

# Robot dispenser gives pharmacists time for medicines review under LPS

A ROBOTIC dispenser is giving community pharmacists time to provide a medication review service to patients in hospital under one of the first local pharmaceutical services pilot to go live in England.

Pharmacists Andrew and Steve Gray have installed an ARx Rowa Speedcase automated dispenser at Well Close Square pharmacy in Berwick-upon-Tweed. Under the LPS pilot, financed by Northumberland Care Trust, the robot is used to dispense prescriptions for two pharmacies — Well Close Square and Union Brae, Tweedmouth — owned by the two brothers. Each pharmacy is adjacent to a medical centre.

Andrew Gray told *The Journal* that the opportunity to relocate to a health centre site had prompted the decision to install an automated dispenser.

“The new site had limited space and we wanted to build in plenty of capacity. We offset some of the costs of the robot by not having to install lots of storage drawers and by not needing to take on and train additional staff.”

The enhanced safety aspect of automated dispensing, which Mr Gray says all but eliminates mistakes caused by look-alike packaging, was also considered important. The dispenser, which cost a six-figure sum, can hold 10,500 items in a seven-metre run of shelving.

Richard Copeland, pharmacist consultant in public health at Northumberland Care Trust, said that the pilot was a good example of the innovation that was possible under LPS. He pointed out that under the current pharmaceutical services contract it is not possible to dispense prescriptions at one location for another contracted pharmacy. Around 80 per cent of the dispensing under the LPS pilot is carried out by the robot. Mr Copeland added that in the future electronic transmission of prescriptions could be linked to the automated dispenser. The use of accredited checking technicians would also release pharmacists for clinical services.



*The robot dispenses for two pharmacies*

Jim Smith, chief pharmaceutical officer at the Department of Health, visited Berwick last week to launch the LPS pilot officially.

Northumberland Care Trust has another LPS service at Bellford where pharmacist Andrew Booth is providing medication reviews to patients from a dispensing doctors' practice.

## What the robot allows

Staff time released by using the automated dispenser allows the pharmacists to provide a medication review service, principally for patients from the two surgeries who have been admitted to Berwick Infirmary. The infirmary has around 100 beds and no onsite pharmacy. Many of its patients have been transferred from Wandsbeck District General Hospital at Ashington, about 50 miles south of Berwick. Patients spend an average of two weeks at the infirmary and all can expect to be visited by the pharmacists during that time. Medication reviews are also being provided at the surgeries. The LPS pilot also covers discharge planning and “one-stop” dispensing for these patients.

News Feature, p360

## PSNC and Minister differ on LPS

A SHARP difference between the views of the Pharmaceutical Services Negotiating Committee and the Government on the significance of local pharmaceutical services (LPS) schemes became apparent last week.

Speaking at the PSNC dinner, Parliamentary Under-Secretary of State for Health David Lammy said that LPS was an exemplar for how services might look in the future and that it would make pharmacy the pivotal point in the interface between primary and secondary care.

“I am enthusiastic about LPS as it could, and should, liberate the NHS and pharmacists to provide services where they are most

needed, Mr Lammy said, (*PJ*, 8 March, p323).

Conversely, PSNC chief executive Sue Sharpe believes that LPS is more likely to be a vehicle for specialised services than a real alternative for most contractors.

Alastair Buxton, the PSNC's head of NHS services, said on 12 March that discussions were taking place with the Department of Health over what should be included in a national contract and what should be left for negotiation between primary care trusts and local pharmaceutical committees or contractors. He declined to indicate how the discussions were going.

## Prescription charge up 10p again

THE charge for a National Health Service prescription in England and Scotland will rise by 10p to £6.30 on 1 April. With 85 per cent of NHS prescriptions exempt from payment, the increased charge is expected to raise £446m for the NHS in England 2003–04 and £46m for NHSScotland.

At the same time, the cost of prepayment certificates will rise from £32.40 to £32.90 for three months and from £89 to £90.40 for 12 months.

The Royal Pharmaceutical Society has repeated its call for a complete review of the prescription charge system. Ann Lewis, the Society's Secretary and Registrar, said that

the charging system was not in line with the Government's policy of equal access for all to health care services.

“Although the Society is pleased that the Government has once again held the increase below the current rate of inflation, there remain people on low incomes who are not exempt from prescription charges and for whom a prescription charge of £6.30 is not affordable. For some patients this means not having access to the medicines they need.”

The prescription charge in Wales is frozen at £6 until after the election of a new National Assembly in May.

### ROYAL PHARMACEUTICAL SOCIETY NEWS

#### Council consults on a new Charter

The Council has decided to consult the membership on what should be included in a new Royal Charter for the Society (p377). Following a Council decision that a new Charter is needed to complement proposed new legislation (p379), the Society is publishing a preliminary consultation paper (see centre pull-out), to be followed by a further paper next week. An article this week by the President (Marshall Davies) explains the importance of the Council's decision (p378).

# “Still a long way to go” for NHS plan, according to NHS Modernisation Board

DELIVERY of the National Health Service plan in England is on schedule, but there is still a long way to go, according to the NHS Modernisation Board.

