriate (see "Resource management" overleaf).

Three levels of pharmacist were identified. The names "junior", "C" and "practitioner" refer to levels of responsibility, not necessarily grades.

Junior pharmacists are part of the Structured Training and Experience for Pharmacists scheme (STEP). The STEP programme is a collaborative recruitment and retention initiative for junior pharmacists involving all NHS pharmacy organisations in South East London.⁵ The programme is designed to offer junior pharmacists a wide range of training and experience by linking all pharmacy organisations in this area.

In the first year, the majority of juniors' time is taken up by operational commitments (dispensary, technical services and medicines information). They have a dedicated 15 per cent of their time committed to ward-based services, and undertake the Certificate in Pharmacy Practice (London School of Pharmacy) which provides a toolbox of clinical skills and ensures the academic content of their practice is accredited. Ward-based assessment using a competency tool is regularly undertaken.⁶

After successfully completing the first year, the STEP pharmacist is required to undertake six months of clinical practice in a medicine rotation.

Junior pharmacists undertake most of the patient contact activities, which include drug history taking and patient education. Simple problems that are identified are resolved by consultation with junior medical staff. These include errors or omissions in drug histories, and inappropriate dosage or formulation. Junior pharmacists ensure the safe and timely supply of new medicines, complete appropriate documentation (eg, non-formulary forms), ensure

TABLE 1: WARD PHARMACIST ALLOCATION TO MEDICINE PRE ACUTE SERVICE TRANSFER

Ward	Number of beds	% of time dedicated to ward pharmacy activities		
		Basic grade	C grade	Practitioner
General medicine	28			30%
	28	50%		
	24		15%	
	24		15%	
	30		15%	
Elderly care unit	30			20%
	56			50%
	28	15%		
Respiratory/ general medicine	18		15%	
	28	15%		
	30		15%	
Admissions	30	50%		
Observation (STH)	16	15%		
Total	404	1.45 WTE	0.75 WTE	1.00 WTE
Total				3.20 WTE

Note: WTE = whole time equivalent

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guidelines are followed, and undertake practice research and clinical audit. In addition they teach and mentor preregistration trainees and students and monitor the services provided by them. Junior pharmacists are able to practise their communication skills, problem identification skills and clinical skills while being supported by a C grade pharmacist.

Complex pharmaceutical care problems are referred to the C grade pharmacist, who resolves these by consultation with the specialist registrar or by referral to the practitioner. Such problems include therapeutic controversies and therapeutic drug monitoring. In order to accredit the learning of C grade pharmacists they undertake formal postgraduate qualifications, either a clinical diploma, or modules from the Certificate in Applied Therapeutics which is accredited by Brighton University. C grade pharmacists are expected to monitor and assess the services delivered by the junior pharmacists as well as teaching and mentoring them. They also undertake additional clinical pharmacy duties, which can include direct patient care clinics (eg, anticoagulation or HIV), participate in post-take ward rounds (the first consultant ward round following admission) and deputise for the practitioner in certain circumstances. They document appropriate pharmaceutical information/interventions in the patients' medical notes after discussion with the practitioner. In addition they design and undertake practice research and audit, and ensure guidelines are appropriately followed. C grade pharmacists are able to develop their clinical decision making skills and build up their clinical expertise, without compromising the care of the patient.

Practitioners co-ordinate and monitor the practice activities of the team and undertake clinical teaching of junior staff. They document appropriate pharmaceutical information/interventions in patients' notes, participate in post-take ward rounds, manage patient care clinics, consult with senior medical staff and undertake directorate work (eg, budget management). They develop clinical pharmacy services in line with departmental and patient needs. They also design and supervise practice

