A wake up call for primary care

THE April 2002 Budget announcement of new money for the National Health Service is welcome. But, in the context of the NHS Plan, will it translate into new and improved services for patients and better working conditions for all staff? The settlement of 7.4% per year has to cover the competing claims of revenue and capital requirements. Many trusts estimate that they require at least 6.5% growth each year, just to stand still.

However, primary care trusts are already discovering that their revenue budgets will also have to withstand the competing claims of existing deficits, estimated to stand at in excess of £1.5 billion, and the enormous backlog in NHS maintenance and repair, estimated at £3.2 billion. More important are the annual consequences of servicing private finance initiative (PFI) and public–private partnership (PPP) debts, which are building up across hospitals and primary care. With more than 42 PFI hospitals in the pipeline and extensive investment promised in primary care, the revenue implications of using private sector finance have received little attention. It has to be borne in mind that PFI and PPP policies don't come cheap. PFI and PPP is not new money or a new source of investment; but, rather, a debt that has to be serviced by the NHS out of its revenue budget.[1-4]

Chief executives of PFI hospital trusts have discovered that the policy that has contributed to more than 13 000 NHS bed closures since 1997 is an expensive one. The increased costs of servicing the debts using private finance have created major affordability problems at local level and major reductions in services and staff budgets. GPs report that services are being bled dry as new money is absorbed into PFI debts, and in making good the funding gap that has been created by private finance.[5-8]

The debt from PPPs is set to grow. The government has not only failed to abolish the internal market, it has signalled a move to wider markets with the greater use of private companies and commercial contracts in the delivery of NHS health care. A myriad of companies, ranging from supermarkets — such as Budgens and Sainsbury's, and private health insurers Norwich Union and BUPA — to venture capital, are already tendering to re-provide a range of services, including former NHS hospitals, diagnostic and treatment centres, and primary care facilities. With the spectre of franchising becoming a reality, GP-owned premises will rapidly become a thing of the past. The General Practice Finance Corporation, the former public loans body for GP premises, which was privatised and sold to Norwich Union in 1989, reports that more than 60% of its lending is to commercial developers.[9-11]

For the past 50 years, GPs have had to bear many of the risks of primary care premises development. But there are no such risks for the commercial sector. The government is underwriting 30-year revenue streams and guaranteeing generous rates of return — but only to commercial developers. The private sector bonanza includes windfalls from the lucrative refinancing deals when the debt is sold on, with the National Audit Office reporting rates of return on investment soaring from 14% to 36% in one scheme it examined, thereby calling into question the value for money and risk transfer of these schemes.[12,13]

Then there are new possibilities for private ownership and control in the franchising of NHS services. The new GP contract signals an end, both to GP ownership of practice premises and independent practitioner status. More significantly, it marks the break up of GP services, to enable their commodification and sale under the direction of primary care trusts.

Primary care trusts are the beginning of the final transition from the NHS to the universally despised and detested US-style Health Maintenance Organisations (HMOs). Primary care trusts have been established, not on the basis of geographic communities, but membership through practice lists. This is the formula by which US HMOs and insurance-based systems operate. Crucially, the needs-based resource allocation system of the previous 50 years is being overturned, with a move from geographic populations to membership based on practice lists. It is no coincidence that the government has still not been able to develop an equitable global resource allocation formula for PCTs.

All membership schemes have an inbuilt incentive to cherry pick or cream-skim healthier patients, or to decrease the range of benefits available to some groups and to move to reimbursement on the basis of individual risk, rather than community needs. Gatekeeping in US HMOs, such as Kaiser, is specifically designed to control clinical activity in such a way as to pass the risks and costs of care from the insurer and the provider to patients, their families, and their clinicians. In the US some 45 million people, mainly the working poor and their children, have no access to health care, with devastating consequences. The government will continue to argue that the UK situation is different because it is committed to universal health care, but it has already put in place the mechanisms and structures to restrict and limit entitlements to NHS health care.