In its second annual report on the NHS plan, the board says: “The resources going into the NHS are paying dividends for patients but there is still a long way to go. Capacity problems remain. The building blocks are there and the culture of the NHS is changing. With extra resources about to come on stream we feel confident that fast and effective progress can be made. The patient-centred NHS, once a distant ambition, is now drawing visibly closer.” The report covers the year to October 2002.

The report highlights two main areas where more progress needs to be made. The first is in increasing capacity in terms of staff, equipment and premises. In primary care, where demand is rising, it says: “With the right level of investment and additional capacity, for example, greater use could be made of the skills of pharmacists, optometrists and dentists to improve patient access to local NHS services.”

The second area of concern is mental health where the report says “progress has been slower than in other parts of the NHS”.

Beth Taylor, principal regional pharmacist at Southwark Primary Care Trust, is a member of the NHS Modernisation Board. In the report she says: “In the past year, we have seen huge rises in both the number of prescriptions and the money spent on NHS



*In the past year, there have been huge rises in the numbers of National Health Service prescriptions*

medicines. This reflects the excellent progress we have made in ensuring people get the medicines they need, especially within coronary heart disease, cancer and mental health. But this has also placed pressure on budgets and pharmacy services.”

An increase in the number of prescriptions for statins (from 12.2 million to 16.5 million a year) is said to be saving 6,000 lives. It forecasts 19 million prescriptions for 2002–03.

Ms Taylor says that nurses and pharmacists will be taking on prescribing responsibilities, especially in the management of chronic illnesses, and welcomes the renewed emphasis on medicines management. “We have also made a start at using information technology better, although there will remain barriers to its wider use until everyone involved in medication gets access to NHSnet,” she adds.

The board presented its report to Prime Minister Tony Blair on 10 March. Ms Taylor told *The Journal* that the meeting had lasted around half an hour. “It was helpful and it shows that the Prime Minister is committed to this,” she said. She added that the fact that increased medicines use features as a success in the report will give pharmacists an opportunity to work with primary care trusts. The highlighted shortage of general practitioners allows pharmacists to show the services they can offer.

The report also includes a case study on the changing role of pharmacy technicians. Technician Dawn Oliver, of St George’s Hospital, Morpeth, now spends much of her time working on discharge planning and patient counselling for acute psychiatric patients. The report says that changing her role has given her more job satisfaction and has helped the hospital recruit “much-needed” clinical pharmacists.

## Deregulation survey organised by Nuclea collects 5,000 responses

A CONSUMER survey carried out by Nuclea as part of its campaign against pharmacy deregulation has so far generated around 5,000 responses. A linked petition has been signed by over 50,000 customers at Nuclea’s 1,200 member pharmacies.

The survey is being run in collaboration with the Patients Association. It seeks information from customers as to why they use particular pharmacies, what products they purchase and comparisons between supermarkets and community pharmacies. A supplement to the questionnaire seeks information on the services provided by the pharmacies themselves. Collated responses to the survey will be submitted to the Department of Health before the mid-April deadline for the Government’s initial response to the Office of Fair Trading report on pharmacy deregulation.

Pharmacists are continuing to lobby Members of Parliament about the OFT report. A petition collected in Leicester was presented to Patricia Hewitt (Secretary of State for Trade and Industry and local MP) by pharmacist Terence Mattock.

Sutton, Merton and Wandsworth Local Pharmaceutical Committee met three MPs representing its area (Tom Cox, Lab, Tooting; Paul Burstow, Lib Dem, Sutton and Cheam; and Tom Brake, Lib Dem, Carshalton and Wallington), and Liberal Democrat small business spokesman Brian Cotter, at the House of Commons this week. A petition carrying 25,000 signatures was presented and the MPs reported receiving numerous letters and postcards on the subject from constituents.

Other campaigns continue to attract extensive coverage in local newspapers.

## MPs speak out on deregulation

INCREASING pressure is being brought on the Government by Members of Parliament to reject the Office of Fair Trading’s call to deregulate National Health Service pharmacy contracts.

Following a Westminster Hall adjournment debate on the future of pharmacy on 12 March, the Royal Pharmaceutical Society’s director of public affairs, Beverley Parkin, said: “There weren’t two views. There was only one view, which was that the OFT was wrong. Nobody could see any merit in implementing the OFT report.”

The debate concluded with an appeal for a further debate because of the number of MPs who wanted to speak but were not called to do so because of time constraints.

Details of the debate can be found via the *PfJ Online* topics page ([www.pfjonline.com/links](http://www.pfjonline.com/links)).

# GPs too busy to advise on smoking

SMOKERS believe that general practitioners do not have time to discuss their habit with them, new research shows. And they complain about GPs responding in an unhelpful manner, offering little or no explanation of products and services on offer to help them stop.

The research, a series of focus groups carried out by the charity No Smoking Day, also suggests GPs are reluctant to give opportunistic advice on giving up smoking. Work overload and time pressures are among the reasons why doctors do not give such advice to smokers. GPs also consider such activity unrewarding, annoying for patients and ineffective. Instead, they tend to focus interventions on "relevant" patients, such as those with chest infections, asthma, heart and vascular disease.

