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William Keith Davidson
Mary W A Davidson
BMJ 2007;335:569, doi:10.1136/bmj.39330.736134.BE
### Albert Henry ("Harry") Hands

C A H Hands  
*BMJ* 2007;335:569, doi:10.1136/bmj.39330.718137.BE

### Patricia Jordan (née Arnold)

Alan J Whitley  
*BMJ* 2007;335:569, doi:10.1136/bmj.39323.640648.BE

### Terence Frederick Seaman

Peter Ham  
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### Thomas Symington

Alan Symington  
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### Career focus

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*BMJ* 2007;335:569, doi:10.1136/bmj.39329.734097.BE
The future of smoke-free legislation
Will cars and homes follow bans on smoking in public spaces?

A tide of epidemiological,1 clinical,2 and toxicological research has gradually transformed the meaning of the quiet, convivial cigarette into a health hazard for others, and smokers into stigmatised, regulated exiles from public spaces.4 Bans on smoking in enclosed public places have moved into global overdrive in the past decade. Three studies in this week’s BMJ provide evidence of the clinical and social effects of legislation to prohibit smoking in almost all enclosed public places and work places—including bars, restaurants, and cafes—in Scotland implemented in March 2006.5,7

The hospitality and tobacco industries forecast the end of civilisation after banishing smoking from bars.8 The bar economy and tourism would collapse. The vibrant tradition of pub life would be sacrificed on the altar of risk aversion. Drinks left on the bar while smokers stepped outside would be spiked by rapists,9 and street fights would increase. Smoking would be displaced to homes where angry men would ruin their families’ health, beat their wives, and even cause more house fires.10 At least these were the arguments the tobacco industry used publicly. Privately, they admitted as long as 13 years ago that “These arguments simply had no credibility with the public, which isn’t surprising when you consider that our dire predictions in the past rarely came true.”11

Smoke-free bars remain full from Dublin to New York, Auckland, Vancouver, Oslo, Sydney, Rome, and Glasgow. The study in this issue by Haw and colleagues shows that the Scottish smoke-free legislation has been followed by remarkable falls in cotinine concentrations in smokers and non-smokers living in both smoking and non-smoking households.12 The study also found no evidence of displacement of smoking from public places into homes, confirming earlier findings from Ireland.13 The study by Akhtar and colleagues also in this issue found that cotinine reductions in primary school children were significant only in households where no parent or only the father smoked,2 suggesting that mothers’ smoking in houses and cars continues to be an important source of exposure in children.

Cars are an intriguing and symbolically important interface between public and private worlds. While the interior of cars is considered by many to be a “private” space, the law has long regarded cars as effectively public spaces. Their occupants are subjected to legal requirements regarding seat belts, car standards, driving conduct, and mobile phone use designed to protect public safety (harm to others) and the safety of the occupants (via the benevolent paternalism inherent in seat belt legislation).

Several US jurisdictions and South Australia have legislated bans on smoking in cars when children are on board. These laws have taken a legislative first step into outlawing what has until now been assumed to be a private self regulated behaviour (parents’ freedom to expose their children to high concentrations of tobacco smoke in settings assumed to be private). The ability of parents to exercise this “freedom” in public settings such as on public transport and in enclosed shopping precincts is now denied in many nations, including Scotland, through reference to the health and amenity of others. This creates a paradox—why should parents be prevented from placing their children’s and others’ health at risk in public vehicles but be allowed to do so in private vehicles? Legislation on smoking in cars—which is focused on a setting where those harmed are most likely to be family members—moves the boundaries of health protection legislation in an important new direction.

As public smoking bans proliferate, homes are now the most important source of exposure to secondhand smoke, and unconsenting minors are often exposed. No nation has ventured to legislate against domestic smoking, although increasingly public awareness campaigns are successfully urging many people to make their homes smoke free.12 Homes are assumed to be the “castles” of their occupants, where a wide range of private freedoms of expression are sanctified that are prohibited in public. It would seem inconceivable in any but the most authoritarian states for smoking to be banned in homes.

However, there are many ways that households can be encouraged and supported to implement smoke-free rules. The qualitative study in the trio of papers reported in this week’s issue offers many insights into themes that have resonated with people who have already taken this step. Public awareness campaigns are important, but health workers such as general practitioners, hospital consultants (for example, those in paediatric asthma clinics), health visitors, midwives, and specialists in cessation have vital roles. They should offer advice and support to individuals, particularly parents, grandparents, and other carers. Ex-smokers often cite their children as important influences on their decision to quit. Children should therefore also be supported in their efforts to request their parents to at least smoke outdoors.
Achieving health equity for all

The Commission on Social Determinants of Health sets out its vision and goals

This week the Commission on Social Determinants of Health (CSDH), established in 2005 by the then director general of the World Health Organization (WHO), the late Lee Jong-Wook—has released an interim statement.¹ It sets out a new vision to achieve what it calls “health equity”—fairness of opportunity to achieve and maintain good health. The intention is to kickstart a global movement to tackle, at all levels and in all sectors, the social, environmental, economic, and political factors that underpin inequities in health—the so-called “causes of the causes” of ill health.

Nearly 30 years ago, WHO brought the community of nations together to issue a call for “health for all by the year 2000.”² The Declaration of Alma Ata³ focused on accessible and affordable primary health care worldwide, and on tackling the social and economic causes of ill health. It affirmed that health is a fundamental human right. And it called on governments, international organisations, and the world community to create the opportunity for everyone to attain a level of health that would enable them to lead socially and economically productive lives. Alma Ata was a seminal moment in the history of global public health.

Thirty years on, the world is a very different place. Increased urbanisation, larger trading blocks, increased globalisation, massive aid programmes, deforestation, climate change, international terrorism, cheap air travel, the internet, the collapse of the Soviet Union, the rise of rapidly emerging “tiger” economies, sweatshop working conditions, and low pay have all contributed to major shifts in the world order, and to fundamental changes in the health of the world’s peoples.

The commission’s interim statement has four main elements. Firstly, it outlines the philosophy and principles behind the new movement—strengthening health equity by seeking to rebalance the socially determined conditions in which people grow, live, work, and age. Secondly, it provides overviews of some of the problems that need to be dealt with, such as differences in life expectancy, health, and wellbeing between different countries and regions, and between people of different sexes, ethnic groups, classes, occupations, and other forms of social stratification. Thirdly, it looks at the main ways in which these gaps can be minimised—the big levers for change. And lastly, it outlines how the commission is amassing the evidence and engaging governments, international organisations, civil societies, and other global big players in driving the messages home.

To pull together the evidence, the commission has established nine “knowledge networks.” It has collected, collated, analysed, and synthesised a vast body of information on a wide range of themes—globalisation, health systems, urban settings, employment and working conditions, early child development, social exclusion, women and equity between the sexes, measurement and evidence, and priority public health conditions. The quest is to identify the most important causal relations, the key areas for action, and the most effective interventions to tackle socially determined inequities worldwide.

Poverty is usually the ultimate cause of inequity. But the commission looks beyond poverty, at the many factors that enmesh people in a poverty trap—from drought and war to sex bias, religious castes, language barriers, unemployment, corruption, lack of investment, and sheer bad government. How can the world community help to ameliorate some of these influences?

The commission admits it has no magic wand. But what it does have—and what has previously been lacking—is a thorough understanding of the links between the various social determinants and the types of ill health they can lead to, and a much better evidence base of how they can be tackled. The statement looks in depth at three case studies. Firstly, a union of female street vendors in India which has set up a wholesale service, crèche facilities, a cooperative bank, and an insurance

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scheme. Secondly, a state run welfare scheme for poor families in Brazil, with cash grants to mothers, linked to child immunisation and better education. Lastly, a two pronged programme to increase employment and promote cardiovascular health in an economically depressed part of northern Sweden. All three schemes are making a big difference and are sustainable.

The other weapon in the commission’s armoury is the mechanism it has set up to engage with the world’s movers and shakers. Part of this comes from the high level influence of its 19 prestigious members—from ex-heads of state to world renowned academics, and from senior ministers to leaders of international organisations—and part from the expanding family of “partner countries” who signed up to the process and who are cascading the principles and practice through their own internal networks.

Given that the biggest gains are likely to be made outside the healthcare system, what part can health professionals play in all this? The answer is potentially a very large part. Health networks are among the most firmly established and extensive in the world. As the recent Crisp Report has urged, we have powerful means for sharing our knowledge, skills, and expertise with communities and nations who could most benefit from them.

Next year, 30 years after Alma Ata, the Commission will launch its final report with detailed recommendations. But this interim statement initiates the tasks of building a wider and more solid consensus, adding direct experience to the knowledge base, and developing and testing the levers for change. The vision is clear, stark, and unambiguous—health equity is a fundamental human right, a matter of social justice. No self respecting nation should tolerate the persistence of such colossal unfairness and disadvantage. The Commission on Social Determinants of Health seeks not only to open our eyes to this injustice, but to galvanise us all, wherever we are, into doing something about it.


