

# Pharmacy practice research reviewed

Joanna Lumb, a freelance medical writer, highlights a selection of the work that will be reported in the pharmacy practice research sessions at the British Pharmaceutical Conference next week, to help guide pharmacists to sessions they might wish to attend or posters they might wish to visit

The Conference practice research sessions continue to thrive, and 89 papers were accepted this year for presentation either as posters or orally. This review makes no distinction between the two categories. The "R" numbers below refer to pages in the practice research supplement to the *International Journal of Pharmacy Practice* (see Panel).

## Primary care services

Medicines management features prominently in this year's practice research programme. Among the papers are reports of pharmacists' and GPs' attitudes to new pharmacy services, particularly medication review, and several studies describing pharmacist involvement in aspects of cardiovascular care. Importantly, patients' views have also been assessed.

**Medicines management trial** The Department of Health-funded community pharmacy medicines management project for patients with coronary heart disease — a randomised controlled trial — is being evaluated by researchers at the University of Aberdeen. **Tinelli et al** (R9), from this group, sent a questionnaire to all 98 participating pharmacists to assess their knowledge of, and attitudes towards, medicines management. The vast majority of the 75 respondents regarded activities related to prescribed medicines as part of the service; fewer respondents saw review of patients' over-the-counter medicines or providing advice about healthy living as part of the service. Most thought that medicines management services could be provided from either community pharmacies or medical practices. Nearly all respondents saw room for improvement in the pharmacist/GP working relationship.

The same authors have also explored GPs' opinions on the pharmacy medicines management service (R67). A questionnaire was completed by 116 GPs in participating practices. Access to a consulting room, appropriate training and protected time were seen as the most important resources needed by community pharmacists to provide the service. Only about one-third of GPs believed that access to patients' medical notes was the most important factor in delivering the service.

The Centre for Pharmacy Postgraduate Education has developed a training package for the medicines management trial. **Jaffray et al** (R66), from the Aberdeen group, report that this training has provided a significant improvement in pharmacists' perceived knowledge and skills, although some 70 per cent of pharmacists said they had undertaken additional training to support service provision.



**A survey by Rosenbloom et al has found that many pharmacists believe their work for older people is undervalued**

**Training GPs** GPs in Tayside Primary Care Trust have been offered training in medication review by practice pharmacists, the rationale being that pharmacists may be more effective in performing medication review but may not have time to provide the service themselves. Training was offered to all GPs in one local health care co-operative and **Hansford et al** (R79) report a survey to assess GPs' views of the training. Sixty-one per cent of participating GPs (27/44) responded. Around three-quarters said that the training had met their needs and 52 per cent that they were now more confident about undertaking medication reviews. Training was also seen to

help them to meet standards in the new general medical services contract.

**GP clinic** In Wales, a community pharmacist has obtained funding to run a medication review clinic, in one GP surgery, for elderly patients taking six or more medicines. **Lau and Evans** (R82) evaluated the service after 62 patients had been seen in nine clinics. Eighty-nine interventions were made, including stopping medication, starting new medication, concordance discussions, and technical changes (eg, generic switch). The interventions led to an estimated cost saving of £4,500, while primary care organisation funding to reimburse the pharmacist was £1,800. Feedback showed that both GP and patients welcomed the pharmacist input. For GPs, such schemes can save time while meeting the aims of the National Service Framework for Older People relating to medication review.

**Pharmacist attitudes** Another questionnaire survey explored the attitudes of 97 community pharmacists in three South London PCTs to a pharmacy-based medicines management service for older people. Most pharmacists felt able to undertake a basic medication review, although 30 per cent thought they lacked the clinical skills to identify patients needing a review. Many felt that their work for older people was not valued by the PCT. The research is reported by **Rosenbloom et al** (R38), from Hertfordshire LPC and the School of Pharmacy, London. They note that many questionnaire non-responders were locums and emphasise that efforts should be made to ensure that this group is involved in service developments.

**Antihypertensive treatment** Pharmacist-managed antihypertensive treatment in primary care produced effective blood pressure control in a study by **Jamieson et al** (R36), from Frimley and the University of Bradford. In a crossover study, 33 patients received care in a pharmacist-managed clinic, following an agreed individualised clinical management plan, or usual care from their GP. Significantly more patients achieved target blood pressures ( $\leq 140/85$ mmHg) during the study period than during the control period. A patient satisfaction survey showed that patients valued their discussions with the pharmacist and wanted the service to continue.