Given work and time pressures, GPs also say they are uneasy about publicity campaigns encouraging more smokers to seek their help.

Doctors who took part in the research also said that they were less likely to raise smoking with socially disadvantaged patients, who were generally seen as more dependent on cigarettes, less able to stop, and most likely to be annoyed by GPs querying their behaviour.

The GPs thought they were generally positive about patient-initiated consultations concerning smoking. But most smokers said it would not occur to them to make a GP appointment to discuss their habit, especially as GPs were already "too busy".

A No Smoking Day report, which details the research findings, says that GP understanding of specialist cessation services is patchy with many doctors wanting

to know more, particularly about local schemes. Smoker awareness of such services is high, but inaccessibility, rumours of long waiting lists and scepticism about effectiveness often deter them from seeking help. Many smokers were "surprised and impressed" to learn of a 40–50 per cent short-term success rate.

In the wake of the report, the Royal Pharmaceutical Society and the charity PharmacyHealthLink are calling for better use of pharmacy services to provide smoking cessation.

Miriam Armstrong, chief executive, PharmacyHealthLink, said: "Pharmacists are perfectly placed to help GPs in their fight against smoking. They are trusted health professionals with an in-depth knowledge of how to help people quit. They can also supply the most effective stop-smoking treatments on the NHS — nicotine replacement therapies and bupropion [Zyban] — directly to patients if a local patient group direction is in place.

"However, at present there are too few PGDs for smoking cessation, which is why GPs may be feeling swamped by demand. Setting up a PGD will help deflect smokers away from GP surgeries and towards other health professionals who can offer the excellent advice and also supply NRT and Zyban on the NHS."

Marshall Davies, President of the Royal Pharmaceutical Society, said: "Pharmacists have an important role to play in supporting those people who want to stop smoking. Giving up smoking requires planning, encouragement, support and motivation. Pharmacists together with NRT are a very effective combination."

## Smoking cessation PGD template published by PharmacyHealthLink

PHARMACYHEALTHLINK has published a template for the development of patient group directions for the supply of products to help people give up smoking.

The template, launched at a meeting of the All-Party Pharmacy Group on 5 March, explains how to set up a PGD, and includes information on supplying nicotine replacement therapy (NRT) outside its licensed indications, such as to pregnant women and patients with heart disease or diabetes.

Discussing the relative risks of smoking and using smoking cessation products to help stop smoking, the group heard that it was odd that women in the early stages of pregnancy who wanted to stop smoking were encouraged to do so without the support of either NRT or bupropion and only to use NRT later if they were unsuccessful. Dr Hayden McRobbie, research fellow in the tobacco dependence research and treatment psychology section of St Barts and the London school of medicine, said that most of the negative effects of smoking on the unborn child

were in the third trimester. Professor Robert West, professor of psychology at St George's Hospital medical school, said that although nicotine was a known teratogen NRT could be used by pregnant women after a doctor's advice, while bupropion, which was contraindicated in pregnancy, was not teratogenic. Even so, he took the view that NRT was safer in pregnancy than smoking because the nicotine was delivered more slowly than by smoking and was not accompanied by the many other detrimental ingredients of smoke.

Pharmacists told the group how difficult they found it to convince primary care trusts to introduce PGDs so that smoking cessation products could be supplied.

The group's chairman, Dr Howard Stoaite, said he hoped that PharmacyHealthLink's template would help overcome such problems.

The template can be downloaded via the *Pf Online* links page ([www.pjonline.com/links](http://www.pjonline.com/links)).

### BRIEFLY

#### Advice on travel after surgery

People who have major orthopaedic surgery should not travel for more than three hours up to 90 days after surgery, according to the All-Party Parliamentary Group on travel-related deep vein thrombosis.

#### Cost analysis for MS drugs

A cost effectiveness analysis performed for the National Institute for Clinical Excellence, for its appraisal of therapies for multiple sclerosis has been published (*BMJ* 2003;326:522). The researchers show that the cost per quality adjusted life year of interferon betas and glatiramer is unlikely to be less than £40,000.

#### Competency in prescribing

A competency framework is being widely distributed this week by the National Prescribing Centre entitled "Maintaining competency in prescribing: an outline framework to help pharmacist supplementary prescribers".

## Guideline proposed for children's medicines

PROPOSALS for guidelines on the development and monitoring of medicines intended for use by children have been put forward by the European Agency for the Evaluation of Medicinal Products.

It has suggested that a paediatric pharmacovigilance guideline be written by the Committee on Proprietary Medicinal Products' pharmacovigilance working party. It will be designed to underpin other strategies currently being considered by EU regulators.

Issues that the paper says should be covered include data collection and manage-

ment, the detection of potential safety problems (especially for orphan drugs), and laboratory investigations.

Special attention should be paid to children's vaccines, the paper adds, notably concerning the relationship between risk and benefit in healthy children, especially when the incidence of infectious disease in the target population is low.