Problems with performance related pay in primary care

Payments should be based more on treatment and prevention and less on risk factor measurement

General practice in the United Kingdom has the largest healthcare pay for performance programme in the world—the quality and outcomes framework (QOF). By earning the maximum number of performance indicator “points,” an average sized practice can earn about £125,000 (£185,000; $252,000) in addition to its usual sources of income. In this week’s BMJ, Guthrie and colleagues discuss the effectiveness of the system in relation to the management of cardiovascular disease. They show how general practices can earn many points and extra payments without this necessarily indicating a reduction in the risk of cardiovascular disease.

For example, a practice could receive nine points (each worth about £125) for generating a list of patients with hypertension. The completeness and accuracy of this list might be subject to external audit by the Primary Care Organisation. An extra 30 points would be earned if 90% or more of such patients have a record of risk factors (blood pressure and smoking history) in their notes, and 56 more points would be earned if 70% or more of such patients have a record of blood pressure lowered to below specified target values (150/90 mm Hg). Overall, 15% of payments, worth an estimated £200m across the approximate 11000 general practices in the UK, arise from measuring cardiovascular risk factors (such as blood pressure and serum cholesterol) and recording whether they are below specified values.

Whether or not doctors should receive financial incentives for providing medical care is debatable. Should police officers be paid extra for catching criminals and should firemen be paid incentives for putting out fires? A balance is needed between encouraging doctors to exercise independent professional judgment and paying them for carrying out specific tasks. The treatment and prevention of cardiovascular disease is becoming a series of isolated tasks predicated on financial rather than clinical value. Linking each task to the receipt of money means that money rather than medical judgment drives practice.

In addition, the need to count cases and fill in forms requires extra resources and increases bureaucracy. Baroness Deech, head of the Office of the Independent Adjudicator, said in relation to the bureaucracy of postgraduate education, “We live in an age of over-regulation. I do think universities are over-regulated.” The same criticism can be applied to the National Health Service.

A further problem with the QOF relating to cardiovascular disease is that many of the measurements documented are not worth documenting. If doctors are to be paid for performance it should be for treating and preventing disease. In vaccination, payments increase with numbers of children vaccinated, as all children are susceptible to infections. The same principle applies...
to cardiovascular disease—everyone is susceptible. Identifying people on the basis of a high risk factor cut-off value is inappropriate because relatively few events occur in people with high risk factor levels. Most events occur in the majority of people whose risk factor values are closer to the average.

Blood pressure and serum cholesterol measurements are commonly used in screening because these important causes of coronary heart disease and stroke are thought to be useful for predicting who will and will not develop such an event. However, with certain exceptions (such as familial hypercholesterolaemia), this is not the case. Aetologically important risk factors are rarely useful as screening tests. It is often assumed that combining information on several cardiovascular risk factors will overcome the problem that individually they are poor predictors, but such an approach is only a little more precise than simply basing a person’s risk estimate on age alone, and is not worth the extra cost and complexity. Most heart attacks and strokes (more than 90%) occur in people over the age of 55, which is why 55 has been proposed as a reasonable age above which to prescribe drugs to reduce cardiovascular risk.

The QOF, now in its third year, has been useful in drawing attention to the importance of the treatment and prevention of cardiovascular disease, but not how best to do so. The QOF expert panel, assembled by the BMA and the NHS Employers is currently reviewing the QOF programme. This provides an opportunity to improve and simplify the system.

Guthrie and colleagues argue for increased incorporation of treatment information into outcome indicators. This makes sense, because it is the treatment of risk factors that reduces risk, not their measurement. Performance indicators should not be based on the measurement of risk factor levels, but on the proportion of people with existing vascular disease or diabetes, or those above a given age who receive effective preventive treatment, in addition to encouraging sensible dietary and lifestyle measures (such as smoking cessation).

The resources currently used to fund the management of risk factors and the QOF payments that follow could be redirected into paying for the drugs used. The financial element would then be directly linked to treatment and prevention rather than the process. Much unnecessary medical activity and cost could be avoided—£200m from the existing cardiovascular disease specific QOF payments alone. Further savings would arise from better use of time in general practice, avoidance of risk factor measurement, and reduced administrative costs. Incentive payments would be better used sparingly to encourage selected effective interventions that need specialist examination, such as screening for diabetic retinopathy in people with diabetes.

Such a revised QOF system would be simpler and would release valuable general practitioner time and resources. Greater importance would be attached to medical judgment, rather than to robotic tasks. The QOF expert panel is expected to deliver its recommendations this autumn. Hopefully, it will have time to reflect on these matters and advocate a much simpler strategy for treating and preventing cardiovascular disease—one that is linked to more focused incentive payments, while protecting the independent professional status of doctors in the UK.

Dealing with scientific misconduct
Europe needs policies for good scientific practice and for investigating misconduct allegations

International awareness of scientific misconduct is low. Codes of good practice and procedures for handling allegations of misconduct involving research throughout Europe are either underdeveloped or non-existent.

To help resolve this problem, the first world conference on research integrity will take place in Lisbon on 16-19 September 2007 (http://tinyurl.com/2b34xo). It was organised by the US Office of Research Integrity and the European Science Foundation—an association of 78 scientific research organisations in 36 European countries. The event is an opportunity to discuss the harmonisation of policies on scientific misconduct at European and international level.

Unlike in the United States, where the Office of Research Integrity oversees allegations of scientific misconduct involving research supported by US Public Health Service funds, oversight of research in Europe is fragmented and varies widely between countries. With the exception of Scandinavia and—to a lesser degree, Germany, France, and the United Kingdom—little or no regulation exists to govern scientific misconduct. Regrettably, the European Commission (EC) has drawn up no regulations about potential
problems arising from its multibillion framework of research programmes in Europe.

Europe has a long history of allegations of scientific misconduct, but recent cases have highlighted the limitations of current oversight systems. At first glance, it may seem that misconduct is more frequent in Northern Europe than in Southern Europe, but this may reflect the lack of reporting and monitoring in the south. In Spain, for example, most research institutions have no codes of scientific integrity or policies to handle misconduct. It has been suggested that most European countries hide individual cases of fraud as a result of the lack of specific rules, but we do not know whether research misconduct is more common in countries that do not have monitoring standards than in those that do.

What steps should be taken? At a national level, countries without formal systems for investigating allegations (mainly in Southern and Eastern Europe) can learn from models in other countries. As an initial step, a local ombudsperson could be appointed to act as an impartial third party. This person could be approached by people seeking advice about scientific misconduct and might even be empowered to conduct (if necessary) preliminary inquiries. If the ombudsperson thinks that further investigation is needed, the matter should be referred to the institution where the study was carried out. The findings of the national monitoring body should be published annually. Decisions about whether to disclose the names of scientists proved to have been dishonest should take into account the prevailing culture and sensibilities. However, there is clearly a need to retract research that is found to be fraudulent. Implementation could be enforced by research funding agencies (and private foundations) providing funding only to institutions that adhere to scientific integrity guidelines.

In most European countries legislation does not cover cases of scientific misconduct. In the absence of appropriate legislation, internal regulations may offer solutions through conciliation or arbitration; for example, as happens in the Deutsche Forschungsgemeinschaft.

Modern research often has many authors, and problems can arise when authors from different countries are treated inconsistently. This could be prevented by establishing Europe wide policies on scientific dishonesty, with uniform procedures for violations.

However, on the basis of current political, legal, cultural, and ethical differences between European nations, it is not feasible to set up a legally binding, unified, pan-European oversight framework. In addition, unlike other matters, the Treaty of the European Union specifies that ethics are within the competence of the member states and, therefore, no such directive can be imposed or prevail over national legislation.

A more realistic and timely pan-European scenario would be where most countries (or most research institutions) have regulations in place, which are complemented by additional Europe wide efforts, mainly focused on agencies that fund research. Thus, pan-European research funding bodies, notably the EC and the European Research Council, could set up regulatory mechanisms and compel institutions to formulate rules about research integrity and procedures for handling allegations of misconduct.

Jurisdiction (such as funding by the EC) is an essential requirement that must be met to make the system work by recognising a research agency’s right to enforce compliance. The EC and the European Science Foundation are well suited to appoint independent scientific experts to investigate misconduct in projects financed by the framework research programmes and the European Research Council, especially as the combined budget of the 2007-13 seventh framework research programme and the European Research Council is €48bn (€32.5bn; €65.5bn). In addition, once these steps are taken, a European network of committees handling misconduct and fraud in research, as proposed by the Finnish National Advisory Board on Research Ethics, could be of great use.

International cooperation might tackle the problem of scientists moving to countries where employers are unaware that they have committed misconduct. Moreover, albeit heterogeneous, European academic societies and associations could define principles of good scientific practice for their area of expertise and make them binding on their members.

Independently, the EC could ask its advisory European Group on Ethics in Science and New Technologies to draw up a set of recommendations within a pan-European framework. Although not legally binding, the standards described by this group could be adopted by those countries that lack regulatory mechanisms. Alternatively, they might consider implementing some of the national oversight scenarios proposed above.