**Diabetes clinics** **Harding et al** (R49), from West Bromwich and Queen's University Belfast, have evaluated the impact of a pharmacist-led medicines management programme for older people with diabetes. Three GP practices received the programme, which

## Practice Research Supplement

The BPC practice research abstracts are being published as a supplement to the September issue of the *International Journal of Pharmacy Practice*. Copies of the supplement are made available to those attending the conference practice research sessions as well as to *IJPP* subscribers. Copies can be purchased for £15 from the Pharmaceutical Press, Customer Services, PO Box 151, Wallingford, Oxfordshire OX10 8QU (tel 01491 829272; fax 01491 829292; e-mail rpsgb@cabi.org). The abstracts are also available in the form of PDF files, which can be downloaded via the BPC section of the Royal Pharmaceutical Society's website ([www.rpsgb.org/events](http://www.rpsgb.org/events)).

involves dedicated clinics run by nurses using a protocol devised by pharmacists, plus home visits by a nurse or pharmacist. There were four control practices. Pre- (2002) and post- (2003) intervention data were recorded for 335 control and 246 intervention patients. Blood pressure control was better in the intervention group and there were also fewer deaths. The researchers believe that the improved outcomes might be related to higher use of antihypertensive drugs recommended as first choice by the National Institute for Clinical Excellence.

**Medication review for CHD** Pharmacists in Adur, Arun and Worthing Teaching PCT are providing medication reviews to patients with coronary heart disease. The attitudes of 11 participating pharmacists have been explored, in in-depth interviews, by **Harding et al** (R28), from Worthing and the School of Pharmacy, London. The service was seen as professionally rewarding, with benefits for pharmacists, patients and the NHS. It was also seen as offering opportunities for breaking down demarcations in primary care.

#### **Extended roles in lipid management**

An indication of differences between patients and pharmacists' views on community pharmacy, with implications for medicines management services, comes from qualitative research reported from Keele University. **Chatterton et al** (R88) interviewed 25 current or past statin users and 20 community pharmacists to explore views on extended roles in lipid management. Pharmacists were keen to provide extended services to statin users, including lifestyle advice, cholesterol monitoring, and statin dose change in response to test results. Patients supported developments that might increase convenience, such as cholesterol monitoring and repeat dispensing, but were less positive about clinical interventions, such as dose alteration. Also, while pharmacists saw lack of access to medical notes as a barrier to service development, patients had concerns about such access because of confidentiality issues.

**BP screening** **Choo et al** (R69) demonstrate the potential for community pharmacy identification of patients with high blood pressure. During last year's Blood Pressure Awareness Week, 102 Moss pharmacies provided a blood pressure testing service. Around half of the 1,675 people tested were considered to be at risk from high blood pressure because of other cardiovascular risk factors, such as diabetes and smoking. Over one-quarter of this "at risk" group had blood pressure readings that required further monitoring or treatment. The authors suggest that BP testing in pharmacies could be part of the advanced services in the new pharmacy contract.

#### **Hospital pharmacy services**

**Minor injuries service** An innovative service piloted at the University Hospital of Wales, Cardiff, involves a pharmacist working

in the minor injuries area of the accident and emergency department. The service was provided, for a three-month period, from 5 to 7pm on weeknights and 2 to 6pm at weekends. Minor injury patients were triaged by a nurse and then referred to the appropriate health care professional. **Davies et al** (R39) report that over a one-month evaluation period, 25 per cent of patients were seen by the pharmacist, an average of three patients per hour. Preliminary results show an increase in the percentage of patients receiving analgesia when the pharmacist was present and a reduction in waiting times. Surveys showed improved multidisciplinary working, and patient and health care staff satisfaction with the service. There are now plans to extend the service into other areas of A&E.

**Surgical preadmission clinics** Pharmacists are increasingly involved in taking patient histories in medical admission units. Surgical units can also benefit from this service, according to the results of a Manchester study. **Spiller and Ashcroft** (R31) report a prospective controlled trial evaluating the impact of a pharmacist-led surgical preadmission clinic for elective orthopaedic surgery. In the intervention arm, a pharmacist took the drug history and recorded the patient's regular medication as well as antibiotics and thromboprophylaxis on to a medication chart for a doctor to sign on admission. In the control arm, the history and medication chart were completed by a doctor. Assessment indicated that the pharmacist improved both drug history taking (fully recorded in 96 per cent of 48 patients in the pharmacist group and 32 per cent of 53 in the control group) and medication chart writing (written correctly in 92 per cent versus 74 per cent of patients). The next step is to look at the resource implications and cost-effectiveness of the service.