The aim of the guideline will be to address possible differences in the efficacy and safety of medicines in children and adults. Few data are available relevant to children when medicines are authorised.

## PGDs to be allowed for some CDs

PATIENT group directions for some Controlled Drugs are to be legalised. Currently, CD law prohibits the supply of CDs under PGDs.

The Home Office is consulting on slimmed down proposals originating from the Department of Health and Medicines Control Agency to allow nurses working in coronary care units and accident and emergency departments to use diamorphine to treat cardiac pain. It also proposes to allow PGDs for non-injectable drugs in Schedule 4 Part 1 of the Misuse of Drugs Regulations 2001 (mostly benzodiazepines) and all drugs listed in Schedule 5 (low dose opiates).

The Health Department original proposal was that all Schedule 4 drugs should

be eligible for supply under PGDs. But the Home Office took the view that injectable Schedule 4 drugs used in the treatment of drug dependence should be excluded because there is a Home Office policy to tighten, not loosen, the prescribing of CDs to treat dependence.

The Advisory Council on the Misuse of Drugs objected to the supply of anabolic steroids under PGDs because it thought that there was no identifiable need.

Comments can be sent to Naim Siddiqui, Communities and Law Enforcement Drugs Unit, Home Office (Room 243), 50 Queen Anne's Gate, London SW1H 9AT (e-mail [Naim.Siddiqui@homeoffice.gsi.gov.uk](mailto:Naim.Siddiqui@homeoffice.gsi.gov.uk)) until 7 April.

## Europe-wide patent moves closer

A CENTRALISED patent system for the European Union has moved a step closer following agreement in the Council of Ministers on a common approach.

Ministers have now agreed that European patents will be enforceable through the European Court of Justice, and not through separate national courts. In addition, patents will be filed only in English, French or German, with only the detailed claims that define the monopoly being in all EU

languages. The new system will cut significantly the cost of obtaining patent protection throughout the EU. Currently, patent protection in just eight EU countries costs £50,000, which is around five times the cost of a single country patent for the United States or Japan. The new system will cut the cost to £25,000 for the enlarged union of 25 member states.

Proposals for a European patent were first tabled 30 years ago.

## Clinical trials rules consultation

VIEWS are being sought by the Medicines Control Agency on proposals to implement a European Directive on good clinical practice in clinical trials. The Directive has to be implemented by 1 May 2004.

European Union Directive 2001/20/EC includes many practices and criteria which are already found in current clinical trials practice in the United Kingdom. However, it includes significant new controls which will affect all British clinical trials. For

example, no clinical trial will be allowed to start unless authorised by both the MCA and an appropriate ethics committee. Currently, most clinical trials in Britain are conducted under exemption schemes that mean that clinical trials certificates are not needed.

MLX287, its associated papers and the European Directive can be downloaded via the *Pfj Online* links page ([www.pjonline.com/links](http://www.pjonline.com/links)).

# Patients who stop antihypertensives may be suffering from depression

PATIENTS who stop taking antihypertensive medication may be suffering from anxiety or depression that leads them to misinterpret symptoms as adverse drug effects, researchers suggest.

In a study involving 233 patients, researchers from the Royal Hallamshire Hospital, Sheffield, and the University of Bristol found that episodes of drug intolerance were related to psychiatric morbidity. Furthermore, this relationship was entirely explained by episodes of intolerance that could not be attributed to the pharmacological action of the drug.

“When faced with a hypertensive patient who has experienced intolerance to several different drugs, particularly with adverse effects that are not typical for the drugs prescribed, possible psychiatric factors should be considered and explored,” they say.

The researchers analysed the case notes of all patients who attended a hypertension clinic in Sheffield over one year. They identified patients with documented intolerance to two or more antihypertensive drugs and sent them a questionnaire to determine how many had experienced panic attacks, panic disorder, anxiety or depression. Questionnaires were also sent to a control sample of patients with no documented episodes of drug intolerance.

The researchers found that episodes of non-specific intolerance (ie, intolerance due to symptoms not explained by the pharmacological action of the antihypertensive drug) were associated with panic attacks and depression ( $P=0.008$  for each). Psychiatric diagnoses were recorded for seven (39 per cent) of 18 patients with four or more episodes of non-specific intolerance, nine (19 per cent) of 48 patients with two or three episodes and 25 (15 per cent) of 167 patients with one episode or no episodes.

The researchers say that because drug-

specific intolerance was not associated with psychiatric morbidity, psychiatric problems were more likely to be the cause rather than the consequence of repeated episodes of drug intolerance. They suggest that patients with psychiatric problems might ascribe unfamiliar symptoms to their medication or may misinterpret symptoms of their psychiatric illness as adverse drug effects. Another possible explanation could be that biochemical changes associated with psychiatric disorders increase the chance that antihypertensive drugs provoke adverse effects.

“Effective treatment of coexistent psychiatric disorders could increase the acceptability of antihypertensive drugs, and thus enhance blood pressure control and reduce the risk for cardiovascular complications,” the authors conclude (*Archives of Internal Medicine* 2003;163: 592).

