

# Pharmacy practice research: a review

This year's British Pharmaceutical Conference included 85 pharmacy practice research papers. **Clare Bellingham** reviews a selection

Expanding clinical roles, particularly in community pharmacy, featured in many of the practice research papers presented at this year's conference. Top of the research agenda were medicines use reviews (MURs) and pharmacist prescribing. Perhaps this should not be surprising since these subjects are of wide interest: nearly all practising pharmacists could be in the position to provide one or the other. Other featured topics are pharmacists' roles in teams, implementation of the new community pharmacy contract in England and Wales, job satisfaction, and adherence to prescribing guidelines.

## Medicines use reviews

More and more community pharmacists are providing MURs. However, the picture is not entirely rosy, with some negativity about the service found among GPs. Research presented at last year's conference reported that a third of pharmacists were providing MURs. A survey of 1,080 community pharmacists conducted by **Blenkinsopp** (Keele University) *et al* revealed that 59 per cent of pharmacists are offering MURs and only 16 per cent had no plans to provide them. Why the rise in popularity? For 40 per cent of pharmacists, the main driver was company policy, while another 40 per cent said it was their own decision to offer MURs. Some pharmacists used MUR funding to pay for a second pharmacist. This released time not just for MURs but also to catch up with paperwork. Reasons for not providing MURs included a lack of consultation facilities and pressures of work. Only 12 per cent of pharmacists said providing MURs had improved their relationship with GPs.

Two groups explored doctors' views about MURs. **Celino** (Webstar Health) *et al* found that doctors want MURs to focus on helping patients to understand their medicines, rather than clinical recommendations. They surveyed 20 GPs and found that although GPs were happy with the idea of MURs before they started, the reality was a disappointment. GPs reported concerns with inappropriate or ill-informed clinical recommendations, the types of patients reviewed and a lack of integration with the practice. In the second study, **James et al** at Cardiff University report that GPs welcomed the MUR service in principle but wanted a number of changes. These included a clearer understanding of their role in the MUR process, and better presentation and transfer of information.

The particular problem of information transfer was examined by **Ruda and Wood** at Aston University, Birmingham. They evaluated the quality of 450 MUR forms and found a wide variation. Only 12 per cent were fully completed, 18 per cent were difficult to read and 36 per cent contained abbreviations that would not have been understood by patients. The top three interventions were health promotion advice, monitoring advice and dose rationalisation. In total, 35 per cent of recommendations were referrals to the GP.

**Thomas** (Cardiff University) *et al* examined the MUR form itself (rather than pharmacist's entries) and found it to be cumbersome and time-consuming to complete. However, they comment that a revised version of the MUR form has now been developed and this addresses many of the problems they identified. They add that further modifications may be necessary, particularly finding improved IT solutions.

Good news about MURs was presented by **Baglolle et al** of LloydsPharmacy, who assessed the impact of MURs on asthma control. The proportion of patients whose asthma was rated "under control" increased from 5 to 9 per cent after an MUR, those considered to be "reasonably controlled" increased from 36 to 46 per cent, and those "not controlled" decreased from 59 to 45 per cent. In a third of cases, the pharmacist referred the patient to the GP or asthma nurse. Of those referred, 71 per cent had a treatment or dosage change. Patients also liked these MURs, with 73 per cent rating them as "very good".

One issue MURs tackle is compliance. Two groups presented research in this area. **McGovern** (NHS Greater Glasgow and Clyde) *et al* audited patients' compliance with osteoporosis medication in 52 community pharmacies in Glasgow. Of 353 patients, 22 per cent said they did not always take their medicines (bisphosphonate, calcium or both). Reasons for this included forgetting (46 per cent), disliking the taste (22 per cent), stomach upset (10 per cent), being fed up with taking it (7 per cent) and being unsure of the indication (2 per cent).