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5Maisonneuve H, Bérard A, Bertrand D. Britain’s failure to tackle research misconduct: Britain is ahead of most countries. BMJ 2004;328:229.
Direct to consumer advertising of drugs in Europe
Evidence on its benefits and harms is available but is being ignored

The promotion of prescription drugs to the public (“direct to consumer advertising”) is currently used only in the United States and New Zealand. A systematic review of the clinical and economic consequences confirmed that this form of advertising influences patient demand and doctors’ prescribing behaviour, but evidence of health benefits or improvements in underuse was lacking.1 A more recent report from the Institute of Medicine confirmed that direct to consumer advertising increases the early use of new drugs and asked for a two year moratorium of such advertising for newly approved drugs.2 Requests were made to revise the legislation towards limiting or even banning such advertising both in the US and in New Zealand3 4 after rofecoxib (a heavily advertised drug) was withdrawn from the market because it increased heart attacks.5 A proposal to modify the current ban on direct to consumer advertising will be considered by the European parliament in the next few months in the context of a wider series of reforms “to improve the regulatory, non-regulatory and research and technological development framework for pharmaceuticals” (summarised in a document now open for public consultation until 12 October).6

At the request of the European parliament, the Enterprise and Industry Directorate General of the European Commission released a report for consultation at the end of April 2007 on “current practice with regard to provision of information to patients on medicinal products.” The report focuses on information publicly available on the internet from regulatory bodies or official sources in member states,7 which consists mostly of information on package leaflets, databases of approved drugs and regulatory reports, and other sources of information from regulatory bodies on approved drugs.

The conclusion of the report is clear though problematic: “Member States may not be in a position to fully address patients’ needs in terms of the substance of information and the access via different means. In turn, the pharmaceutical industry possesses the key information on their medicines but this information can currently not be made available to patients and healthcare professionals through Europe.”8 In other words, after an unsystematic review of information for patients available in Europe through regulatory bodies or Ministry of Health websites, the report states that the available information is not sufficient for patients’ needs, and it suggests that the information possessed by the producers could plug this gap. Curiously, the document never mentions direct to consumer advertising but calls for a partnership in the production of information, supporting the idea that producers are a reliable source of information for patients and consumers.

Although the aims of the report are laudable, the methods it uses are scientifically weak: the report does not describe how literature was reviewed or the data collected; many statements are unsupported; and several comprehensive documents recently published on this subject are not mentioned.14-8-10 Also, the identity of the authors is unclear.

Despite what is stated in the report, several examples of good information sources for patients are now available in Europe.11 The difficulty for the public is finding them and distinguishing between promotional material and unbiased evidence based information. Information should be reliable (evidence based, arising from a systematic evaluation, and unbiased), comparative (with respect to all treatment options), and adapted to users (evaluating the potential problems of generalising to other populations, with consideration of patients’ values and preferences).12 These three principles also apply to prescribers in evaluating the risk-benefit profile of an intervention and in defining the strength of a recommendation when producing a guideline.12

The idea of a public-private partnership stems from the recent second progress report of the European Commission’s High Level Pharmaceutical Forum that proposes “to organise a platform to bring together relevant stakeholders to explore ways to exchange good practices and on ways to overcome barriers to accessing information.”13 Although it does not support direct to consumer advertising, this standpoint suggests that reliable information could come jointly from producers and regulatory bodies. However, such a partnership would confuse their separate roles and responsibilities.

So where do we go from here? We think that a partnership between drug companies and drug regulatory authorities in the area of information, and even more so in the field of drug evaluation,14-15 would be confusing. Therefore, we propose two areas of real partnership with the drug industry that would reinforce public trust in the system.

The first would entail a real commitment to waive confidentiality and give full access to data on the effectiveness and safety of drugs. Giving full access to all clinical trial protocols (not just those that are registered for publication purposes) and to the periodic safety update reports available to regulatory agencies would enhance transparency.

A second more institutional partnership is based on the fact that patients’ needs and not industry patents should be the focus of regulatory bodies. For this reason, the European Medicines Evaluation Agency should move from the commission’s Enterprise and Industry Directorate General to its Health and Consumer Protection Directorate General to avoid the current conflict between supporting the competitiveness of the drug industry and the interests of patients.

The most sensible way to protect public health would be to identify sources of unbiased and systematically reviewed information and maintain the current European legislation on drug promotion, while reinforcing the role of the European Medicines Evaluation Agency.

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is followed by clips of many children with difficult breathing, fever, dehydration, abdominal pain, etc. Some even show the progression of the condition. The second is a CD produced for the World Health Organization by Trevor Duke and others of Melbourne University, Australia. It supports and illustrates a recent WHO publication on hospital care for children. It contains three video clips of ill children and many still images, all in a context to reinforce the method set out in the book. There must be other good teaching videos, CDs and DVDs out there, but there is scope and need to produce and share such practical teaching material.

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WAM C is adviser to TALC (Teaching Aids at Low Cost).

Competing interests: None declared.

1 Harnden A. Recognising serious illness in febrile young children in primary care. BMJ 2007;335:409-10. (1 September.)


Face to face always

Performing snapshot assessments in emergency settings is notoriously risky. Serial assessment of the child is not always possible. A scientific approach of measuring heart rate, capillary refill, respiratory rate, and behaviour takes less than 3 minutes and is achievable in these settings. Harnden is wrong in saying that this is not achievable in primary care. To state that there is no evidence that measurement of these parameters helps identify serious bacterial illness may be true for primary care but is not true in hospital (emergency department or paediatric wards). Logic dictates that a similar assessment should take place in primary care.

The Intercollegiate Advisory Group for Services for Children in Emergency Departments has concerns about the abilities of telephone triage systems and inadequately trained frontline staff to differentiate seriously ill children from children with self limiting febrile illness. In the wake of the new General Medical Services contract, increasing numbers of parents access telephone advice, emergency departments or primary care centres for assessment of their febrile infant (particularly out of hours). These points of contact must ensure staff have basic paediatric assessment skills. To substitute experienced primary care, emergency medicine and paediatric staff with cheaper alternatives is not necessarily a safe strategy. The low incidence of serious bacterial illness means that most of the time, most children will come to no harm. This is no consolation for the parent of a seriously ill child.

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FCD is chair, Intercollegiate Advisory Group for Services for Children in Emergency Departments.

Competing interests: None declared.


2 Harnden A. Recognising serious illness in febrile young children in primary care. BMJ 2007;335:409-10. (1 September.)

3 Royal College of Paediatrics and Child Health. Services for children in emergency departments (intercollegiate report) 2007. www.rcpch.ac.uk/Health-Services/ Emergency-Care

NICE BEHAVIOUR

QALYs in the community

One of the major concerns of rheumatologists (who have been involved with submissions to the National Institute for Health and Clinical Excellence (NICE) for a series of expensive drugs for the treatment of rheumatoid arthritis and other inflammatory joint diseases) is “what is contained in a QALY assessment.” The answer, many believe, is not enough. If it were clear that there was a cost assessment of the potential reduction in orthopaedic costs, of the economic cost of putting
someone on the sick register, or of the similar costs to carers, then we might be happier to accept that patients might be denied treatment.

If someone with rheumatoid arthritis is turned from a working taxpayer into a benefit recipient then the drug cost might be totally offset by the difference between the tax revenue lost added to the disability benefits paid. For biological agents, which are often considered in people of working age, the income level of a patient to be in positive credit balance may be quite low.

There is the additional question of whether the use of biological agents and other similar drugs might, if given early enough, provoke sustained disease remissions—which would reduce the medical on-costs of the drugs themselves. Much as I hate to use that hackneyed phrase “more research is needed,” it would be helpful to have clear answers to these two questions.

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Competing interests: ANB is a physician with an interest in offering effective and expensive treatments to patients, and current president of the British Society for Rheumatology.


ME guideline is unworkable

NICE recommends that everyone with mild or moderate myalgic encephalopathy/chronic fatigue syndrome (ME/CFS) should be offered a course of either cognitive behaviour therapy (CBT) or graded exercise therapy (GET).1

This is despite published evidence remaining weak (especially for group CBT) and inconsistent.2 Patient evidence submitted to the chief medical officer’s report concluded that CBT produced “no change” in 67% of cases and made the condition “worse” in 26% of cases.3 Around 50% of respondents reported that inappropriate exercise therapy had also made their condition “worse.”4

When the NICE estimate on prevalence is used this recommendation will affect some 200000 people. A one to one course of CBT covering 12 to 16 sessions will cost well over £1500. The cost of a professionally supervised exercise therapy programme is also likely to be substantial.

So where is around £300 million of new money going to come from at a time when very limited funding for some of the newly established NHS clinical services for people with ME/CFS is now being cut?5 And where are all the therapists going to come from? Those already in post often cannot even cope with their current workload.

These are important questions that I raised at a NICE implementation and planning meeting in October 2006—but nobody from NICE could provide a convincing answer. These recommendations are going to be of no value whatsoever to many people with ME/CFS. They are also going to be impossible to implement owing to a lack of both funding and human resources.

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Competing interests: Physician with personal experience of this illness.