Study author Dr Peter Jackson, of the Royal Hallamshire Hospital, told *The Journal* that prescribers and pharmacists seemed to recognise the problem of non-specific drug intolerance among patients with chronic conditions but that it had not been formally studied.

“We did not investigate solutions to the problem although many such patients will have psychological problems worthy of treatment in their own right. We are currently investigating methods of increasing concordance in such patients,” he said.

## BRIEFLY

### GSK launches dutasteride

GlaxoSmithKline has launched dutasteride (Avodart), a 5 $\alpha$ -reductase inhibitor, for the treatment of moderate to severe symptoms of benign prostatic hyperplasia (BPH). The product is also indicated for treatment of BPH to reduce the risk of acute urinary retention and to reduce the risk for BPH-related surgery. Dutasteride inhibits both type 1 and type 2 isoenzymes of 5 $\alpha$ -reductase, the enzyme responsible for converting testosterone to dihydrotestosterone in the prostate (see p363).

## NCC pharmacists to start counselling for depression in Wales

PHARMACISTS at 23 branches of National Co-operative Chemists in south Wales could soon be involved in counselling patients with depression.

NCC is seeking ethical approval for a trial in which its pharmacists will talk to patients with depression, reminding them to collect their prescriptions and discussing queries or concerns about their treatment. The programme, called Pharmacist to Patient (P<sup>2</sup>P), is being run in collaboration with GlaxoSmithKline's +Plus medicines support service. The two companies are currently working with pharmacists on developing a counselling handbook and patient discussion aids.

## ECT may be better than drugs for short-term treatment of depression

ELECTROCONVULSIVE therapy (ECT) is probably more effective than drug therapy as a short-term treatment for depression, a meta-analysis has shown.

However, there is less evidence that the benefits are maintained in the long term, say the United Kingdom ECT Review Group, which carried out the study. Non-randomised studies suggest that relapse rates are high after acute response to ECT, it says.

The group adds that continuation drug therapy could be an effective preventive strategy, but that this area was beyond the scope of its review. It adds that differences between ECT and drug therapy may be compounded by anaesthetics and nursing

care involved in the ECT procedure. Subgroups thought to benefit in particular from ECT include the elderly, those with treatment-resistant depression and those with post-partum disorders. But because of “little randomised evidence” for these subgroups, the reviewers call for further trials.

The review highlights impairments in cognitive functioning as a result of ECT. These involved mostly changes in memory. Higher “doses” of ECT, though more effective, were more likely to cause impairment.

The report adds that ECT carried out to a high standard can maximise efficacy and minimise side effects. But it points out that, in general, standards of ECT across the UK are poor (*Lancet* 2003;361:799).

# Parkinson's disease, hormone therapy and caffeine intake — is there a link?

A PROTECTIVE effect of caffeine against the onset of Parkinson's disease may be reversed in women who use hormone replacement therapy (HRT).

So found United States scientists investigating why caffeine appears to protect men but not women against Parkinson's disease. Proposing that hormonal effects could be to blame, they examined the risk of the disease according to both use of HRT and caffeine intake. They used the records of over 77,000 women who had been followed up for 18 years as part of the US Nurses Health Study.

Overall, the risk of Parkinson's disease was similar in women who had used hormones postmenopausally and those who had never done so. However, use of HRT reduced the risk of the disease in women

with low caffeine consumption (relative risk 0.39, 95 per cent confidence interval 0.13–1.17). High caffeine consumption and HRT use increased the risk of Parkinson's disease (2.44, 0.75–7.86,  $P=0.01$  for interaction). Women using HRT who drank six or more cups of coffee per day were four times more likely to develop the condition.

The authors say that inconsistencies in studies looking at HRT and Parkinson's disease could be due to a caffeine-oestrogen interaction. They conclude that clinical trials of caffeine or oestrogens in women should avoid the combined use of these agents.

They note that conversion of caffeine to its primary metabolite is markedly inhibited by oestrogen in oral contraceptives or HRT products (*Neurology* 2003;60:790).

## Aspirin prevents colon adenomas

TWO recent studies, published in *The New England Journal of Medicine* show that aspirin prevents colorectal adenoma, the precursor to most colorectal cancers (2003;348:883 and 891).

In the first, Dr Robert Sandler, of the University of North Carolina, Chapel Hill, and colleagues treated 635 patients with prior colorectal cancer with aspirin 325mg daily or placebo for a median 12.8 months.

One or more adenomas were detected by colonoscopy in 17 per cent of patients in the aspirin group and 27 per cent of patients in the placebo group, giving an adjusted relative risk of 0.65 for recurrent adenoma in the aspirin group.

The mean number of adenomas was lower in the patients treated with aspirin. Also, the median time to detection of a first adenoma was 15.5 months in the aspirin group compared with 11.3 months in the placebo group. In contrast, aspirin had no effect on the size of the largest adenoma or the number of patients with advanced tumours. This led the researchers to conclude: "Daily use of aspirin is associated with a significant reduction in the incidence of colorectal adenomas in patients with previous colorectal cancer."