Multi-compartment compliance aids were examined by **Nunney et al** at the University of Leeds. They found that these aids made the process of taking medicines more convenient for patients. But although they might improve compliance with complex regimens, they do not assist with the prospective component of remembering to take medicines. Risks with multi-compartment compliance aids included patients receiving the wrong medicine in the device, receiving a medicine they could not identify, and patients taking a whole day's or whole week's supply at once.

What patients think about pharmacist prescribing was investigated by a number of researchers. Overall, the verdict is positive. But several groups said more publicity is needed to promote pharmacists' role in prescribing.

## Pharmacist prescribing

**Stewart** (Robert Gordon University, Aberdeen) *et al* asked nine prescribing pharmacists in Scotland to distribute questionnaires to 20 consecutive patients. Just over half were returned (103 of 180 forms). Patients rated the care provided by pharmacists: 89 per cent were satisfied with the consultation, 73 per cent thought the pharmacist was interested in them as a person and 79 per cent thought the pharmacist told them everything about their treatment. However, most said that they would still rather see a doctor.

A similar result was found in Belfast. **Lloyd** (Queen's University Belfast) *et al* interviewed 74 patients and although all were happy for a pharmacist to prescribe for them, only 28 per cent preferred seeing a pharmacist to a doctor. Other findings were: 77 per cent said the pharmacist gave them more information about their medicine than their previous prescriber; 93 per cent said they understood their medicine better following pharmacist prescribing; and 69 per cent said their medical condition had improved following pharmacist prescribing.

**Stewart** also led another study in which 5,000 members of the public in Scotland were sent questionnaires about non-medical prescribing. Of the 1,728 responses, 40 per cent were confident in pharmacists' ability to prescribe, 25 per cent thought pharmacists should be able to prescribe the same range of medicines as doctors and 40 per cent thought pharmacists would prescribe as safely as doctors. However, 66 per cent were concerned about a lack of privacy in pharmacies.

**Hobson and Scott**, at the University of Bath, interviewed 18 patients about independent prescribing. They found that community pharmacists have more barriers to overcome than nurses. Community pharmacists were not viewed as health care providers, were seen as "non-NHS" and there was a lack of understanding about pharmacists' skills. However, views were much more positive among those study participants who had experienced supplementary prescribing by a pharmacist. They reported feeling empowered by a more concordant approach compared with doctor consultations.

**Cooper** (University of Nottingham) and **Guillaume** (University of Sheffield) turned their attention to stakeholders' views on pharmacist supplementary prescribing. This was generally viewed positively, with benefits to patients such as enhanced access to medicines, fewer delays in seeing a health professional and

## Practice research abstracts

The BPC practice research abstracts are being published as a supplement to the September issue of the *International Journal of Pharmacy Practice* and are available at [www.pharmpress.com/ijpp](http://www.pharmpress.com/ijpp)

improved continuity of care. The success of supplementary prescribing was perceived to depend on the enthusiasm of the pharmacist prescriber, the relationship between the dependent and independent prescriber, and support from employers and peers.

Pharmacists' views on antimicrobial prescribing in secondary care were explored by **Tonna** (Robert Gordon University) *et al*. Pharmacists said supplementary prescribing was more appropriate for chronic conditions (eg, cystic fibrosis) and independent prescribing for acute care. Although pharmacists thought they had sufficient knowledge to prescribe antimicrobial therapy, they identified barriers to doing this including a large throughput of patients and not providing a 24-hour pharmacist prescribing service.

Pharmacist prescribing may be helped by clinical decision support software. **Krska** (Liverpool John Moores University) *et al* investigated pharmacy students' opinions of one such tool: the EMIS "mentor on the web". Most students found it useful but said it needed modifying for use in pharmacy. On other training issues, **Aston** (Aston University) *et al* report that community pharmacy preregistration trainees believe the cross-sector experience is too short and would prefer a four-week placement in hospital. **Bollington** (Royal Glamorgan Hospital) *et al* found that hospitals devote six hours of staff time every week to every preregistration trainee or student technician. **Diack** (Robert Gordon University) *et al* demonstrate the feasibility of a web-based learning environment for both pharmacy and medical students: 44 per cent of students said it increased their understanding of the importance of inter-professional working.