1 Baker R, Shaw EJ. Diagnosis and management of chronic fatigue syndrome/myalgic encephalomyelitis (or encephalopathy): summary of NICE guidance. BMJ 2007;335:446-8. (1 September.)


4 ME Association. Summary of key points to emerge from All Party Parliamentary Group meeting held in Committee Room 17 at the House of Commons on Thursday 12 July. www.meassociation.org.uk/content/view/307

TIME TO DROP EPNOMYS?

Curbing Medicales is the issue

Blanket abandonment of eponyms cannot be argued successfully.1 2 Surely the real question is whether Medicales (including excessive use of eponyms) should be abandoned; or at least brought to heel. The scholarly dandification of the English language by post-renaissance travellers around the 16th and 17th centuries AD included the absorption and reworking of classical terms from Greek and Latin. This represented an inversion of the hard won earlier rejection of Latin as the exclusive language of knowledge and powers. As such, this new tendency (with flourishing pseudo-classical tosh, and start saying what we mean.

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Competing interests: None declared.

1 Woywodt A, Matteson E. Should eponyms be abandoned? Yes. BMJ 2007;335:424. (1 September.)

2 Whitworth JA. Should eponyms be abandoned? No. BMJ 2007;335:425. (1 September.)

JOB FOR LIFE

Satan what done it

Launer does a great service in describing the Book of Job as the most enduring handbook for any of us who have to deal professionally with tragedy, loss, or despair.1 The opening paragraph, however, contains a serious error that should be corrected.

Launer says that the book’s prologue tells of the catastrophes inflicted by God on the hero. In fact, a more careful reading of the prologue will reveal that it was Satan, not God, who inflicted the catastrophes. God’s role was permissive in that he removed the protective “hedge” that He had placed around Job and allowed Satan access to “everything he has.”2

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Competing interests: None declared.

1 Launer, The Book of Job, BMJ 2007;335:453. (1 September.)

2 Holy Bible, Job 1, 9-12. (New international version.)

Enlightenment, finally

I found the Book of Job a fascinating medical classic: the serial misfortunes, the (well meaning, but misplaced) counselling from friends, and the refusal of the Higher Power to accept fault.

It’s good to know that there was an evidence base for MMC/MTAS.

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Competing interests: JMT survived MMC/MTAS; some of his friends did not.

1 Launer, The Book of Job. BMJ 2007;335:453. (1 September.)

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Primary care pays only “lip service” to clinical governance, MPs say

Michael Day LONDON

Poor communication between primary care trusts and GPs is seriously compromising the safety of patients in England, a group of MPs said this week.

In its latest report the House of Commons Committee of Public Accounts also warns that 90% of GPs are failing to report dangerous incidents to the National Patient Safety Agency.

For its report, which examines the Department of Health’s progress in implementing clinical governance in primary care, the committee had taken evidence from the chief executive of the NHS, the deputy chief medical officer, and the NHS’s director general of commissioning.

Committee chairman Edward Leigh said, “Too many primary care organisations are paying lip service to the principles of the Department of Health’s clinical governance agenda. The lines of communication between the primary care trusts, on the one hand, and their GPs and other healthcare contractors, on the other, are defective.”

He added: “How can we be confident in the NHS’s ability to share learning locally and nationally about what can go wrong in health care when only a tiny proportion of GPs—4%—routinely report patient safety events and incidents to the National Patient Safety Agency?”

In response to a series of high profile problems in the 1990s, including the Shipman murders and events at the Bristol Royal Infirmary, the health department introduced its 10 year programme to boost patient safety. The centre-piece was the clinical governance system.

The new report suggests, however, that clinical governance is not as well established in primary care as in secondary care. The committee says that this is due largely to the complexity of the role of primary care trusts in commissioning and providing care and to the independence of contractors delivering health care, particularly GPs.

The Committee of Public Accounts’ 47th report of the current session can be found at www.parliament.uk/pac.
Genome sequence of one person is published for first time

Susan Mayor LONDON
The complete genome sequence of one person—one of the US biologists working on the project, J Craig Venter—was published for the first time this week. By enabling scientists to compare the contribution of each of the parental chromosomes, it showed that genetic variation among humans was much greater than previously estimated.

The data indicate that variation from human to human is about 0.5% of the genome, not 0.1%, as previously thought.

The new genome, called HuRef (which stands for human reference), is the first time that the full or diploid genome, consisting of the DNA in both sets of chromosomes (one from each parent), has been published for one individual (PloS Biol 2007;5(10): e244. Two previous versions of the human genome, published by the Human Genome Sequencing Consortium and by Celera Genomics, were mosaics of DNA sequences from several donors.

Data on more than 20 billion base pairs of DNA were analysed to assemble most of Dr Venter’s diploid genome. This made it possible to determine the contributions of each of the parental chromosomes and to determine the amount of variation between them. Results showed that at least 44% of the genes differed in the two chromosomes.

Dr Venter, chairman of the J Craig Venter Institute, which is based in Rockville, Maryland, said: “We have shown that human to human variation is five to sevenfold greater than earlier estimates, proving that we are in fact more unique at the individual genetic level than we thought.”

Sequencing the genome also showed a wider variety of DNA variants than previously thought. HuRef contained a total of 4.1 million variants between the two chromosomes, covering 12.3 million base pairs of DNA. Of these, 3.2 million were single nucleotide polymorphisms (SNPs, in which just one nucleotide—the basic unit of the DNA strand—is changed). The researchers said that this was a typical number, but they found at least 1.2 million variants that had not been described before.

They also found a surprisingly high number—nearly one million—of non-SNP variants, including insertions and deletions (where a single DNA unit has been inserted or deleted) and copy number variations (where the same gene occurs in multiple copies).

Owen Dyer LONDON
The US medical establishment is failing to enforce professional ethics among doctors who serve in the US military, charges a letter signed by doctors from 16 countries that was published in last week’s Lancet.

The letter compares military doctors working in the Guantanamo Bay detention camp to doctors who helped the South African police question detainees in the apartheid era.

“The attitude of the US medical establishment appears to be one of ‘See no evil, hear no evil, speak no evil,’’” the letter says, pointing out that no military doctor has been charged or disciplined for offences committed in what President George Bush describes as the war on terror (Lancet 2007;370:823). “The failure of the US regulatory authorities to act is damaging the reputation of US military medicine,” it says.

The letter is signed by 260 people, almost all of them doctors, from 16 countries. Many also signed a letter that appeared in the Lancet in March 2006, criticising doctors who participated in the force feeding of prisoners at Guantanamo Bay.

Among the letter’s organisers are David Nicholl, a neurologist at Birmingham’s City Hospital, and the psychiatrist William Hopkins, of the Medical Foundation for the Care of Victims of Torture.

The letter is timed to coincide with the 30th anniversary of the death of the anti-apartheid activist Steve Biko. His death in police custody was at first attributed to a hunger strike but was shown at an inquest to have been caused by head injuries. The inquest also uncovered evidence of gross negligence and the falsification of records by two doctors working with the police, Ivor Lang and Benjamin Tucker.

South African regulatory authorities initially failed to take action, but an eight year campaign by South African doctors ultimately resulted in Dr Tucker being struck off, while Dr Lang received a reprimand.

The letter concludes that “doctors in Guantanamo and elsewhere have made the same mistake as Tucker who, in 1991, said ‘I had become too closely identified with the organs of the State.’”

The AMA did not return calls from the BMJ for comment.

US medical authorities are accused of failing to act over doctors in Guantanamo

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The AMA did not return calls from the BMJ for comment.
Teen suicide rate rises as prescribing of SSRIs falls

Owen Dyer LONDON

“Black box” labels ordered by the US Food and Drug Administration that warn of a greater risk of suicide from certain types of antidepressants may have had an effect opposite to that intended, says new research.

Comparing numbers of prescriptions of selective serotonin reuptake inhibitors (SSRIs) and reported suicides in the United States and the Netherlands, the researchers found that the rate of suicides among children and adolescents rose as numbers of prescriptions of SSRIs fell in 2003-4 (American Journal of Psychiatry 2007;164:1356-63).

Numbers of suicides among Americans aged under 19 years rose by 14% from 2003 to 2004, the study says, the biggest annual increase since systematic recording began in 1979. The same year saw a 22% decrease in the number of SSRI prescriptions to this age group.

In the Netherlands the number of prescriptions of SSRIs fell in 2003-4, and reported suicides in the United States and the Netherlands, the researchers found that the rate of suicides among children and adolescents rose as numbers of prescriptions of SSRIs fell in 2003-4 (American Journal of Psychiatry 2007;164:1356-63).

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In the Netherlands the number of prescrip-
tions of SSRIs fell just as fast, while the country experienced an even larger jump in the number of adolescent suicides, which rose by 49% from 2003 to 2005.

The American data show a startling reversal in the long term trend towards fewer suicides among young people. From 1990 to 2003 the overall suicide rate in the 10-24 age group had fallen 28.5%. Overall, 4599 Americans aged under 24 killed themselves in 2004, making it the third leading cause of death in this age group.