Primary care trusts and hospital trusts are already established as businesses, which must break even and make a surplus to cover the costs of capital, including PFI debt. Trusts under pressure to break even are likely to turn to government guidance on intermediate care, published in 2001, and which allows the NHS to introduce eligibility criteria, time-limiting NHS care to a maximum of six weeks — one to two weeks for pneumonia, two to three weeks for hip fracture, and six weeks for stroke. There will be the possibility of redefining some NHS care as personal care, thereby creating the mechanism for introducing charges and 'topping up' using private health insurance.

In return for rationing and managing the growing mountain of debts, deficits, and service reductions, foundation hospitals and primary care trusts are to have greater commercial freedoms. New powers will enable them to dispose of land and assets, there is to be an NHS Bank, and foundation trusts are to be free to borrow. As the GP Contract highlights, incentives are being put in to break up services

and contract out more care, as well as bringing in local pay bargaining. Increasingly, as responsibility for investment devolves to foundation trusts, so too will the responsibility for raising revenue from commercial activities and deciding eligibility for services. But, increasingly, the NHS will be reliant on the wealth of local areas and local communities. The new structures and the emphasis on markets to allocate scarce resources are likely to return health care to the highly inequitable situation which existed prior to 1948, breaking with the principle of universal services on the basis of need and not ability to pay. There are no legal safeguards to ensure equity and universality in the White paper, *Delivering the NHS Plan.*

No country in the world has succeeded in delivering universal health care through the market. Markets by definition create winners and losers. The winners are already visible: the bankers, the lawyers, the management consultants, and the accountants — and, of course, the new shareholders in NHS services, which include Jarvis, Tarmac, Siemens, Initial, Capita, and increasingly, for-profit health care providers. The losers are the tax-paying public, employees, the communities they work in, and patients. The discipline of the market is already enshrined in the market-driven performance targets and framework for NHS services. But the performance targets are corporate protocols, where the needs of shareholders — not patients — shape clinical practice. Hence the performance targets focus on financial break-even, surpluses, profits, and 3% efficiency savings. Staff have been disciplined to increase throughput (early discharge and decreased length of stay), while the continued, callous use of terms such as 'bed blockers' and 'inappropriate admissions' justifies the shunting of patients and their associated costs out of the NHS. The professional ethos and the practice of medicine is now being subverted to a new value system that is based on returns to shareholders, whether it be through the capital charging regime of the NHS or through the new debts under PPP.

The passive acquiescence by the Royal Colleges and the BMA of the market-driven NHS Plan compares sharply with the stormy protests that greeted the introduction of the internal market in 1990. As the generation of doctors and patients who spanned the period before and after the introduction of the NHS disappears, so too does the collective memory of the ways in which market-driven health care denies access to care and freedom from fear. Gone too are the accounts of doctors who once had to balance decisions about their own income requirements with the ability of their patients to pay for care.[14] The internal market created an increasingly exhausted, disillusioned, and fragmented NHS workforce, whose professional ethos has already been subordinated to a new value system based on commercial entrepreneurialism. Our children and their children will wonder why the generations who were its chief beneficiaries have done so little to safeguard the NHS.

ALLYSON POLLOCK

Health Policy and Health Services Research Unit, School of Public Policy

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Address for correspondence

Professor Allyson Pollock, Health Policy and Health Services Research Unit, School of Public Policy, University College London, 29-30 Tavistock Square, London WC1H 9QU.

Effective interventions to prevent falls in older people

IN the order of about 35% to 40% of those over the age of 65 years will fall, annually.[1] Children and young adults also have a high rate of falls, though they rarely suffer injurious falls and are able to recover more quickly than older adults. This increased propensity to injurious falls in the elderly results from increased frailty and co-morbidity and a decreased ability to cope with environmental hazards, and subsequently, has a correspondingly high impact on healthcare resources.

The incidence of falls in the elderly varies with the population studied, and rates are higher in nursing homes and hospitals than in the community, with 10 to 25% of nursing home residents having a serious fall each year.[2] Annual incidence rates in community studies vary considerably, ranging from

217 to 1630 per 1000 persons at risk.[3]

Recurrent falls lead to considerable morbidity, in terms of both physical and psychological effects. Fear-of-falling and post-fall anxiety are well recognised and frequently lead to self-imposed functional limitation. In another paper published in this issue of the *BJGP*,[4] of 1540 responders to a postal questionnaire, 30% of men and 60% of women reported fear of falling, and 46% of men, and 40% of women had self-imposed restrictions in their daily activities because of this. Therefore, it is important to assess the elderly regularly to stratify risk factors for falls, to identify fallers, to improve a sense of wellbeing, and ultimately to prevent falls occurring in the first place.