**Transplant clinic service** **Prowse and Scott** (R27) report how the introduction of a clinic-based pharmacist at the Oxford Transplant Centre outpatient department has improved prescribing practice. Prescribing interventions made by the pharmacist, who has access to the patient, medical notes and laboratory results, were recorded and their significance assessed by a multidisciplinary panel. Over a four-month period, 317 prescribing errors were identified from 972 prescriptions. About three-quarters of the interventions were classed as clinically significant. It is noteworthy that the researchers estimate that only 5 per cent of these would have been identified by a dispensary pharmacist with just the prescription available for screening.

**Anticoagulation monitoring** Preliminary results from a trial of a domiciliary anticoagulation service are reported by **Akinwunmi et al** (R84) from the School of Pharmacy, London, and Barts and the London NHS Trust. The early results show that anticoagulation monitoring at home,

provided either by a specialist pharmacist or a phlebotomist, is as good as traditional hospital-based monitoring in terms of INR stability. For the trial, the service is being offered to patients with impaired mobility, a group who might particularly benefit from home monitoring.

**Information transfer** One of the potential difficulties with medicines management is the transfer of patients' medication details between primary and secondary care. **Ahmed and Harding** (R41), from West Bromwich, report an audit of information transfer in relation to 136 patient admissions. Patients' medication was frequently altered unintentionally on admission, during the hospital stay or at discharge. The presence of a primary care pharmacist working within the hospital setting — an interface pharmacist — ensured that accurate medication histories were available for new admissions (via electronic transfer from the GP practice and patient interview) and that unintentional prescribing changes could be quickly identified. Patients were given printed details of their medication regimen on discharge and the pharmacist also arranged electronic transfer of information on discharge medication and laboratory tests to the GP's practice to enable records to be updated promptly.

#### **Information in discharge summaries**

**Tully et al** (R33), from Manchester and Salford, have been investigating the information given to GPs in discharge summaries, specifically whether the GP receives details of why medicines were started or stopped in hospital. Since patients may be treated by several different doctors, it is not surprising that there was a relationship between whether this information was included in the medical notes and whether it was included in the discharge summary. However, the relationship was also seen when the doctor writing the discharge summary had actually prescribed the new drug (and hence knew why it had been prescribed, even if this was not recorded in the notes). The researchers conclude that access to information is not the only factor influencing what is communicated to GPs.

**Discharge interventions** At Antrim Area hospital, all interventions made on discharge prescriptions are recorded and analysed. **Burnett** (R76) reports that over a three-month period over 25 per cent of prescriptions prepared by doctors (510 out of 1,849) required some type of intervention. Twenty per cent of interventions were dose queries. Dealing with queries was calculated to take at least 14 hours per month for the dispensary pharmacist, as well as doctor and nurse time. There was only one query from the 135 prescriptions prepared by clinical pharmacists.

**Dispensing error survey** Data suggesting that the move to original pack dispensing may be contributing to a reduction in dispensing errors and adverse outcomes for pa-

tients are reported by **Roberts et al** (R45) from Cardiff, who have analysed dispensing errors reported electronically from NHS hospitals in 2001–04 and compared these with data for 1991–2001. Forty-three hospitals reported 2,068 dispensing errors in 2001–04. Compared with the earlier data, there were fewer wrong medicines and wrong quantities being supplied. The most common error was the wrong strength of the right drug. There was a reduction in seriously detrimental and fatal outcomes from 8.2/1,000 to 2.5/1,000 errors reported. Statistically significant reductions were seen in the proportion of errors with certain drugs, including warfarin, lisinopril and carbamazepine. The researchers suggest that the increased use of original packs, some of which have visual cues to aid selection, may help to explain these changes.

**Electronic prescribing** A project from the West Midlands has suggested that electronic prescribing facilitates pharmacists' intervention reporting. **Marriott et al** (R44) compared clinical interventions over a three-month period at two district general hospitals, one operating a paper-based recording system and one an electronic patient management and prescribing system. More interventions were reported at the electronic site (2,512 compared with 763) — this is unlikely to reflect differences in workload since the hospitals were of similar activity and case mix. Intervention categories also differed: at the electronic management site, interventions were principally related to therapy monitoring while interventions at the paper-based site mostly involved therapy selection and prescribing. The next step will be to assess any negative consequences of the electronic system for pharmacy interventions.