Thomas Laughren, director of the US Food and Drug Administration’s division of psychiatry products, said in a statement: “FDA is obviously concerned about possible negative impacts of labelling changes but also feels a strong obligation to alert prescribers and patients to possible risks associated with the use of antidepressants. We will continue to monitor antidepressant use and suicide rates, and will take appropriate regulatory actions as new data become available.”

David Healy, professor of psychological medicine at Cardiff University, who is one of the people who first suggested a link between use of SSRIs and adolescent suicides, challenged the study’s conclusions. He said that apparent changes in the rate of suicides may really reflect changes in coroners’ verdicts.

Moreover, he said, “a drop in the script rate may involve primarily those on treatment chronically,” accompanied by a “constant or even increased rate of new patients being put on the drugs.” The beginning of treatment with SSRIs is a period that carries a high risk of suicide, he said.

He added that the increase in suicides might be due to doctors switching patients from antidepressants to antipsychotics. But Robert Gibbons, of the University of Illinois at Chicago, the study’s lead author, said that there had been no increase in antipsychotic prescribing as SSRI prescribing fell.
IN BRIEF

Keogh becomes NHS medical director: The cardiothoracic surgeon Bruce Keogh, professor of cardiac surgery at University College London and director of cardiothoracic surgery at the Heart Hospital, London, has been appointed as the new medical director of the NHS in England, leading the work of the government’s clinical directors (or “tsars”), and as deputy chief medical officer.

Prostate cancer is the most likely cancer to show family history: Twenty per cent of patients with prostate cancer had a family history of the disease, says a new study that was based on 206,000 cases (Annals of Oncology doi: 10.1093/annonc/mdm414). It is followed by breast cancer (14%) and colorectal cancer (13%).

Canadian research institute promotes open access: From 1 January 2008 researchers with the Canadian Institutes of Health Research will have to ensure that their original research articles are freely available online within six months of publication. James Till, who chairs a national task force of researchers and stakeholders, says that the new policy will serve as a model for other funding agencies. See www.cihr-irsc.ca/e/34851.html.

Elsevier introduces free web portal: The publisher Reed Elsevier has introduced a web portal for oncologists, financed by advertising, that gives them free access to articles from 100 of its own journals. Oncologists are asked to register their personal information in exchange for immediate access to articles on cancer. See www.oncologySTAT.com.

Israeli judge categorises indoor tobacco smoke as “assault”: Proprietors of public places who fail to enforce smoking bans are “accomplices to assault,” an Israeli district court judge said in a precedent setting ruling. The judge has fined a Tel Aviv restaurant owner the equivalent of $800 (£400; €580) for failing to keep the premises free of tobacco smoke.

HRT raises risk of breast cancer but lessens risk of colon cancer: Women who took hormone replacement therapy for more than two years had a lower risk of colon cancer than women who took it for ≤6 months (hazard ratio 0.8 (95% confidence interval 0.7 to 0.9)) but a higher risk of breast cancer (1.3 (1.1 to 1.6)), a study of 73,000 women found (Annals of Oncology doi: 10.1093/annonc/mdm404). The increase in the risk of breast cancer was less for transdermal HRT (1.3 (1.1 to 1.5)) than for oral HRT (2.1 (1.4 to 3.2)).

Off-label use of erythropoietin may be harmful, doctors told

David Spurgeon QUEBEC

Doctors should be vigilant about the off-label use of erythropoietin to treat anaemia in critically ill patients, says an early release editorial in the journal of the Canadian Medical Association.

The editorial (CMAJ 2007;177:697) is available on the journal’s website (www.cmaj.ca) and is based on a meta-analysis in the journal.

Recombinant erythropoietin, a complex glycoprotein hormone, is approved for the treatment of anaemia in patients on dialysis, patients who have had major surgery, and those undergoing treatment for cancer.

When used off label to treat critically ill patients the drug, which costs about $400 (£200; €290) a dose, will save, on average, less than one unit of blood, will not improve clinical outcomes, and may increase the likelihood of thrombotic complications, says the editorial, by Paul Hebert, editor in chief of CMAJ, and Matthew Stanbrook, the journal’s deputy editor (scientific).

The editorial’s conclusion is based on findings from a meta-analysis of nine randomised controlled trials (CMAJ 2007;177:725-34) and a commentary on the use of erythropoietin in critically ill patients (CMAJ 2007;177:747-9), also available on the journal’s website.

It says that in the United States the hormone’s manufacturers have promoted it aggressively through direct to consumer advertising and incentive payments to doctors, prompting an investigation by the US Congress.

The meta-analysis, which compared erythropoietin with placebo or no intervention, showed that the drug had no significant effect on overall mortality (odds ratio 0.86 (95% confidence interval 0.71 to 1.05); I²=0).

The treatment and control groups did not differ in length of stay in hospital or intensive care unit.

(See Short Cuts p 537)

New partnership is set up to improve aid

Owen Dyer LONDON

A new drive to meet the health commitments of the United Nations’ millennium development goals was announced last week, as Britain and other European countries joined many of the world’s biggest health agencies and foundations to launch the International Health Partnership. The new partnership aims to simplify and improve the delivery of aid to selected developing countries.

Seven “first wave” countries in Africa and Asia will initially join the scheme: Burundi, Ethiopia, Kenya, Mozambique, Zambia, Cambodia, and Nepal.

Six donor countries have signed up to the scheme so far: the United Kingdom, France, Germany, Italy, the Netherlands, and Norway. Other partners include the World Health Organization; the World Bank; UNAIDS (the joint UN programme on HIV and AIDS); Unicef; the Global Fund to Fight AIDS, Tuberculosis and Malaria; the European Commission; and the African Development Bank.

(See Personal View p 565)

Europe witnesses

Rory Watson BRUSSELS

The first known instance of transmission of chikungunya fever by mosquitoes in Europe is currently taking place in northeastern Italy. Previously some travellers from areas where the infection is endemic—parts of Africa, South East Asia, and the Indian subcontinent—had returned home to Europe with the virus. But never before had local transmission taken place.

The virus has been spread by the Aedes albopictus mosquito

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Two thirds favour organ donation after death, but only one in 20 take steps to facilitate it

Clare Dyer BMJ

People in the United Kingdom have a positive attitude to use of human tissue and organs for medical research, education, or transplantation, with 68% saying they are certain or likely to donate their body, organs, or tissue, concludes an independent study carried out for the Human Tissue Authority. However, only 5% of people had already taken the necessary steps to do so.

The research, carried out by Ipsos MORI, found that consent was a key factor in whether people would allow their tissue or organs to be used. Interviewees were given a choice of three options about consent and asked which most closely represented their views. It was possible to choose more than one option.

The highest percentage (46%) said they would be happy for their tissue or organs to be used for any purpose with their prior consent. Some 33% thought it acceptable for their family members to give consent on their behalf after their death, and 19% believed that it was never acceptable to use tissue or organs for any purpose without the consent of the individual or family. Sixteen per cent of respondents said they didn’t know, did not hold any of the three opinions, or refused to answer.

More than 2000 members of the general public were surveyed for the research, the results of which were released at a meeting last week to report on the authority’s progress in its first six months.

The study also included four general focus groups and in-depth interviews with four people: a disabled person aged over 60, a carer, a British Asian, and a practising Muslim.

White respondents, those in higher social classes, and those with confidence in the regulation of human tissue were most likely to see it as acceptable for their organs and tissues to be used.

The authority was set up to regulate the removal, storage, use, and disposal of human bodies, organs, and tissue.

Shaun Griffin, the authority’s director of communications, said that the research would form a baseline for further work and help in formulating codes of practice and informing the public.

The Ipsos Mori report can be found at www.hta.gov.uk.

first local transmission of chikungunya fever in Italy

During August health authorities in the province of Emilia-Romagna detected an unusually high number of cases of febrile illness in two small villages near Ravenna, Castiglione di Cervia and Castiglione di Ravenna. Subsequent analyses confirmed the diagnosis of chikungunya fever.

Between 4 July and 4 September 197 cases were reported of patients experiencing high fever, joint and muscle pains, headaches, rashes, and gastrointestinal problems. The symptoms generally lasted one to two weeks. One death had been reported: an 83 year old man with underlying medical conditions.

The cause of the outbreak is understood to be a visitor from the Indian subcontinent. The person was already infected and developed the symptoms two days after arriving in Italy. The “Asian tiger” mosquito (Aedes albopictus) is thought to be responsible for transmitting the infection in Italy. The height of the epidemic was in the third week of August.

The Stockholm based European Centre for Disease Prevention and Control is working with the Italian health authorities and has issued advice to people visiting or returning from areas where chikungunya fever is present. It emphasises the need to minimise the risk of mosquito bites and recommends that anyone experiencing a fever or unexpected joint pain within 12 days of returning home should seek medical attention. Treatment takes the form of non-steroidal anti-inflammatory drugs or non-salicylic analgesics.