As well as age-related physiological decline (decreased lower extremity muscle strength, reduced peripheral sensation, vestibular function, visual acuity, and reaction times), age-associated multiple pathology, together with the accompanying polypharmacy is associated with increased risk of falling.[5] A meta-analysis examining the relationship between falls and medications showed significantly increased risk from psychotropic medication (odds ratio [OR] = 1.7), class 1(a) antiarrhythmics (OR = 1.6), digoxin (OR = 1.2), and diuretics (OR = 1.1).[6]

In addition, environmental hazards are a particular risk for the elderly in the community. Key areas, such as poor lighting, hazards in the home (e.g. children's toys lying on the floor), frictional variations between shoes and floor coverings, and inappropriate use of surroundings (e.g. use of unstable furniture for support instead of hand rails) have been identified.[7] Of note, multiple risk factors are synergistic and the risk of falling increases exponentially with the number of risk factors.[5]

A proactive case-finding strategy is recommended in the joint American and British Geriatric Societies Falls guidelines.[8] The guidelines suggest that all patients over the age of 65 years be asked once a year if they have fallen, though the success of this approach is limited by resources and time constraints. However, if a patient presents to the GP after having fallen, then the guidelines would recommend that a gait and balance assessment, i.e. the 'Get up and Go' test, is performed. The patient is asked to stand from a chair without using his/her hands and walk across the room unaided. If the patient performs this manoeuvre successfully, and has only had one fall, then no further interventions or assessments are required. However, if problems are identified while attempting this simple test, then the patient should be assessed for the presence of other risk factors for falls.

The falls guidelines[8] describe which fall-preventing interventions are evidence based. The available evidence is dependent upon whether the study has been carried out in community-living, institutionalised or hospitalised older people. The best evidence supporting interventions to prevent falls is based on community studies. There is currently no evidence for interventions preventing falls in an acute hospital setting.

Intervention strategies are either multifactorial or single interventions. Multifactorial interventions recommended for a community setting include medication reviews, use of assistive devices, gait retraining, modification of environmental hazards, and treatment of cardiovascular risk factors. Single interventions are less evidence based, and medication reviews, exercise, and balance training are all that can be recommended.

1. Medication review: particular attention should be paid to psychotropic drugs and drugs causing hypotension. These should be discontinued if at all possible.
2. Gait retraining, and exercise programmes: though associated with evidence to prevent falls, the exact type and duration of exercise is not yet clear.
3. Assistive devices: walking sticks and Zimmer frames help maintain postural stability. In addition, hip protectors should also be considered for elderly patients at risk of falls. While they do not actually prevent falls *per se*, they have been shown to reduce the number of hip fractures in high-risk individuals.[9]
4. Postural hypotension: a symptomatic and sustained drop of greater than 20 mmHg systolic or greater than 10 mmHg diastolic blood pressure is easily detected. If present, then an underlying cause should be sought — medication being the most easily reversible cause.
5. Modifications of environmental hazards: potentially hazardous settings should be highlighted to the patient and carers; for example, loose carpets, cluttered passageways, lack of handrails, etc.
6. Educational or behavioural programmes: there is no evidence that these programmes are effective as a single intervention, and therefore, should only be considered when other risk factors are being addressed.
7. Visual acuity: although the presence of poor vision is associated with increased falls, there is no specific evidence regarding interventions on visual problems.
8. Footwear: again, there is no evidence supporting interventions regarding footwear. However, highlighting potential risk factors to patients is likely to be beneficial.
9. Cardiovascular disorders: traditionally, falls and syncope have been regarded as two separate diagnoses. There is now evidence supporting a considerable overlap between the two.[10] The commonest causes of syncope in older people are orthostatic or postural hypotension, carotid sinus syndrome, neurocardiogenic syncope (or vasovagal syncope), and cardiac bradyarrhythmias, and these diagnoses should be sought in those with unexplained falls and/or syncope.