**Hospital medicines management services** Variation in medicines management services in NHS trusts has been identified by **Borja-Lopetegi et al** (R21), from London. They have developed key performance indicators that can be used in modelling pharmacy service provision. Pharmacy managers in 62 NHS trusts in the London and Eastern regions were asked to rate their performance. The results to date, from 31 trusts, show that in 40 per cent of trusts, more than three-quarters of patients do not receive a pharmacy medication history within 24 hours of admission; in 62 per cent, up to half of all patients have a pharmaceutical review within 24 hours of any medication change; use of patients' own drugs is more common in surgical patients than medical patients; and 60 per cent of trusts do not have self-administration. Some services showed a correlation between service level and pharmacy whole-time equivalents.

### Adverse drug reactions

**Chiefs' views on ADR reporting** The views of hospital chief pharmacists on pharmacist adverse drug reaction reporting has been investigated by **Cox et al** (R68) from



### In Aberdeen, Stewart et al have piloted a community-based method for monitoring ADRs in children

Birmingham. They sent a questionnaire to chief pharmacists in all acute NHS trusts and had a 74 per cent valid response. Two-thirds of respondents thought that pharmacists' yellow card reports should be reviewed by the pharmacy department before being sent to the Committee on Safety of Medicines. A majority expressed concern about pharmacists' competency to detect ADRs. The researchers comment that it is often impossible to assess causality in a single report and that local attempts to do so may prevent important information being forwarded to the CSM. They suggest that resources might be better used to provide training and promote individual responsibility for ADR reporting.

**Monitoring paediatric ADRs** Researchers from Aberdeen have piloted a community-based method of monitoring ADRs in children, suitable for both prescription and over-the-counter medicines. In seven community pharmacies, **Stewart et al** (R46) collected data over four weeks on children under 12 who received amoxicillin, salbutamol, paracetamol suspension or ibuprofen suspension. Parents were asked to complete a five-day diary recording any perceived adverse reactions. Of 312 cases, 267 parents agreed to participate and 106 of them returned questionnaires. Fifteen ADRs were described, most commonly diarrhoea with amoxicillin. Having demonstrated the feasibility of prospective reporting, a larger study would now be useful.

### NICE and prescribing

**Collaborative approach** A joint primary/secondary care approach to implementing NICE guidance has had positive outcomes, according to a paper from **Palmer et al** (R20). The Bristol, North Somerset and South Gloucestershire health community has

set up a NICE Commissioning College, comprising four PCTs and six associated acute trusts. An IT-driven approach has been developed for disseminating NICE technology appraisals, assessing resource needs and preparing funding bids. Managers and clinicians receive warning of impending guidance and have the opportunity to take part in the consultation process. Since most NICE technology appraisals relate to medicines, pharmacists are heavily involved in this work. The collaborative work is said to have facilitated successful introduction of complex and expensive treatments.

**Compliance with NICE guidance** Two studies report assessment of GP compliance with NICE guidance. Both are reported from Liverpool John Moores University and Ellesmere Port and Neston PCT. **Price et al** (R81) investigated whether the GPs in the PCT's 13 surgeries were following guidance on use of glitazones in type 2 diabetes by examining medical records of all 121 patients currently prescribed these drugs. The vast majority were taking rosiglitazone. Seventeen audit criteria based on NICE guidance and British National Formulary recommendations were used to assess overall compliance which ranged from 63 to 74 per cent. The area of lowest compliance related to monitoring of liver function: pre-treatment liver function tests were carried out in 0 to 71 per cent of surgeries and two-monthly monitoring within the first year in 0 to 91 per cent.

In a second study, **Johnston et al** (R80) assessed the same surgeries' compliance with NICE guidelines for the anti-obesity drugs orlistat and sibutramine. Overall compliance was around 60 per cent for both drugs. The researchers comment that future studies could attempt to differentiate between non-compliance due to lack of awareness or a conscious decision to ignore the guidance.