The centre is also encouraging EU governments to raise awareness among healthcare providers of the current outbreak in Italy. See www.ecdc.europa.eu.
BMA calls for investigation into cost of MTAS

Lynn Eaton LONDON

The National Audit Office should carry out a full independent investigation of the cost to the taxpayer of the medical training application service (MTAS), the flawed computerised system used this year to appoint junior doctors to training posts in the UK, says the BMA.

Andrew Rowland, vice chairman of the BMA’s Junior Doctors Committee, says in a letter to the National Audit Office that it’s not just the reported £1.9m (€2.8m; $3.9m) paid to an IT company to set up an online recruitment system that needs to be investigated. He says the potential hidden costs to the tax payer should be looked at as well. These may include the continuing costs of using MTAS to collect data, he says, and of the extra interviews that had to be arranged after the system was abandoned.

“We know that thousands of doctors have had their careers messed up, that many of those who found posts still haven’t been paid properly, and that others are going to be out of post next month,” said Dr Rowland.

“What we don’t yet know is how much public money has been wasted on this failed experiment. The £1.9m paid to the company that set up the failed MTAS IT system is the tip of the iceberg. In some ways we’ll never know the real impact this disaster has had, because we’ll never know how many doctors have been prevented from reaching their full potential or how many patients had their care delayed.”

“The £1.9m paid to the company that set up the failed MTAS IT system is the tip of the iceberg”

The BMA is already investigating continuing problems since junior doctors started their new posts on 1 August. Some doctors are being underpaid, for example. Many are still in temporary posts. These were set up to plug gaps in the system after the collapse of MTAS and while the new arrangements were being sorted out.

A spokesman for the National Audit Office said it had yet to see the letter but that it was unlikely to take any action until the inquiry into the affair being conducted by John Tooke, dean of the Peninsula Medical School, has reported (BMJ 2007;334:818). The House of Commons select committee on health announced in July that it would be looking into the NHS’s Modernising Medical Careers programme and the MTAS system. The audit office spokesman said it would wait until the select committee had reported.

GPs and patients clash over premium rate phone lines

Adrian O’Dowd MARGATE

GPs in the United Kingdom are being urged to consider dropping the use of 0844 phone numbers for their practices, which campaigners say force patients to pay a premium rate for the calls.

Doctors’ leaders, however, have hit back at the accusations, saying that GPs are not making a profit from the lines and that they have improved patients’ access.

Concerns are growing about the extra costs to patients who contact practices that have switched their surgery phone numbers from local geographical codes to the 0844 code. These codes are more expensive, say patients’ groups and the “Say No to 0870” website [http://saynoto870.com](http://saynoto870.com), which campaigns against the use of premium rate codes such as 0870, 0844, and 0845.

But Richard Vautry, deputy chairman of the BMA’s General Practitioners Committee, said his own practice used a 0844 number and that it cost the practice £1000 more than the previous system but was worth it.

“The biggest advantage of using the code was to improve access. “We are able to manage the volume of calls much better,” he said.

Students will no longer get free copies of BNF

Adrian O’Dowd MARGATE

The safety of patients could be threatened by a government decision that will affect the quality of training of young doctors in the use of drugs, say leaders of the profession.

The Department of Health has decided to stop paying for a free copy of the British National Formulary (BNF) for all medical students in England. The move has been described as illogical, shortsighted, and against the current drive to reduce the number of prescribing errors.

The BNF provides up to date information on all drugs available on the NHS and is used daily by more than 200 000 health professionals in the United Kingdom to help them select the correct treatment for patients.

The BNF also helps students develop their knowledge and skills before taking on clinical responsibility. It is published twice a year under the authority of a joint formulary committee comprising representatives of the medical and pharmaceutical professions and the UK health departments.

Dominic Vaughan, the BNF’s publishing director, said, “The BNF is a critical tool for the safe use of drugs. It gives health professionals the information they need to make the best treatment decisions for their patients.”

A recent study of new doctors, published in the British Journal of Clinical Pharmacology (2007;64:363-72), found that training in pharmacology is insufficient to prepare medical students to prescribe safely and rationally.

In December last year students were told they would not receive the BNF, but this decision was overturned in March after pressure from the profession. This, however, proved to be a temporary reprieve, as the government has said it is withdrawing funding for good.

The BMA’s medical students’ committee has reacted angrily to the decision.

A Department of Health spokesman said, “The funding for the provision of the BNF has not been cut or deleted, it has been reallocated to the strategic health authorities, as we believe they are better placed to determine local education and training expenditure priorities.

“It is therefore up to the undergraduate medical deans and BMA medical student committees to approach all 10 health authorities to request funding of the BNF for medical students.”

Competing interest: The BMJ Publishing Group co-publishes the BNF with the Royal Pharmaceutical Society.
Hospital closures: the great taboo

Closing a hospital always generates a public outcry, even if the evidence suggests that closure will improve services. Nicholas Timmins asks why it’s so difficult

Nick Timmins  FINANCIAL TIMES

The Tory MP Kenneth Clarke used to tell a story, when health minister back in the 1980s, of meeting his Italian counterpart, who complained vigorously about the difficulty of closing hospitals, when rationalisation of health services was badly needed in his own country.

“We don’t have a problem,” Ken chortled. “We just close them.” And, at the simplest level, that is clearly true. In the United Kingdom numerous hospitals have closed or merged with their neighbours over the past 40 years. The exact number is hard to pin down because of the frequency of mergers. But the number of beds has certainly decreased: in 1948, when the NHS was founded, the UK had around 550 000 beds; today the figure is half that, at around 228 000 in 2003-4.

True, the great bulk of that reduction is due to the closure of the old mental health asylums and the geriatric “back wards,” whose patients are now in means tested care homes. And people with learning disabilities have been shifted out of hospital and into social care.

Even so, there are 50 000 fewer acute beds than in 1948. It is a measure of how medicine has changed that the amount of activity in that smaller number of beds is way up: more than 15 million finished consultant episodes in 2003-4, against fewer than 4000 discharges and deaths in 1951.

Yet everyone knows that even just reshaping hospital services, let alone actually closing a hospital as a place of safety and asylum. The very name still carries the medieval connotation of a hospital as a place of safety and asylum.

Hospitals bring with them, too, a sense of territory for doctors and staff. This may be less strong now than it was, but beds, and their number, can help define status.

Even when changes are being driven purely on clinical grounds, it can be hard to achieve medical consensus. John Maynard Keynes noted of doctors that “wherever there are five gathered in a room there will be six opinions.” Substitute doctors, and you can probably add one to that.

Human nature also tends to leave hard decisions until they have to be taken. So it is rare for big changes to take place until financial imperatives demand that what is clinically necessary be done—so closures and reconfigurations become tied up in “cuts.”

Politicians’ accountability for tax funded health services does not, of course, make the task any easier. The former health secretary Frank Dobson summed it up: “I am not having a blue plaque on the wall of Barts saying, ‘Founded by Henry I in 1123, closed by Frank Dobson in 1999.’”

Local newspapers and other media get more mileage from highlighting opposition than support. Local MPs—witness Hazel Blears, Labour party chairwoman, campaigning against recently approved changes to services in Manchester—find it hard to go public, even when privately convinced of the case. Kidderminster is engraven on politicians’ hearts. There, in 2001, Richard Taylor, a local doctor, took the parliamentary seat from a Labour minister when the local hospital was due to lose its “blue light” accident and emergency department. That case too, however, showed how horribly things can go wrong when health authorities do a lousy job of presenting the case for change. During that election campaign it was almost impossible to find anyone in the town who did not believe that the entire hospital was closing—not just the blue light service.

Perhaps too, for understandable reasons, there is a reluctance to spell out clearly that changing technology and work patterns have made existing services unsafe—or less safe than they should be. NHS managers worry that saying this bluntly risks frightening patients and demoralising staff. So the talk is of improvement, not risk. A better, blunter, language may be needed; it is not impossible. Aneurin Bevan managed it. He would, he declared, “rather be kept alive in the efficient if cold altruism of a large hospital than expire in a gush of warm sympathy in a small one.”
**Patients do better when doctors follow guidelines**

Doctors are notoriously bad at following guidelines. Perhaps they would do better if it was clear that following guidelines made a real difference to patient outcomes. Proving this is difficult, but in one recent study researchers did find a link between guideline based care and better outcomes for patients with depression.

They did a secondary analysis of data collected between 1996 and 1998 in three randomised trials from the US, by developing a quality indicator that measured participating primary care doctors’ adherence to national guidelines. The doctors were good at recognising depression and starting treatment. They weren’t so good at long term follow-up, adjusting treatment when necessary, or assessing alcohol use or patients’ risk of suicide. They were particularly poor at following guidelines on the treatment of older people with depression.

The researchers found that doctors’ scores on the quality indicator significantly predicted patients’ scores on a modified depression scale 12, 18, and 24 months after enrolment. Better adherence was associated with fewer symptoms and a lower risk of persistent depression.

These data are old and practice has changed, says an editorial (p 342). But the principle of the study is sound: guidelines should be tested to see if they improve patients’ symptoms. If they don’t, they should probably be changed.