The National Service Framework for older persons[11] has recommended that all hospitals have a specialist falls unit in place by 2004. Although the majority of risk factors for falls will be assessed at a primary care level, detailed cardiovascular investigations, such as tilt testing and carotid sinus, massage should be carried out in a specialist unit. While dedicated falls units are not yet supported by the level of evidence associated with specialist stroke units, it has been shown that a dedicated falls and syncope service is not only clinically effective in preventing falls and fractures, but also is effective in reducing hospital admission rates and length of stay. Our day-care facility in Newcastle upon Tyne has shown that the average length of stay for patients admitted because of a fall has been reduced by more than seven days, and subsequent bed occupancy reduced by 6616 bed

days, in comparison with peer trusts without such a facility.[12] Thus, at the current time, patients who present with recurrent falls, have multiple risk factors for falls, or who are found to have gait and balance abnormalities at initial screening should be referred to a falls unit.

JOANNA L HAMPTON
Clinical Research Fellow

ROSE ANNE KENNY
Head, Cardiovascular Investigation Unit

JULIA L NEWTON
Consultant Physician
Falls and Syncope Service, Institute for Ageing and Health, Care of the Elderly Offices, Royal Victoria Infirmary, Newcastle

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Address for correspondence

Dr J L Newton, Falls and Syncope Service, Institute for Ageing and Health, Care of the Elderly Offices, Royal Victoria Infirmary, Newcastle, NE1 4LP. Email: julie.newton@nuth.northy.nhs.uk

Community pneumonia — more help is needed to diagnose and assess severity

THE latest guidelines from the British Thoracic Society (BTS) for the management of community-acquired pneumonia (CAP) includes recommendations for general practice, concerning both diagnostic work-up and assessment of disease severity.[1] Differentiating pneumonia from other lower respiratory tract infections (LRTIs) is an important task, for at least three reasons: (a) overlooking pneumonia may have fatal consequences for the patient;[2] (b) prescription of antibiotics to patients with acute bronchitis and exacerbations of chronic obstructive pulmonary disease (COPD) should be reduced, owing to both the risk of harmful effects on the patient of unnecessary treatment and problems with increased resistance against antibiotics;[3,4] and (c) airway obstruction is not properly treated with antibiotics.[4,5]

No single symptom or physical finding has shown to be of substantial predictive value — in terms of high sensitivity and high specificity — in the diagnosis of pneumonia.[6] Diagnostic clues, such as severe dyspnoea, chest pain, and auscultatory crackles, are present in fewer than half of the cases with pneumonia and are frequently found also in the other common LRTIs.[6-8] The statement in the BTS guidelines that 'the presence of normal vital signs on chest examination makes an underlying diagnosis of pneumonia unlikely',[1] may be misleading. Underdiagnosis of pneumonia in primary care is a reality. Among 1819 adults with acute cough in a United States study, an acute radiographic infiltrate was found in 16 of the 272 patients in whom a chest film was ordered, and in 32 of the remaining patients.[7] In other words, the diagnosis of pneumonia was not suspected in two-thirds of those where it was proved on radiography. In a Norwegian study, pneumonia was suspected by the general practitioner (GP) in only 12 of the 20 patients with a radiographic diagnosis of pneumonia.[8] The diagnosis was missed when the chest findings were normal. These diagnostic failures usually do little harm, owing to the benign course of illness in the majority of cases and the liberal prescription of antibiotics in LRTIs in general.[9] In a few cases, however, a missed diagnosis may be fatal, as recently shown in the study of CAP deaths in young adults in England and Wales.[2] Unless GPs are able to have access to new and better diagnostic instruments, there is reason to fear an increased number of pneumonia deaths if they become more restrictive in their prescription of antibiotics in LRTI.