Similar findings were forthcoming from the other study led by Dr John Baron, of the Dartmouth-Hitchcock Medical Center, Lebanon, New Hampshire. They treated 1,121 patients with a recent history of colorectal adenoma with aspirin 81mg or 325mg daily for at least a year. Colonoscopy revealed that incidence of adenoma and relative risk were lower in the group receiving 81mg aspirin than in the higher dose and placebo groups.

Dr Sandler and his colleagues suggest that the apparently better result with low-dose aspirin may be due to the fact that they used higher risk patients who would require

a greater dose of aspirin than those in Dr Baron's study. The difference could also be merely down to chance.

In an accompanying article, Dr Thomas Imperiale, Indiana University school of medicine, states that a protective effect of aspirin is biologically plausible because it inhibits cyclo-oxygenase-2, an enzyme found in colorectal cancer tissue, and epidemiological studies have consistently shown a 40–50 per cent reduction in colorectal cancer risk (ibid, p879). He points out that aspirin appears to have greater efficacy than previously reported dietary or nutritional interventions for preventing colorectal adenoma. In contrast, Dr Imperiale draws attention to the fact that there was no reduction in cancer incidence in the only randomised trial of aspirin conducted to date.

The conclusions of Dr Sandler and colleagues are cautious: "Adenomas developed in some patients in the aspirin group. For that reason, aspirin cannot be viewed as a replacement for surveillance colonoscopy. Before aspirin use can be recommended for patients with colorectal cancer, the risks and benefits will need to be compared with those of alternative chemopreventive agents."

### BRIEFLY

#### HIV drug-resistance tackled

A not-for-profit organisation has been set up to help combat HIV drug-resistance. The organisation, RDI (response database initiative), is collecting data from HIV patients for use by clinicians so they will be able to choose the most effective drugs for their patients. Information about the organisation can be found on its website ([www.hivrdi.org/](http://www.hivrdi.org/)).

## Prevention of heart failure with ramipril

THE angiotensin-converting enzyme (ACE) inhibitor ramipril (Tritace) may prevent heart failure developing in patients at high risk of cardiovascular events. So suggest new data from the HOPE (heart outcomes prevention evaluation) study, first published in 2000.

ACE inhibitors are already known to reduce mortality and morbidity in patients with low ejection fraction or heart failure or both. But, unlike previous trials on the prevention of heart failure, patients in this analysis did not have uncontrolled hypertension or a low ejection fraction — a precursor to heart failure.

In the HOPE trial just under 9,000 high-risk cardiovascular patients, without pre-existing heart failure, received either ramipril (10 mg per day) or placebo for four and a half years. Previously reported results showed a 22 per cent reduction in the primary end point of cardiovascular death, heart attack, or stroke.

In the new analysis, researchers found that heart failure (heart failure death, admission to hospital, treatment or symptoms) occurred in 951 patients and was associated with a fourfold increase in the risk of death. Ramipril reduced new-onset heart failure from 11.5 per cent to 9 per cent, a risk reduction of 23 per cent.

The researchers say that the results extend the benefits of ACE inhibition to an even broader range of patients at high risk of cardiovascular events but without a history of heart failure or low ejection fraction.

They add that this is the first study to show that an ACE inhibitor can prevent heart failure in these patients. "The prevention of heart failure in this population will reduce the high burden of mortality, morbidity, hospitalisation and associated costs," they add (*Circulation* 2003;107:1282).

# Royal launch for Royal Free robots

A ROBOTIC dispenser at the Royal Free Hospital, London, was officially launched by the Duke of York this week. The dispenser is part of a scheme to install £1m-worth of automated equipment at hospitals in Camden and Islington.

The duke and other guests visited the Royal Free on 11 March to open its new outpatient pharmacy, part of events marking the 175th anniversary of the hospital, which originally opened as a dispensary. The centrepiece of the outpatient unit is an ARx Rowa Speedcase automated dispensing robot capable of storing 10,000 items.

John Farrell, head of pharmacy at the Royal Free, explained to *The Journal* that four automated dispensers are to be installed at hospitals in Camden and Islington. Mr Farrell is also head of pharmacy at University College London and the Whittington hospitals and for community services provided by primary care trusts in the area, the equivalent of the former district pharmaceutical officer role. The Royal Free will have a second robot in its main inpatient dispensary, with a capacity of 18,000 items, and similar machines will be put into UCLH and the Whittington by May.

"We are going heavily into automation. It gives us an opportunity to reprofile our pharmacy services and move forward in

clinical areas," he said.

As well as freeing staff time, automated dispensers also have the advantage of requiring only a quarter of the space needed for conventional dispensary shelves to hold equivalent stock levels. At the Royal Free, this has allowed the outpatient pharmacy to be installed in a former Lloyds Bank outlet that would have been too small to use otherwise.

Around 70 per cent of dispensary stock can be held inside the robot. Each item is barcode scanned on insertion and can be retrieved and delivered to the dispensing benches in as little as nine seconds. Mr Farrell said: "Workflow analyses have shown that staff can spend up to 60 per cent of their time simply retrieving products from shelves. Automation allows staff to concentrate more on the dispensing process and



Ann Lewis, right, Secretary and Registrar of the Royal Pharmaceutical Society and a former hospital chief pharmacist, was among the guests at the opening of the automated dispensary at the Royal Free Hospital

makes the dispensary a calmer, safer and hassle-free area."