**Paediatric dosing** Anecdotal evidence that hard-to-measure doses of liquid medicines are routinely prescribed for paediatric patients led **Baqir and Smith** (R24) to develop a standard dose guideline which has been piloted on two paediatric wards at North Tyneside General hospital. The guideline covers paracetamol, ibuprofen and penicillin antibiotics and uses doses that can be measured easily using a standard oral syringe or 2.5ml or 5ml spoons. The guideline's impact was examined by audit of prescriptions. Of 52 prescriptions before introduction of the guideline, 48 per cent would not have complied with the guideline. After the guideline, 21 per cent of 79 prescriptions did not comply. The plan now is to introduce the guideline in other hospitals in the trust and to expand it to include other commonly used drugs, including laxatives and antihistamines.

### Over-the-counter steroids

**Conflicting views** Community pharmacists are well aware of the dilemma in dealing with customers who are referred by

their GPs to buy an OTC steroid for a non-licensed indication. This issue is highlighted in research from **Rogers *et al*** (R14) from the University of Bath. They sent a questionnaire to 100 GPs and 100 community pharmacists seeking their views on the recommendation of OTC steroids, and had responses from around 50 per cent. Pharmacists were more conservative than GPs in their recommendation of OTC steroids, but were more likely than GPs to recommend use for insect bites and stings. Many of the GPs were unaware of the licence restrictions on OTC steroids. Forty-two of 46 GPs said they would advise patients to purchase an OTC product for use on the face. Only seven of 59 pharmacist respondents would sell a product for facial use as a result of a GP's advice.

### Medication non-adherence

**Intentional or not?** An investigation of reasons for non-adherence in elderly people is reported by **Bhattacharya *et al*** (R63), from the Universities of East Anglia and Bradford and York District Hospital. They measured adherence in 100 patients, 10 to 14 days after discharge from a medicine for the elderly ward, using dosage unit count and a medication adherence rating scale (MARS). Around 45 per cent of patients demonstrated non-adherence. Few patients were non-adherent with all of their drugs, the drugs most commonly associated with non-adherence being aspirin, loop diuretics and calcium channel blockers. The MARS categorises non-adherence into unintentional (forgetting) and intentional (altering, missing, stopping, taking less). In this patient group, intentional non-adherence was more common.

### What do patients want?

**Queries to NHS Direct Online** Patients' medicines-related queries sent to NHS Direct Online have been analysed by **Radia *et al*** (R57), from Guy's and St Thomas' hospital, London, the Universities of Bradford and East Anglia and NHS Direct Online. Over a five-month period in 2002, 1,297 medicine-related queries were received (11 per cent of all queries). These were categorised as contraception (28 per cent), immunisation (9 per cent) and general drugs related (63 per cent). The median age of people sending queries was 26 and 72 per cent were female. Analysis of a sample of queries showed that the pattern did not reflect known prescribing patterns. This is likely to be because of the age of questioners, topical issues (for example, common queries concerned the availability of measles, mumps and rubella vaccines as separate injections and the side effects of hormone replacement therapy) and because the internet-based system may be favoured for personal or potentially embarrassing questions. The researchers comment that most of the queries on drug side effects and interactions could probably have been answered at the point of supply and that

more research is needed to determine why patients choose to use the internet for such information.

**Minor ailments schemes** NHS community pharmacy minor ailments schemes are becoming increasingly common. To ensure that such schemes are successful, it will be important to find out what patients think of them and what barriers to use there may be. To assess these issues, a questionnaire-based survey was carried out in Birmingham among 24 patients who chose not to use the local pilot scheme (Pharmacy Direct) over a two-week period. (Over the same period, 68 patients used the scheme.) **Langley *et al*** (R8) found that non-users had concerns over privacy in the pharmacy and had increased confidence in the GP's ability to diagnose minor ailments. Without addressing such issues, schemes will fail to realise their full potential in reducing GP appointments.

**Shared care** Patients were also involved in a study carried out by **Elliott *et al*** (R11) from the University of Manchester and Manchester Royal Infirmary to investigate views on shared care after a renal transplant. Patients, GPs and renal unit staff were interviewed. The researchers report a mismatch of perceptions and say that better understanding of responsibilities is needed if the benefits of shared care are to be achieved. From the patients' perspective, there was a desire for greater involvement in decisions about their care.