The C-reactive protein (CRP) test is such an instrument. In three studies, comprising 165 patients with pneumonia admitted to hospital, all had an elevated CRP value (more than 10 mg/l), and the majority had values above 100 mg/l.[10-12] In pneumonia patients treated outside hospital, CRP values of more than 10 mg/l has been found in about

85%.[13,14] Among young Finnish military conscripts with pneumonia, CRP values of more than 20 mg/l have been found in all cases caused by pneumococci and in 93% and 63% of the cases caused by *Mycoplasma* pneumonia and viral agents, respectively.[15] A normal CRP value found in a patient with pneumonia probably indicates a mild and self-limiting disease in almost every case. Caution should, however, be shown when interpreting a normal value on the first day of illness, at the beginning of the acute phase response.[16] In the great majority of patients whose symptoms have lasted for more than one day, pneumonia can usually be safely ruled out when the CRP value is 10 mg/l or lower. Values above 100 mg/l strongly support a diagnosis of pneumonia. The interpretation of values between 10 and 100 mg/l is more difficult and the duration of illness has to be taken into account.[14] Moderately raised CRP levels are often found in viral infections in the first week of illness, but values above 100 mg/l are infrequent.[7,17] The CRP value is lower than 11 mg/l in most patients with acute bronchitis, and in infectious exacerbations of asthma and COPD.[5,18,19] Accordingly, a low CRP value in a dyspnoeic patient makes it likely that a treatment other than antibiotics is needed.

We need more knowledge about the CRP response in common infections. GPs need strong support from such research, as well as sufficient clinical experience with the test to feel secure in taking the CRP value into account in their decision making. In the absence of these conditions, it will be difficult to demonstrate any value of the CRP test in terms of more rational antibiotic prescribing. If the doctors rely more on an elevated CRP value than on a normal value, an increased use of antibiotics can be the result. Macfarlane *et al*[20] are concerned about this possibility in their recent study, although they found that the CRP value was strongly associated with both pneumonia and other bacterial LRTIs. This tells us that we need more research to determine the usefulness of antibiotics in bacterial and atypical chest infections, both in patients with normal and elevated CRP values. However, we have sufficient evidence today to recommend a restrictive antibiotic prescribing in the presence of a normal CRP value, and an increased alertness for serious infection when the CRP value is above 100 mg/l. In the BTS guidelines the CRP test is recommended on admission to hospital.[1]

Chest radiography is not recommended in the routine work-up in the community by the BTS guidelines.[1] One problem is the difficulty of diagnosing a mild or early stage of pneumonia by radiography. In a study comparing radiographs with high resolution computed tomography (HRCT), only 18 of the 26 cases of pneumonia diagnosed by HRCT were read from the chest films.[21] The doctor cannot always rely on a negative radiograph when deciding on antibiotic treatment.

Which patients with pneumonia need to be treated in hospital? Co-existing disease, such as COPD and heart failure, is associated with an increased risk of death.[22] Three easily made clinical observations are underlined in the BTS guidelines: a respiratory rate of 30 per minute or more; a diastolic pressure below 60 mmHg; and mental confusion.[1] Patients with two of these 'core' adverse prognostic features need urgent treatment in hospital. Patients younger than 50 years, with no co-existing disease and with none of the three core adverse prognostic features, can usually be treated at home. These recommendations are supported by firm evidence and they should be used as a simple memory aid for GPs.

Assessment of oxygenation by the use of pulse oximetry is recommended in the BTS guidelines, also outside the hospital. Hypoxaemia (with a PaO_2 <92%) is an adverse factor indicating a need for hospitalisation and oxygen treatment during transport. The sensitivity of hypoxaemia for severe pneumonia is, however, not very high,[2,23] probably owing to the patient's ability — at least for some time — to compensate for the lack of oxygen by deep and fast breathing.

It is time to add more technological aids in the diagnostic work-up for coughing and dyspnoeic patients in primary care. Clinical information from the CRP test and pulse oximetry, as well as spirometry and microbiological analysis, may enable GPs to choose better treatment options for their patients. Some steps must be taken before such information can be used in a sensible way. Guidance from clinical research carried out in primary care will be needed.

HASSE MELBYE

Professor of General Practice, Institute of Community Medicine, University of Tromsø, Norway

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Address for correspondence

Professor Hasse Melbye, Institute of Community Medicine, University of Tromsø, 9037 Tromsø, Norway. E-mail: hasse.melbye@ism.uit.no