Most acute patients in the hospitals are now prescribed their medicines in patient packs. These are held in bedside lockers and can be administered by the patients themselves or by nursing staff. Pharmacy technicians maintain these stocks, which are used to speed up discharge times. This increased use of patient packs fits in well with automated dispensing, Mr Farrell said.

Further developments for the automated dispensers might include a refrigerated unit, the inclusion of Controlled Drugs, and a labelling option. Integration of hospital-wide electronic prescribing with automated dispensing, following pharmacist screening of prescriptions, may also follow.

## US drug-resistant bacteria on the rise

DRUG-RESISTANT strains of *Streptococcus pneumoniae* are on the rise in the United States, a new study shows.

Researchers analysed trends in the proportions of bacteria at eight locations across the US, looking in particular at strains that were resistant to penicillin and erythromycin. They noticed that while strains resistant to only one of the drugs seem to have levelled off in past years, strains resistant to both drugs are increasing. By July 2004, the researchers predict that 41 per cent of the bacterial strains at these locations will be resistant to both antibiotics.

The study is due to be published in the April issue of *Nature Medicine* but can be viewed as an advance online publication ([www.nature.com/naturemedicine](http://www.nature.com/naturemedicine)).

## Drug-related problems may bring thousands to A&E departments

DRUG-RELATED problems may bring 3,000 patients each year to a hospital's accident and emergency (A&E) department, a new study indicates.

Researchers from Guy's and St Thomas' Hospital NHS Trust, London, have carried out what they say is the first UK study to review medication-related attendance at A&E.

They reviewed attendance over two weeks at their hospital's A&E department. Out of 2,636 patients, 106 (4 per cent) attended with a drug-related problem.

The most commonly presented problems were adverse drug reactions or side effects and overdoses (see Table below).

The agents most commonly associated with adverse reactions were analgesics, psychiatric drugs, drugs with narrow therapeutic indices, antibiotics, antihypertensives

and illegal drugs. Around a third of the patients with side effects had taken illegal drugs.

Overdoses accounted for 27 per cent of medication-related problems. Half of these were intentional with the most frequently used drug being paracetamol. Of the 14 patients who presented because they had run out of medicines, six required an inhaler for asthma. Of the 20 patients with an "untreated indication", 11 had required emergency hormonal contraception. The four non-compliant patients were all taking medicines for psychiatric illness.

Patients with drug-related problems were more likely to present in the early hours of the morning and on Saturdays. The demographics of the patient group showed a younger age than reported in previous American studies, which the researchers attributed to increased use of illicit drugs (*Journal of Clinical Pharmacy and Therapeutics* 2003;28:41).

The study's lead author, Ruth Bednall, senior pharmacist in general medicine at the trust, told *The Journal* that advice from pharmacists could prevent the attendance of some patients at A&E. "With a decrease in A&E waiting times a priority for the health service, anything to reduce numbers has to be good," she said.

TABLE: PERCENTAGE OF PATIENTS WITH DRUG-RELATED PROBLEMS

Problem	Percentage
ADR/side effect	33
Inappropriate drug prescribed	2
Non-compliance	3.8
Overdose	27
Run out of medicines	13.2
Subtherapeutic dose prescribed	2
Untreated indication	19

## European wholesalers see strong retail growth

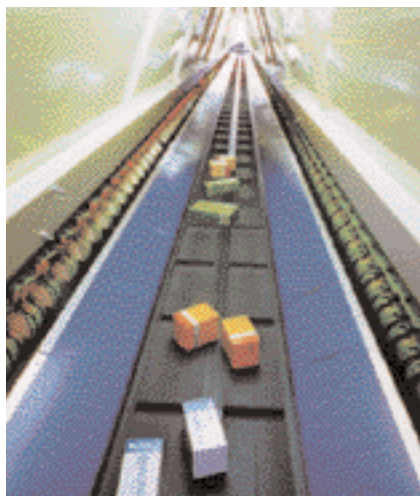
BOTH Alliance UniChem and GEHE have reported large increases in operating profits for their retail pharmacy divisions in Europe. In both cases growth has come from the increasing size of their pharmacy chains outside the United Kingdom.

Alliance UniChem reports that, in 2002, for the first time the majority of its pharmacy acquisitions had been in mainland Europe rather than the UK.

Jeff Harris, executive chairman of Alliance UniChem, told *The Journal* that as a result of uncertainty hanging over the UK community market while the outcome of the Office of Fair Trading report was awaited, acquisitions for its Moss Pharmacy chain had been restricted in the main to health centre pharmacies. "We shall be back in the market at some stage," he added. The company now has 1,021 pharmacies, of which around 780 are in the UK.