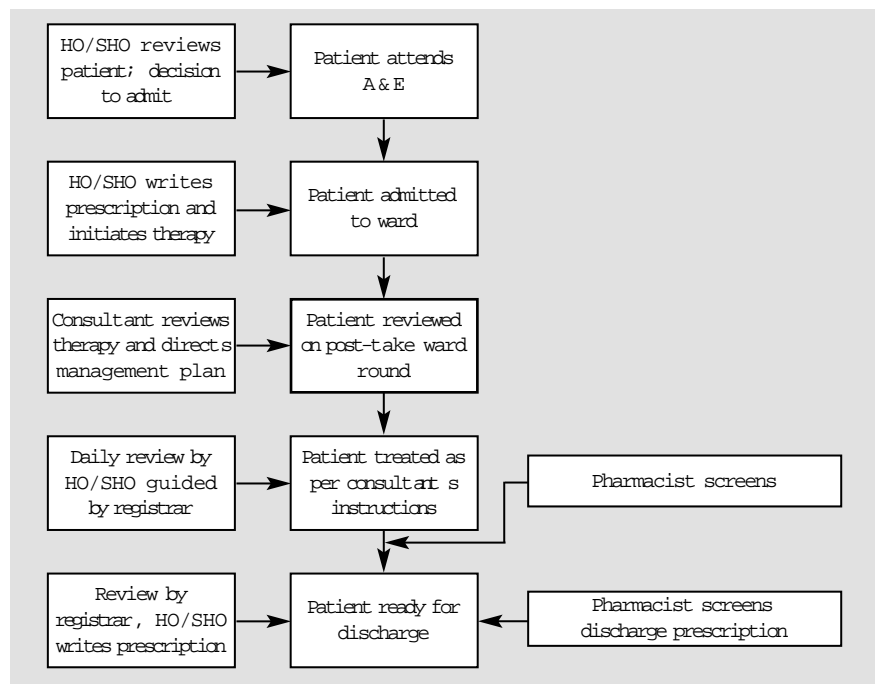


Figure 1: Pharmacists' involvement during an inpatient's stay before change in service

research and clinical audit, and design and review guidelines. They have specific responsibility for the delivery of pharmaceutical care to patients who are managed by their team.

All pharmacists participate, on a rotational basis, in the medicines advice team. The team operates every afternoon to support clinical pharmacy practice across the hospital. It is structured to ensure that each pharmacist provides the appropriate level of pharmaceutical care according to his or her skills.

Each pharmacy team interacts with different medical teams depending on the nature of the illness of the patients admitted to the wards. Like the medical model there is the opportunity for referral to another specialist pharmacist practitioner if required.

This results in considerably more pharmacy involvement, and involvement by the appropriate level of practitioner, during the patients' stay (Figure 2).

RESOURCE MANAGEMENT

In order to implement this strategy, restructuring of existing resources, as well as securing additional resources, was required. This was obtained over a period of three years from various sources. This required a concerted approach to influence senior medical staff and management, and some financial risk-taking on the part of the pharmacy department.

An additional two whole time equivalent (WTE) posts were secured to manage the admissions process (including participation in post-take ward rounds). Significantly, this was strongly supported by the physicians who wished to see best practice adopted after the transfer of acute services onto the St Thomas' site.

Previous work has demonstrated that the "Near to patient" pharmacy system reduces overall drug costs.⁷ The savings made were reinvested in the pharmacy service. This resulted in an additional post being allocated to service the medical wards. The other

Specialty	Number of beds	Number of wards	% of time dedicated to ward pharmacy activities				
			Practitioner	C grade	B grade (2)	B grade (1)	
Admissions	Observation ward medical admissions	82	3	60%	80%	80%	15%
North wing team	Respiratory/general medicine	85	4	45%	50%	80%	15%
South wing team	Cardiology/endocrinology/haematology/general medicine	78	3	20%	80%	80%	15%
Elderly care team	Elderly care stroke unit	103	4	50%	15%	80%	—
Total		348	14	1.75 WTE	2.25 WTE	3.20 WTE	0.45 WTE
Total							7.65 WTE

Note: B grade pharmacists (1) — first year, have residency, postgraduate training and operational commitments. B grade pharmacists (2) — second year, have residency, postgraduate training and medicines advice team commitments. C grade pharmacists — have post-take ward round, clinic and MAT commitments. B and C grade posts are rotational. All practitioners have directorate, post-take ward round, clinic, training, MAT and management commitments