### Working in teams

Pharmacists in all sectors work as part of teams. The impact that teamwork has on prescribing decisions was investigated by **Lewis et al** at the University of Manchester. They asked 48 hospital doctors about incidents where they had made uncomfortable prescribing decisions. One-third were related to difficulties of prescribing within a team, including perceived pressure to prescribe from nurses, uncertainty of accountability and hierarchical issues. Other difficulties related to prescribing etiquette such as maintaining other prescribers' decisions and adhering to prescribing norms.

**Zargarani et al**, also from Manchester, explored how 15 community pharmacists felt about working with an accredited checking technician (ACT). Concerns about ACTs stem from pharmacists' lack of knowledge they say. Pharmacists were uncomfortable about ACT training and feared that inexperienced staff would become ACTs. Some were also concerned about ACTs checking their work and about where responsibility for accuracy errors made by the ACT lies.

Communication between community pharmacists and GPs still focuses on resolving prescription technicalities, according to

**Morecroft and Jones** at Liverpool John Moores University. Daily contact was initiated by pharmacists for technicalities such as checking drug strength, quantity, dose, availability or interactions. Eighty per cent of pharmacists contacted GPs less than once a month to discuss clinical queries, such as drug use during pregnancy, or to recommend therapeutic monitoring. The main reason for GPs contacting pharmacists was to request an emergency supply. GPs contacted pharmacists about once a month to check stock availability or for advice on prescribing.

### New pharmacy contract

The need to integrate pharmacists into the primary care team is reflected in research into the new community pharmacy contract in England and Wales. **Blenkinsopp** (Keele University) *et al* asked pharmacists, GPs and primary care organisations (PCOs) about their relationship since the introduction of the new contract. Most pharmacists (79 per cent) said their involvement with GPs was much the same, and the research found a low level of contact between pharmacists and GPs in many areas. However, 40 per cent felt the new contract had improved their integration with PCOs.

Meanwhile, **Inch** (Aberdeen University) *et al* assessed progress in implementing the new contract. Their research paper reports an interim analysis; the full results were presented verbally at the conference. The interim analysis (involving 425 of 1,080 questionnaires) showed that most essential services are now implemented. Over 85 per cent of pharmacies are providing disposal of unwanted medicines, health promotion, signposting and support for people with disabilities. However, only two-thirds had implemented repeat dispensing and prescription-linked healthy living services. On enhanced services, 44 per cent of pharmacies were providing smoking cessation services, 42 per cent patient group directions and 39 per cent supervised medicine administration. Only a minority were providing novel enhanced services, such as clinical medication reviews and supplementary prescribing.

Closer integration of the GP and pharmacy contracts would improve uptake of repeat dispensing, according to **Celino** (Webstar Health) *et al*. They interviewed GPs who perceived repeat dispensing positively but were unaware of their key role in implementing it. None was aware of multidisciplinary audits. GPs wanted audits to focus on patients' knowledge or use of medicines, rather than clinical aspects of prescribing.

**Bradley et al**, University of Manchester, investigated the level of innovative service provision, such as enhanced services, in pharmacies in 10 primary care trusts (PCTs). Most innovations were commissioned by PCTs and were services that were new to the pharmacy or geographical area rather than being innovative. Examples of innovation generated by individual pharmacists were rare. Barriers to innovation were lack of funding, lack of

adoption by pharmacists, lack of integration between health professionals and PCT reconfiguration.

Support for innovative services is provided by **Al-Blawi et al** from Bradford University. They assessed a pharmacist-run primary care diabetes clinic in which the pharmacist provided counselling, dose adjustment and therapeutic changes. The study involved 28 patients. Compared with a control group, patients attending the clinic had better adherence, improved knowledge about treatment and higher treatment satisfaction scores. After 12 months, clinic patients had better diabetes control, blood pressure and cholesterol levels than at baseline, with no change in the control group.