**Swapping insulin needles** Another patient survey explored the issue of how often patients with diabetes change their syringes and needle tips. A questionnaire was sent to 312 insulin users, 65 per cent of whom responded. The majority changed their syringe and needle tip at least every four to five days, but practice varied from changing at each injection (16 per cent) to changing when injecting is painful or when the old needle is blunt or damaged (15 per cent). The study is reported by **Macleod *et al*** (R56) from Aberdeen, who comment that community pharmacists need to advise on correct use of syringes and needle tips — they acknowledge, however, that there is no evidence linking the observed diversity to clinically important differences and no specific guidance relating to reuse.

**Views on head lice** A questionnaire was also used to determine parents' beliefs and attitudes towards head lice management. **Craddock and Wright** (R42), from North Yorkshire and the University of East Anglia, distributed questionnaires to parents of year 3 children in primary schools. From 131 replies, nearly one-quarter of parents said they would be prepared to use chemical treatments to prevent infection. Many had used non-evidence-based treatments, including tea tree oil shampoo and conditioner. The researchers conclude that these findings high-

light the importance of pharmacy advice at point of supply.

### Education and training

**Involving patients** Is it time for patients to be involved in assessing undergraduate health care students? **Gray *et al*** (R48), from the University of Nottingham, discussed this question during structured interviews with 100 stakeholders (academics, students, practitioners [medicine, nursing and pharmacy] and members of the public), mean age 37 years. Most respondents supported a patient role in assessing students' attitude (91 per cent agreed) and professionalism (79 per cent) but were less positive about their ability to assess practical skills (53 per cent) and knowledge (23 per cent). The four groups gave similar ratings except for practical skills, where academics were more positive and the public more negative about patient assessment.

**Preregistration trainees' views** Two questionnaire surveys reported this year have examined the views of preregistration trainees. Both show that new graduates are not confident about certain clinical activities and one study indicates that, at this early stage, over 10 per cent regret their choice of career.

**John *et al*** (R59), from the Welsh School of Pharmacy, sent a questionnaire to 1,379 pre-registration trainees in November 2001, and achieved a 78 per cent response. Nearly 80 per cent reported that they were satisfied or very satisfied with pharmacy as a choice of career while 12 per cent said that they were dissatisfied or very dissatisfied (the others expressed no opinion).

This group is the first in which cohorts from all schools of pharmacy graduated with an MPharm degree. A second paper (R61) reports the students' views on how well the undergraduate course had prepared them for their pre-registration training. The majority were confident in their communication skills and knowledge of drug formulation. However, around one-third thought that the degree "bears little resemblance to the knowledge I require in practice" and 87 per cent felt that more emphasis should be placed on teaching clinical and practice subjects. Around half of the respondents said that they did not feel confident enough to recommend appropriate use of medication.

A similar study is being carried out by **Davies *et al*** (R17) from the University of Brighton. Their questionnaire is collecting information on preregistration students' self-reported fitness to perform basic clinical pharmacy activities. Interim results (from 128 responses) show that students feel more able to achieve "drug supply"-related competencies and to discuss theoretical aspects of medicines than to perform other clinical activities. Drug administration (eg, ability to calculate a dose or to advise on a dosing regimen), drug selection and professionalism have the lowest self-reported competency scores. The respondents' school of pharmacy

appears to influence students' perceived level of preparedness.

**Student numbers** A trends analysis by **Bates et al** (R18), from the University of London, predicts the likely increase in number of undergraduates admitted to UK pharmacy courses. There has been a steady increase in enrolments since 1984 and numbers could rise by around 20 per cent between 2001 and 2007, from 2,114 to 2,540. This figure does not include the impact of the new schools of pharmacy. The researchers express concern about the effect of the increase on academic standards and the quality of students' learning experience, particularly in view of a decline in full-time pharmacist academics and worsening staff:student ratios, and they question whether the pharmacy workforce will be able to accommodate the increasing number of graduates.

**Hospital pharmacist competency** A "competency framework" that has been developed to facilitate the development and assessment of junior hospital pharmacists has been put to the test in a controlled study in the South of England. The study, reported by **Antoniou et al** (R22), from London, Brighton, Southampton and South Buckinghamshire, involved 102 junior grade pharmacists in 22 acute NHS trusts. In 13 active sites the competency framework was used for practice development while nine control sites did not have access to the framework. Pharmacists were assessed every three months for a year.

The active group showed improvement in 24 of 25 measured competencies at month 6 and improvement was sustained at month 12. (The unchanged competency, legality of prescription, was satisfactory at baseline so there was no room for improvement.) In the control group, there was improvement in seven competencies at month 6, increasing to 12 competencies by month 12. Statistical analysis showed that significantly more pharmacists in the active sites achieved a global rating of competency. The researchers comment that use of the framework facilitates identification of individual training needs, a crucial step in continuing professional development.