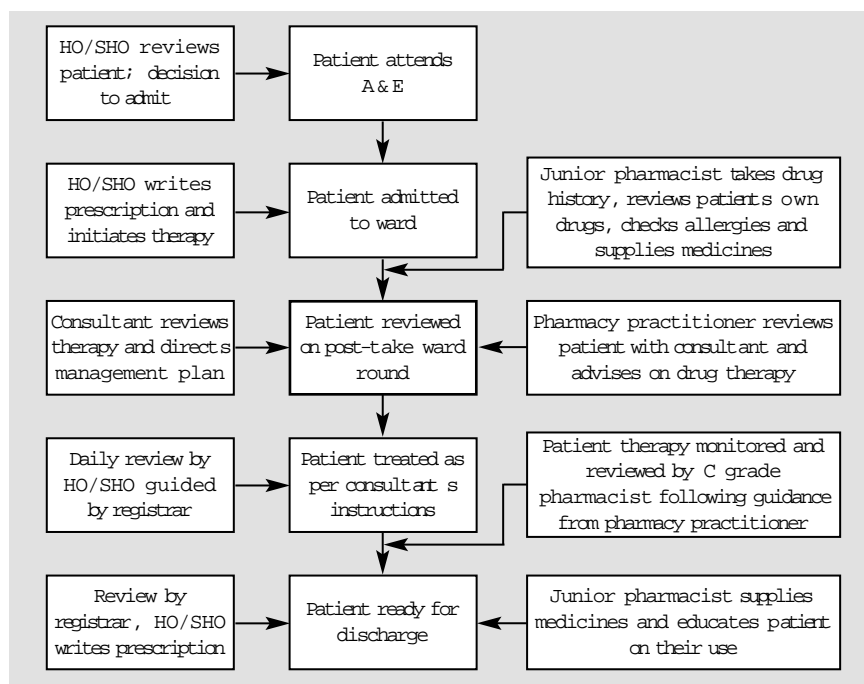


Figure 2: Pharmacists' current involvement during an inpatient's stay

significant resource change occurred as the pharmacy department sought to address implementation of the European Working Time Directive.⁸ This resulted in an extra four junior pharmacist posts being allocated to the department in order that the residency programme would meet the working hours set out by these regulations. Two of these new positions had 80 per cent of their time allocated to the medical ward pharmacy team.

Increase in staffing complements in operational areas that traditionally contribute to ward pharmacy services and the refocusing of these commitments allowed some flexibility.

DISCUSSION

Medicines have been identified as a major cause of morbidity and mortality during hospital stays⁹ and pharmacists have demonstrated that they are in a position to reduce the risk associated with, and improve the quality of, medicines use.¹⁰

Many hospitals are hampered in providing appropriate pharmaceutical care because

of inappropriate skill mix and lack of resource. At our hospital, when tasks were undertaken they were often carried out inconsistently to a competence limited by the skill of the pharmacist. We believe that this new model improves the skill mix, allowing the most appropriately skilled pharmacists to undertake the tasks they are able to perform, and allowing the prioritised tasks to be undertaken consistently. This system ensures all patients of the medical directorate receive the level of pharmaceutical care they require, and as a minimum, all patients have an accurate drug history documented on admission and are counselled on the use of their medicines at discharge.

Consistent provision of the best pharmaceutical care to all patients is still not possible due to insufficient resources. During sickness or when vacancies occur, there is still the requirement for more senior pharmacists to "act down". The system appears flexible enough to cope with this.

The team approach supports the development of junior pharmacists without com-

promising patient care. The process of referral and direction between the grades of staff ensures that senior pharmacists take complex decisions. Constant feedback of these decisions to the junior staff means that all members of the team gain from the experience of the more senior staff. Junior staff are encouraged to provide more complex pharmaceutical care if they are competent and if time allows.

Junior pharmacists are assessed using the competency grids developed by the London and South East Clinical Pharmacy Development Group. These give clear direction to the juniors as to their strengths and weaknesses. Clear competencies for C grade pharmacists and senior practitioners need to be developed.

The impact of these changes has been evaluated and will be reported separately.

FUTURE WORK

With an effectively standardised baseline service we are now in a position properly to evaluate further changes to skill mix, including the potential for involving pharmacy technicians in some of the tasks, such as medication history taking and patient counselling.

CONCLUSIONS

The team-based model has facilitated the consistent delivery of pharmacy services to medical inpatients according to their assessed need.

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