On clinical governance, an audit by **Elvey** (University of Manchester) *et al* found that PCTs and community pharmacists are working collaboratively. Most pharmacists said PCT monitoring visits for clinical governance aspects of the new contract had been supportive. Some concerns remained about how poorly performing pharmacies would be sanctioned. Human resources requirements were a challenge for independent pharmacies.

Job satisfaction and stress levels among pharmacists were examined in two papers. **Inch** (Aberdeen University) *et al* found that the new contract had had a negative effect on community pharmacists. Over a third were less likely to stay in community pharmacy as a result of the new contract and only 10 per cent were more satisfied with their job since its introduction.

Pharmacists identified pressures as increased workload, paperwork and lack of time. Moderate levels of stress were identified among hospital and community pharmacists by **McCann et al**, Queen's University Belfast. However, mean stress scores were higher for community pharmacists. They surveyed 813 pharmacists in Northern Ireland. Pharmacists identified interruptions, excessive workload, inadequate staffing and keeping up to date as the most stressful parts of their job. Other identified stresses were limited information about the new community pharmacy contract, impact of Agenda for Change, poor support from professional bodies and the need for a designated lunch break.

But people still want to train as pharmacists. **Hatfield and Wilson**, at Aston University, surveyed "A"-level students who had applied to study pharmacy. Over half stated a desire to own their own business as one of the reasons why they had chosen pharmacy. Does this continue during the pharmacy degree? **Langley et al**, also from Aston, investigated. Although 51 per cent of first-year students said their highest career ambition was to own a community pharmacy, this fell to 39 per cent among final-year students.

### Tackling errors

Automation cuts dispensing incidents but does not eliminate all types of error, according to **James** (King's College London) *et al*. They compared dispensing errors before and after the installation of an automated dispensing

ing system. Errors were reduced by 67 per cent. Post-automation there were no errors based on the wrong strength or wrong drug being dispensed when the label was correct. However, there were more errors where both the label and the item dispensed were wrong.

**Cheung** (King's College London) *et al* developed computer programs to identify look-alike and sound-alike drug names. They were used to obtain a mean similarity score for approved names. This was compared with drug combinations involved in dispensing errors: 39 per cent had higher similarity scores than control. Drug pairs involved in errors with high scores were hydroxyzine and hydralazine, latanoprost and latanoprost plus timolol, amiloride and amlodipine, and prochlorperazine.

Two papers from Sunderland found poor drug allergy documentation in hospitals. **Husband** (University of Sunderland) *et al* reviewed 369 inpatients on six wards and found that no drug allergy status was recorded for 74 per cent of patients. Records for patients with a definite history of drug allergy were poor, and only 44 per cent of those with an allergy had been issued a red alert wrist band as per local policy. **Oloyede** (University of

Sunderland) *et al* examined the records of 100 patients on an elderly care admissions unit. For nearly 40 per cent of those with a known drug allergy, the allergy was not recorded.

### Sticking to guidelines

At East Cheshire NHS Trust, **Scanlan** *et al* found that 48 per cent of hospital admissions during a one-week study were due to drug-related problems. Side effects accounted for 40 per cent of these problems, sub-optimal therapy for 27 per cent, treatment failure for 16.5 per cent, overdose for 9 per cent, poor compliance for 5.5 per cent and drug interactions for 2 per cent. They estimate that preventing these admissions would save the NHS between £0.5m and £2m a year.

An audit by **Patel** (King's College London) *et al* found that 87 per cent of elderly inpatients with a history of falls received one or more drugs associated with falls. Vitamin D was underused, with only a third of patients who had fallen being prescribed it. Furthermore, only half of patients with previous fractures were prescribed bone protection drugs.