**Combined antihypertensive may not be as good as it looks for type 2 diabetes**

A large international trial reports that a fixed combination of the angiotensin converting enzyme (ACE) inhibitor perindopril and the diuretic indapamide protects people with type 2 diabetes from cardiovascular disease and microvascular complications (combined hazard ratio 0.91, 95% CI 0.83 to 1.00, P=0.04) and death (0.86, 0.75 to 0.98, P=0.03). This pragmatic placebo controlled trial investigated unselected participants with a range of blood pressures including normal, and the authors think that the combination could become routine treatment for this disease. They estimate that if half the people in the world with diabetes received this treatment more than one million deaths would be prevented over five years.

A linked editorial is more cautious however (p 804). Participants who took the active pill had lower blood pressure than those given a placebo, which is odd considering that 83% of controls were also taking drugs to lower blood pressure, including perindopril, by the end of the trial. Most antihypertensives are equally effective at moderate doses, so if lowering blood pressure is what counts, not how you do it, doctors would be better off prescribing a cheaper generic ACE inhibitor such as lisinopril. They should also be prepared for a higher incidence of cough than reported in this trial (active treatment 3.3%, placebo 1.3%), says the editorial. Susceptible participants were weeded out before randomisation.

*Lancet* 2007;370:829-40

**Impregnated catheters reduce bacteriuria and funguria in trauma patients**

Urinary infections are a serious threat to sick inpatients, and they are usually associated with indwelling catheters. There is some evidence that impregnating catheters with antimicrobial agents such as nitrofurazone can help prevent nosocomial infections, and the latest trial extends this evidence to trauma patients from Denmark.

In a randomised double blind trial, patients given an impregnated catheter were significantly less likely to develop bacteriuria or funguria than those given regular silicone catheters (9.1% (7/77) v 24.7%, (19/77); adjusted relative risk 0.31, 95% CI 0.14 to 0.70). They were also less likely to need a change of antibiotic or to start new antibiotics. Mortality and length of hospital stay were unaffected.

The trial wasn’t perfect—58 (27.4%) patients were omitted from the per protocol analysis, mostly because they died or needed a catheter for less than 24 hours—but the authors did a series of different analyses, most of which suggested that the impregnated catheters were beneficial. Preventing bacteriuria is different from preventing significant infections or sepsis, but the two are related, say the authors. The impregnated catheters were not associated with excess growth of bacteria resistant to nitrofurantoin, the antibiotic most closely related to nitrofurazone.


**Poor communicators attract complaints**

Poor communication is the most common reason for complaints against doctors in Canada, and doctors who do badly in communication tests are most likely to generate complaints, researchers have found.

Medical graduates in Canada must pass the clinical skills examination to get a licence. When researchers looked for a link between scores in the communication part of this test and complaints during up to 12 years of practice, they found that doctors in the lowest quarter were 52% more likely to have a complaint upheld against them than those in the top quarter (adjusted relative risk 1.52; 95% CI 1.30 to 1.78). One in 10 of all upheld complaints were accounted for by doctors in the lowest group (population attributable fraction 10%, 6.0% to 13.9%). Overall, 17% of the 3424 doctors in the study had at least one complaint upheld against them. Almost half the complaints were about poor communication or attitude.

This suggests that a national licensing assessment can help predict a doctor’s likelihood of attracting complaints, say the researchers, although the association found here wasn’t particularly strong. Perhaps the
clinical skills examination and other tests can be improved to assess communication skills more efficiently. Then we can begin to establish whether targeted training for those who struggle can reduce complaints.  

**JAMA 2007;298:993-1001**

**Erythropoietin not recommended for most critically ill patients**

Intensivists should not prescribe erythropoietin to critically ill patients unless they are part of a clinical trial says an editorial (p 1037), after a large randomised trial reported that weekly treatments made no difference to patients’ transfusion requirements but increased their risk of thrombotic vascular events (hazard ratio 1.41, 95% CI 1.06 to 1.86).

The trial comprised 1460 medical, surgical, and trauma patients admitted to intensive care units in 115 different hospitals. Just over half received 40 000 units a week of epoietin alfa, a recombinant version of human erythropoietin. The rest had placebo injections. Both groups had up to three doses, starting at least two days after admission.

The results for mortality were inconclusive. In one analysis, epoietin alfa reduced overall mortality after 29 and 140 days. In another analysis, it didn’t (0.79 [0.56 to 1.10] after 29 days and 0.86 [0.65 to 1.13] after 140 days). The study’s authors believe and emphasise the results of the first analysis. The editorial’s authors, who are independent of the trial’s sponsors, believe and emphasise the results of the second analysis. The only subgroup to benefit consistently were patients admitted to the intensive care unit after trauma. Subgroup analyses are famously unreliable. This one may justify further trials, but not the wholesale treatment of critically ill trauma patients with epoietin alfa, says the editorial.  

**N Engl J Med 2007;357:965-76**

**US patients unharmed by shorter working hours for doctors**

In July 2003, the US authorities limited working hours for medical residents in teaching hospitals. Since then, researchers have been trying to find out if the changes have been good or bad for patients.

The data so far have been reassuring, says one editorial (p 1053). Of the three biggest studies looking at patient mortality, two reported slight improvements and one no change in the two years after the reforms. Limiting working hours seems to have done no overall harm to patients’ chances of surviving a hospital admission. The two most recent studies examined death rates in high risk surgical and medical patients before and after the changes. Medicare patients admitted to general non-federal hospitals were unaffected, although there was a slight but measurable reduction in mortality among medical patients admitted to Veterans Affairs hospitals with a high commitment to teaching.

We still don’t know for certain the effects of the reforms on medical costs, patient morbidity, or the risk of medical errors, and more work needs to be done, says the editorial. Whatever happens, the reforms are unlikely to be reversed because of the obvious benefits to US residents. They now work no more than 80 hours a week, and no more than 24 hours at a time.  

**JAMA 2007;298:975-83, 984-92**

**Food additives impair children’s behaviour**

Parents have long suspected that artificial food colourings and preservatives are linked to hyperactive behaviour in children. Now they have data. In a placebo controlled trial with a double blind cross over design, children were significantly more hyperactive during weeks when they were given additives than during weeks when all additives were removed from their diet. The effect was small but measurable in 3 year olds and in children aged 8-9, particularly those children who complied best with the trial’s protocol.

Researchers tested two mixes of additives containing a sodium benzoate and a smaller (mix A) or larger (mix B) amount of commonly used colourings. The 153 children aged 3 were most affected by mix A. The 91 most compliant 8-9 year olds were affected by both. Parents and teachers rated their behaviour using established scales, from which the researchers derived an aggregate score.

These results add to a growing body of evidence linking food additives to hyperactive behaviour in children. But it is not yet clear which additives are responsible. This trial tested a combination of sodium benzoate, sunset yellow (E110), carmoisine (E122), tartrazine (E102), and ponceau 4R (E124), all commonly found in sweets.  

**Lancet 2007 doi: 10.1016/S0140-6736(07)61306-3**

**New drug for atrial fibrillation passes its first test**

Sanofi Aventis has developed a new drug treatment for atrial fibrillation. Dronedarone is a modified relative of amiodarone, and it worked well in two identical placebo controlled trials. Participants were in sinus rhythm when randomised, and the drug kept them in sinus rhythm significantly longer than placebo in both trials.

It is good to know that the drug works better than nothing, but patients and doctors would also like to know whether it works better and more safely than currently available treatments including amiodarone, says an editorial (p 1039). The safety profile looks reasonable so far, but only large head to head trials with a long follow-up will provide the answers everyone is waiting for.

Sanofi Aventis designed dronedarone to have fewer adverse effects on thyroid function and lung function than amiodarone, but the company is not required to compare the new drug directly with amiodarone or anything else to get a licence. In their placebo controlled trials, patients taking dronedarone were not at increased risk of hypothyroidism or hyperthyroidism, and the authors found no evidence of pulmonary toxicity during the 12 month trial period. Patients with heart failure were excluded from both trials because a previous study suggested that dronedarone might increase their risk of death.  

Improving health through wealth

Last week, the WHO’s Commission on the Social Determinants of Health set out its vision for tackling health inequity. Lynn Eaton looks at one project that has put social determinants at the top of the agenda and how the commission is working.

It’s more than two years since the Make Poverty History campaign was launched, in January 2005, with the razzamataz of pop stars, politicians, and the public flaunting their white wrist bands and calling on world leaders to tackle the root causes of poverty.

As pop star Bono, who was involved in the campaign, said at the time: “We can make extreme poverty history, I really believe that. The kind of stupid poverty where kids are dying for the lack of an immunisation that costs 20 cents, or for lack of food in a world of plenty. Don’t we want to be the generation that says no to that?”

Against this ground-swell in public opinion, the World Health Organization set up its Commission on the Social Determinants of Health in March 2005—albeit with a lot less fanfare. Its brief was to investigate the social factors that affect health, including unemployment, unsafe workplaces, urban slums, globalisation, and lack of access to health systems.

For many governments exposing the links between wealth and health is unpalatable—especially in societies based on capitalist models. In the UK, for instance, former prime minister Margaret Thatcher sought to bury Douglas Black’s report on the inequalities of health.