**Support staff training** As pharmacists take on new roles, pharmacy support staff are likely also to have additional responsibilities. **Smith and Watson** (R71), from the University of Aberdeen, report a questionnaire survey to identify the training needs and skill mix of support staff. Data were collected from hospital and community pharmacists and their support staff from the five regions in Northern Scotland. Training was found to be insufficient and highly variable, and one-quarter of support staff reported no current training activity. Although training was seen to enhance support staff confidence and pharmacists' confidence in their staff, only 36 per cent of community pharmacists would be willing to close the pharmacy for one hour a



**Antoniou et al** have tested a "competency framework" for facilitating development of junior hospital pharmacists

week for staff training. Barriers to staff training included funding, time, insufficient staff levels, and lack of relevant local courses. The researchers identified a shortage of higher qualified staff, particularly in the hospital sector, and suggest that current skill mix is unlikely to meet the demand for the provision of new services.

**Protected time for CPD** Reasoning that it can be difficult to get started with continuing professional development, a primary care organisation in Wales has been offering community pharmacists CPD facilitation under a protected time scheme. The PCO arranges for one-to-one facilitation during working hours, and locum cover. The session lasts around an hour and pharmacists are helped to identify their learning needs and to devise a personal development plan. **Lau** (R85), from the Welsh Centre for Postgraduate Pharmaceutical Education, reports that 40 of 58 pharmacists accepted the CPD facilitation. Feedback from the pharmacists has been positive, with the scheme providing support and motivation and increasing pharmacists' confidence in undertaking CPD.

**Reporting incidents** Learning from past mistakes will be crucial if the government target of 40 per cent reduction in serious medication errors by 2005 is to be met. Manchester University researchers have developed an incident reporting form for use in community pharmacy to help improve both the reporting and analysis of incidents. Information can be recorded, via tick boxes and free-text sections, on incidents that involve dispensing, OTC sales or other pharmacy services. Face validity was tested using incidents from an existing claims database, focus discussion groups with pharmacy staff and telephone interviews with community

pharmacy clinical governance facilitators. **Morecroft et al** (R12) report that the form facilitates efficient reporting of incidents and also encourages staff to be more proactive in dealing with incidents and learning and reflecting on them.

### New pharmacy services

**Response to prescribing training** The views of the first cohort of pharmacists on two supplementary prescribing training courses have been assessed by **Dawoud et al** (R40), from King's College London and Leicester school of pharmacy. Thirty-five of the 41 pharmacists (primarily hospital pharmacists) completed a questionnaire at the end of the course. Fifty-four per cent thought the course would produce pharmacists fully fit for practice. Interestingly, the majority of the pharmacists felt they were already competent before the course but as this first group was mainly senior specialist pharmacists they may not be typical of later cohorts. One point made by the pharmacists was that the course should include more training in physical examination and consultation and less basic pharmacology and pharmacokinetics.

Half the respondents expected problems in obtaining workable clinical management plans and over 80 per cent thought there would be problems in the process of supplementary prescribing for patients with multiple conditions.

**Community pharmacist views** Whereas the previous study involved pharmacists already committed to supplementary prescribing, another study from King's College London investigated community pharmacists' views on supplementary prescribing. **While et al** (R43) report that a postal questionnaire was completed by 127 pharmacists in seven PCTs. Eighty-five per cent of the pharmacists wanted to train as supplementary prescribers although only six (5 per cent) were currently in training. Pharmacists with postgraduate qualifications had more positive views on supplementary prescribing. Ninety-nine per cent of respondents thought that supplementary prescribing would benefit patients and 91 per cent that it would increase job satisfaction.

**Repeat dispensing** Another new pharmacy service is repeat dispensing. **Petty et al** (R7), from the University of Leeds, point out that repeat dispensing schemes require a patient's medication regimen to be reasonably stable. Their research indicates that this is often not the case. They examined the repeat prescriptions of a sample of 580 elderly patients over a 12-month period. Seventy-nine per cent of medicines were unchanged but only 27 per cent of patients had a repeat prescription that did not change. The mean number of changes was 2.6. Any repeat dispensing scheme will need to allow for medication change, the researchers say. The next step in this research is to identify which medicines and conditions remained stable and which required change.