A number of papers examined the impact of the Quality and Outcomes Framework (QOF) on prescribing trends and adherence

to other guidelines. **Timoney** (Queen's University Belfast) *et al* report a significant increase in statin prescribing but no change in the number of hospital admissions for coronary heart disease. **Horsley and Masters**, Newcastle Regional Drug and Therapeutics Centre, suggest that increased use of analogue insulin may not improve glycaemic control. **Saremi** (Liverpool John Moores University) *et al* found that roughly half of patients prescribed antiobesity drugs stop treatment within the first three months and, of the remainder, a substantial proportion continue treatment despite failing to achieve the target 5 per cent weight loss. **Petty** (University of Leeds) *et al* report that beta-blockers are only prescribed for 34 per cent of heart failure patients but that a lack of knowledge among GPs was not a barrier to prescribing. **Arif** (King's College London) *et al* audited reasons why patients stop clozapine treatment. Of 186 patients, 89 stopped treatment, with 60 per cent due to non-adherence. Two patients developed fatal bowel obstruction and the authors say staff should be reminded of this risk.

**Aspinall** (Liverpool John Moores University) *et al* report that antibacterial prescribing in primary care is frequently outside

## Research into prescribing in secondary care recognised with practice research award medal

**M**ary Tully, clinical senior lecturer at the School of Pharmacy, University of Manchester, has been awarded the 2007 Chemist and Druggist Practice Research Award Medal. The award was presented at BPC 2007, where Dr Tully (pictured) gave a short lecture on her award-winning research.

The Chemist and Druggist Practice Research Award Medal is awarded annually to an individual who has made a significant contribution to the field of pharmacy practice research and has the potential to become a leader in the field. Dr Tully received the award for her work on the process and outcomes of prescribing in secondary care.

At her lecture, entitled "The prescribing process in secondary care" Dr Tully discussed areas of her research, which have included decision-making in prescribing, "uncomfortable" prescribing, appropriate prescribing, the epidemiology of prescribing errors, and documentation.

The aspect of Dr Tully's study that has addressed decision making in prescribing has involved the use of schemas. "Schemas are ordered patterns of mental representation that encapsulate what we know about a specific event," explained Dr Tully. Experts tend to have expert, abstract sets of schemas that they use and they use them quickly. Novices have quite basic schemas and are often much more likely to use hypothesis testing in their problem solving. This is a lot more cognitively demanding and therefore there is a greater risk of making a mistake, she said. Dr Tully's research has found that junior doctors tend to have schemas that emphasise the logical elements of prescribing, ie, dose, drug interactions etc. Consultants have much more sophisticated and complex schemas that include the logical elements but are based much more on the patient's perspective, ie, whether the patient would be willing to take the medicine. Also, within the schema theory, there is an "intermediate effect" that occurs when changing schemas, from being a novice to an expert. Dr Tully's research showed evidence of this intermediate effect or transition with senior house officers, who made a greater number of mistakes. "SHOs may be worse culprits than house offers at making errors," Dr Tully said. "It would suggest that there is further scope for more work here and also potentially more scope for looking differently at the way we provide support for doctors at different stages in their careers," she added.

Another aspect of Dr Tully's research has involved "uncomfortable prescribing". "Investigating what's called uncomfortable prescribing helps us to get a feeling for how important . . . non-pharmacological factors are for decision

making in prescribing," explained Dr Tully. Uncomfortable prescribing is where doctors feel anxious, uneasy and troubled about decisions that they are making. They tend to remember instances of this so it is easy to get doctors to talk about it. A number of factors are associated with this such as the application of evidence-based medicine. Dr Tully found that junior doctors feel uneasy without guidelines whereas consultants sometimes disagree with the applicability of guidelines for individual patients and it makes them uncomfortable if they have to apply guidelines without due consideration to patients.