Alliance UniChem reported a 35 per cent increase in retail sales in Europe, with operating profits of £65m in 2002. Turnover at Moss was £715m. Turnover at UK wholesaling division UniChem was £1.92bn and was affected by GlaxoSmithKline's decision to transfer the former SmithKline Beecham products into its agency scheme.

Similar trends were reported by GEHE. Retail director Michael Ward said that the company had achieved a critical mass of pharmacies in a number of European countries and these are now making a contribu-



*Wholesalers are reporting increased profits as their pharmacy chains reach critical mass*

tion to company profits after allowing for the costs of acquisitions. The company now has 1,847 pharmacies, the majority of which are in the UK. Sales at the company's UK retail chain Lloydspharmacy rose by 10.3 per cent to £1.83bn (£1.14bn) and sales at its UK wholesaling arm AAH Pharmaceuticals were up 3.3 per cent at £3.2bn.

GEHE AG is to change the name of its main holding company to Celesio AG. Individual country names, such as Lloyds and AAH, will continue to be used locally.

## Boots keeps its spot as biggest health retailer in Europe

BOOTS The Chemists remains the biggest health and beauty retailer in Europe despite its failure to expand outside the United Kingdom and Ireland, according to market research company Mintel.

In the UK, Boots takes over 33 per cent of specialist health and beauty sales, which Mintel says reflects the wide distribution of its 1,300 branches. Almost half of all adult consumers go to Boots for basic toiletries, over one-third for cosmetics and 40 per cent to buy non-prescription medicines.

In its latest report on European health and beauty retailing, Mintel forecasts that the UK's four largest supermarket chains (Tesco, Sainsbury, Asda and Safeway) will "accelerate pharmacy installation, constrained only by the availability of pharmacists" if pharmacy deregulation occurs. It notes that while there has been some high-profile price cutting on non-prescription medicines, "this has mainly been to establish credentials as 'shopper champions' rather than initiating wide-ranging price cuts in the area".

The report says that a convenient location is the major factor in terms of where people buy health care products. This ranks higher than the ability to get advice from a pharmacist, the range of products available and well above their price.

*Health and beauty retailing in Europe, Mintel, 18-19 Long Lane, London EC1A 9PL, price £1,495 (tel 020 7606 4533).*

## No synergy for vinorelbine and gemcitabine in NSCLC

COMBINATION chemotherapy with vinorelbine (Navelbine) and gemcitabine (Gemzar) appears to confer no advantage over either drug alone for elderly patients with advanced non-small-cell lung cancer (NSCLC), results of a new study indicate (*Journal of the National Cancer Institute* 2003;95:362).

The authors say that a combination of vinorelbine plus gemcitabine is sometimes used in elderly patients or in patients for whom cisplatin-based regimens are not suitable because of toxicity concerns. "Consequently, the finding that vinorelbine plus gemcitabine is no better than either single

agent will be of interest to those involved in clinical practice and will result in savings in terms of costs and toxicity," they add.

The phase III randomised study involved 698 patients aged 70 years or older who were randomised to vinorelbine, gemcitabine, or a combination of the two drugs (see Panel).

The researchers report that compared with vinorelbine and gemcitabine alone, the combination therapy did not improve overall or progression-free survival. They add that combination therapy was also more toxic than either of the single agents (although, vinorelbine alone resulted in the highest rates of grade 3-4 neutropenia).

The researchers suggest that vinorelbine and gemcitabine, although acting through different mechanisms, may have exerted non-synergistic or even antagonistic effects. They add that compliance was only slightly lower for patients treated with the combination therapy and could not account for the observed lack of improvement.

In an accompanying editorial, Dr Paul Bunn, University of Colorado cancer centre, Denver, and Dr Rogerio Lilenbaum, Mount Sinai cancer centre, Miami, point out that the results contrast with those of a previous

study that found a survival advantage for patients receiving the two drugs in combination. They add that other studies have shown survival benefits for patients receiving a combination of paclitaxel (Taxol) plus carboplatin compared with either agent alone.

"Taken together, these results indicate that elderly patients with advanced NSCLC can benefit from both single-agent therapy and from some combinations and that both single agents and some combinations can be delivered safely," they say. However, they add that whether some combinations (eg, paclitaxel plus carboplatin) are preferred over single agents cannot be determined from the studies to date. "It is hoped that less toxic targeted therapies given sequentially or in combination will provide further advances in the future," they conclude.

Guidance on the use of gemcitabine, vinorelbine and paclitaxel (as well as docetaxel [Taxotere]) in NSCLC was published by the National Institute for Clinical Excellence in June 2001 (*PJ*, 16 June, 2001, p803) and by the Health Technology Board for Scotland in September 2001 (*PJ*, 22 September 2001, p373). Neither considered gemcitabine plus vinorelbine combination therapy.

### Treatment regimens

- Intravenous vinorelbine (30mg/m<sup>2</sup> of body surface area)
- Intravenous gemcitabine (1,200mg/m<sup>2</sup>)
- Intravenous vinorelbine (25mg/m<sup>2</sup>) plus gemcitabine (1,000mg/m<sup>2</sup>).

All treatments were given on days one and eight every three weeks for a maximum of six cycles.