Another aspect of Dr Tully's work has involved prescription errors. In one study, pharmacists in a large teaching hospital collected data about prescribing errors that they were identifying as part of their routine clinical work. What was found was that, adjusted for ward and specialty, 14.5 per cent of prescriptions at admission had an error. Furthermore, in a feasibility study, anonymised data were extracted from the electronic patient record in the same weeks as these pharmacists were collecting data. What was found was that "the paper records showed that the pharmacists only recorded about a fifth to a quarter of the interventions that they were involved with," Dr Tully said. These tended to be more serious or more important interventions. The changes that pharmacists were not recording tended to be the ones where they were clarifying information, Dr Tully said.

Dr Tully plans to continue her work in this area. She is particularly interested in carrying out research into non-medical pharmacist prescribing.



guidelines. They found that 15 per cent of antibiotics prescribed in one PCT were co-amoxiclav, clarithromycin and 4-quinolones, despite local guidelines stating they should be used first-line in few conditions. **Grandidier** (Queen's University Belfast) *et al* report a solution. They evaluated a scheme in which GPs referred patients with upper respiratory tract infections to community pharmacies for management with non-prescription medicines rather than antibiotics. This appeared to change the health-seeking behaviour of patients, and was positively received by GPs and pharmacists.

On the subject of bacteria, **Pinto** (Cardiff University) *et al* evaluated three brands of contact plates for environmental monitoring in aseptic preparation units. Significant differences were found in rates of recovery of bacteria from plates. These differences correlated with differences in wetness between brands. The researchers say brand variation should be considered during quality assurance data interpretations.

Back to poor prescribing, **Langley** (Aston University) *et al* report that a high proportion of patients with community-acquired pneumonia in two hospitals in the Midlands were not treated according to local guidelines. Sticking to guidelines would reduce length of intravenous antibiotic use, length of hospital stay and cost, they say. At Sunderland University, **Patel et al** found that the introduction of mandatory stop dates on hospital prescriptions for antibiotic prophylaxis following surgery was not a success. Before the introduction, 55 per cent of patients received more than recommended prophylactic dose but this rose to 75 per cent once stop dates became mandatory.

**Aldred et al**, University of Leeds, report that care home residents with diabetes do not have their disease monitored or managed according to guidelines. However, they comment that less frequent monitoring or less aggressive treatment may be acceptable for some residents due to poor prognosis or low quality of life. **Patterson et al**, at Queen's University Belfast, also looked at care homes. They analysed pharmacists' interventions in medication reviews for 140 residents. A total of 396 interventions were recommended (mean 2.8 per patient) and the prescriber was contacted in 82 per cent of cases. The main interventions were "review condition or status", "laboratory monitoring", "inappropriately long duration of therapy" and "high dose alert". The most frequent outcome by prescribers was "no change", closely followed by "drug discontinued". The researchers comment that prescribers' acceptance rate of interventions indicates that the prescriber-pharmacist relationship may need improving.

### Community issues

Half of pharmacists occasionally suspect abuse of over-the-counter (OTC) medicines with another fifth suspecting it regularly, according to a survey of 86 pharmacists by **Mackridge et al** at Liverpool John Moores University.

Three-quarters of pharmacists said they felt mostly or completely in control of OTC abuse. When they suspected abuse, nearly all pharmacists were confident in refusing sales but fewer pharmacists felt confident in tackling abuse directly with the customer.

Stock control systems in community pharmacy are robust, report **Mirza and Rosenbloom**, Kings College London. They analysed data from 16 community pharmacy audits in Bedfordshire and found that of 19,396 items dispensed in one week only 2.7 per cent had to be owed. Of these, 59 per cent were part-owed and 41 per cent were owed in full. Human error in the ordering process was the most common reason for owings, followed by requests for unusual items.

Providing a patient information leaflet (PIL) with every dispensed item is still a challenge, concludes **Smith et al**, University of Sunderland. They assessed 500 dispensed items and found 74 per cent of items were entire patient packs, 19 per cent were from split packs and 7 per cent were dispensed from bulk. PILs were missing from 10 per cent of items. Reasons for not supplying PILs were bulk stock only coming with one PIL, PILs being difficult to photocopy and internet download of PILs being inconvenient. But does this matter to patients?

**Raynor** (University of Leeds) *et al* report that patients have mixed views about PILs. They interviewed 456 patients and found that although 21 per cent thought PILs were informative, 14 per cent thought they were too long. Side effect information was the best element for 17 per cent of patients and the worst for 11 per cent. The researchers say, on balance, the positive comments tended to outweigh the negative, but suggest that professionals should do more to support the use of PILs perhaps by highlighting important information. **Gray** (University of Nottingham) and **Dilkes** (St James University Hospital, Leeds) also investigated PILs, examining adolescents' comprehension of the PIL for Nurofen. Their survey showed that most students were able to answer questions about information in the PIL but a few had problems with a question about side effects.

Community pharmacists are confident in advising patients on contraception but there are low rates of this activity, according to a survey by **McCaig et al** at Robert Gordon University. Confidence on advising on use of contraceptives was: condoms 77 per cent; other barrier methods 56 per cent; combined oral contraceptives 87 per cent and progesterone-only contraceptives 85 per cent. Only 11 per cent always advised on the importance of compliance, rising to 33 per cent for first prescriptions. Only 6 per cent always gave advice on missed pills and 9 per cent about diarrhoea and vomiting.

How women access emergency hormonal contraception (EHC) in Wales has changed since it became available over the counter, say **Fitzgerald** (National Public Health Service for Wales) *et al*. They report a significant decrease in GP prescribing of EHC since it as

reclassified for pharmacy sale. By 2005–06, almost a third of all EHC in Wales was sold from pharmacies.

Provision of public health services vary according to the type of community pharmacy, report **Bush et al**, Aston University. Supermarket pharmacies provided fewer services which customers might see as controversial (eg, supervised consumption). However, more supermarket pharmacies offered blood pressure testing than other pharmacies. Meanwhile, independent pharmacies offered most smoking cessation services. **Jesson** (Aston University) *et al* investigated teaching of public health in pharmacy schools and say that, although most teach public health skills, only two thirds dedicate part of the MPharm course to public health.

Alliance Pharmacy's free coronary heart disease (CHD) risk screening programme identified one third of patients as having moderate-to-high CHD risk, report **van den Berg** (Alliance Pharmacy) and **Donyai** (Kingston University). The programme involves an assessment form and measurement of body mass index, blood pressure and cholesterol. They evaluated records for 10,035 participants and found 57 per cent were at low CHD risk, 36 per cent at moderate-to-high risk, and 7 per cent had existing heart disease.

### Patients' perspectives

Patients are happy to use community pharmacists as a source of advice about minor ailments but only 3 per cent view them as part of the health care team, according to a survey by **Georgakis and Morgan** from Sunderland University. Although 55 per cent would consult a pharmacist for advice on minor ailments, only 11 per cent would ask about personal subjects such as contraception because of a lack of privacy. A third of patients thought pharmacists should authorise repeat prescriptions but only 4 per cent thought pharmacists should be involved in treatment review.

**Halsall et al**, from the University of Manchester, asked 21 patients and carers how they judge community pharmacies. Patients and carers assumed pharmacies would provide high standards of clinical and technical care so they differentiated the quality of care between pharmacies on accessibility to services, medicines and advice, and the approachability and friendliness of pharmacists and staff.

Patient perspectives were also sought on aspects of treatment. **Widmann** (University of Manchester) *et al* found that kidney transplant patients attached great importance to using immunosuppressive drugs despite their unpleasant side effects. **Mukattash** (Queen's University Belfast) *et al* report that 86 per cent of the public do not know about the use of unlicensed and off-label medicines in children. They also found a general reluctance to involve children in clinical trials. Yet **Bracken** (Liverpool John Moores University) *et al* report that 3 per cent of medicines for children aged under six years and 1 per cent of those for children aged six to 12 years were unlicensed or off-label.