Organisations like WHO and the Bill and Melinda Gates Foundation, meanwhile, have tended to take a disease based approach to health—offering treatments for tuberculosis or HIV infection but often failing to consider the social context in which these treatments are given. It’s an approach adopted by many governments too, and one that continues to frustrate practitioners who are trying to empower those affected by illness and disease.

“There is huge money for HIV/AIDS, but they don’t make any connections,” says Mirai Chatterjee, one of the 20 commissioners, speaking of her government in India. “We explained that you can’t do anything without taking a broader and more holistic approach.”

Integration in action
Dr Chatterjee is the coordinator of social security for India’s Self-Employed Women’s Association (SEWA), a trade union of over 200,000 self employed women. She is responsible for the union’s health care, child care, and insurance programmes.

“Our government takes this vertical approach,” explains Dr Chatterjee. “If they are talking about HIV/AIDS, they won’t look to the left or the right. It is blinkered vision. They don’t build in cooperation between health and social security. Instead, it’s all in boxes.”

Encouraging politicians to make those connections is a tough call for WHO’s commission. It is to run for only three years, until 2008, and its interim report was published this week. The commission comprises an impressive array of academic and political luminaries (box). “I’m one of the few there who is working at the grass roots and felt a bit overloaded in the presence of such heavyweights,” admits Dr Chatterjee. “I guess the reason SEWA was involved was because we try to put into practice social determinants of health.”

The union was set up in 1972 for poor, self employed women workers who were not entitled to welfare benefits. It originally included women working at home on textiles but then spread to other areas of work such as the construction industry. Although it stemmed from a need to improve the work and economic conditions of women, it was only a matter of time until the union tackled health issues as well.

“We realised very quickly that if you want to organise women and to help them reach self reliance, without looking to their well being, it is not going to start,” says Dr Chatterjee. “Health and child care and insurance is also part of their economic condition. Without that you can’t come out of poverty.”

“We are not a health NGO [non-governmental organisation]. We are a trade union. But we have to work on several fronts,” she says.

The union began to offer health care in 1984, initially in Gujarat, north west India, where it has the majority of its members. Health provision is now one of the union’s

**Commission’s movers and shakers**
The commission is headed by Michael Marmot, director of the International Institute for Society and Health and professor of epidemiology and public health at University College, London. Other commissioners include: Ricardo Lagos, former President of Chile; Giovanni Berlinguer, Italian parliamentarian who introduced Italy’s first national health plan in 1968; Monique Bégin, former health minister of Canada; Denny Vägerö, professor of medical sociology, Stockholm University; Yan Guo, professor of public health at the Peking University Health Science Centre; William H Foege, emeritus professor of international health, Emory University.
largest projects and has been developed in seven other states where the union has members, including Madhya Pradesh.

Members have access to health care that is run by the women themselves, and the emphasis is on health education. Most members pay an annual premium of 85 rupees (£1; €1.5; $2) towards a health insurance policy. This covers the costs of inpatient care to a maximum of 2000 rupees a year.

The union has also run a series of campaigns to overcome the social determinants of health—including one for better water. Women in one Gujarat village, for example, have been trained to mend the pump for the wells and now have responsibility for repairs in 11 villages. And in areas where there are regular droughts, the women have campaigned for underground water tanks that are filled by delivered water. Its calls for improved food security have resulted in a programme to distribute food grain in remote areas of Gujarat.

The union also links up with government health services for immunisation, family planning, tuberculosis control. Its health team has also started two community based centres to diagnose and treat tuberculosis, in partnership with the government and WHO.

“What the commission is saying, instinctively all our members have been saying all these years,” Dr Chatterjee states.

Commission’s role
So, if all this happened without the help of the commission, what difference does the commission make? “It is basically giving what we are doing on the ground the boost. It’s coming up with the evidence not just in India or in SEWA. The commission is highly regarded in India. The minister of health is very much aware of the commission. You get listened to—although how much they do is another question. Everything moves in India at an elephant’s pace.”

It’s a two way process: it is not just about the commission trying to influence the Indian government, but about the trade union being able to inform the work of the commission and to show how its movement might be a model for women elsewhere.

Although Dr Chatterjee is meant to bring the “grass roots” voice, the commission is also going out to listen to the views of others on the ground through what it calls its civil society–a network of representatives who feed in their views. The commission also has a separate knowledge network of various experts across the globe, covering areas such as child development, public health, and social exclusion.

David Sanders, director of the School of Public Health at the University of the Western Cape, South Africa, is a member of the knowledge network. Despite this, he is critical of some aspects of the commission’s work: “In theory the commission’s approach has been good,” he says. “It is giving social determinants a higher profile in health policy discourse. But in practice, it is less good.”

He believes the commission has side stepped one of the key issues behind social determinants of health, which he describes as the political issue: “The issue of power imbalances that lie behind inequitable economic globalisation and other determinants, such as squallid urbanisation, social exclusion, and so on, seem to have been studiously avoided,” he said. These are, he says, “not merely a technical issue.”

The commission has not had the time or the money to involve the public in a meaningful way in its work, he argues. “Time constraints have been major, sometimes due to bureaucratic delays within WHO,” he says, citing delays in finalising the contracts with civil society coordinators. “Reports were often required at short notice for the commission.”

And he described the amount of money made available for civil consultation as having been derisory in Africa. “In fact, my impression is that much more has been spent on other components such as meetings of commissioners and invitees brought to Geneva for short consultations, than on the whole civil society consultation process on three continents.”

Dr Chatterjee accepts that many people will criticise the commission as yet another talking shop. “I had some reluctance to join the commission,” admits Dr Chatterjee. “I didn’t have time to be in a talking shop. Neither do the other commissioners.

“But my sense is that the people involved are action orientated. It’s a great learning forum—it’s not like we’ve got it all off pat here at SEWA.”

The jury may still be out on the commission’s work to date but, if we like some want to say no to the kind of poverty that leaves children dying for lack of an immunisation, this is one place to start.

Lynn Eaton is a journalist

Competing interests: None declared.

From the archive: MK Ranson et al. Equitable utilisation of Indian community based health insurance scheme among its rural membership: cluster randomised controlled trial. BMJ 2007;334:1309-12, doi: 10.1136/bmj.39192.719583.AE


The government’s plan for reforming London’s health care will be to the detriment of primary care

Ara Darzi is an eminent and respected professor of surgery at Imperial College London, and he is now a junior health minister in Gordon Brown’s government. It is clear from the academic literature that he knows an immense amount about surgery in general and laparoscopic surgery in particular. However, tragically it is equally clear, from reading his vision for transforming health care in London, Framework for Action, that he has learnt nothing about general practice and primary care. Given the robust evidence that a strong basis in primary care improves the effectiveness and efficiency of healthcare systems, and when primary care is responsible for 82% of contacts with patients in the NHS, it must be asked whether he could possibly be a good idea to ask a tertiary care specialist to redesign the provision of primary care.

The key part of Professor Darzi’s plan is a network of “polyclinics,” each serving a population of around 50,000 people and within which GPs and specialists are to work side by side. This innovation is supposed to improve the integration of and accessibility to the health service in London, but this hope is based on a profound misunderstanding of the utility of differentiating medical generalists from specialists. Generalists working at the point of first contact develop pragmatic skills that enable them to deal with the uncertainty that is inevitable when the prevalence of serious disease is low and to manage safely the vast majority of problems presented to them. Only 5% of GPs’ consultations result in referral to specialist care; and this interface between primary generalist care and secondary specialist care marks a step change in the prevalence of serious pathology, which enables specialists to use costly investigations and skills in a focused and effective way.

The BMJ has had a perceptive rapid response to its initial coverage of the Darzi report, from Vasily Vlassov of the Moscow Medical Academy (www.bmj.com/cgi/eletters/335/7610/61-a). He points out that in Russia they know a thing or two about what happens when generalists and specialists are brought together in polyclinics: generalist skills are damaged because care is fragmented and continuity is disrupted; specialist skills are eroded by work with populations where prevalence is low and where the predictive values of symptoms, signs, and investigations diminish proportionately. Given the UK’s recent record of introducing sweeping change without piloting and evaluation, it becomes even more essential to pay heed to the experience of others.

Framework for Action uses the simplistic vignettes that seem to have become compulsory in NHS policy documents, showing the imperfections of the present alongside the best of all possible worlds, which must inevitably result from the careful implementation of Professor Darzi’s vision. The problem from the perspective of everyday general practice is that each patient in these stories has only one problem. Kishore has diabetes; Andrew has pneumonia. Unfortunately, the real test of a health service arises when one of these patients is also an alcoholic or has schizophrenia. The report makes no mention of the complex situations that are a daily occurrence in London general practice, involving patients who, while theoretically able to benefit from the provision of multiple services on a single site, are much more often frightened and intimidated and so find it easier to engage with local services on a more domestic scale and at a distance from large institutions.

The framework describes two possible locations for polyclinics, which are to be “more accessible and less medicalised than hospitals.” One location is “freestanding . . . in the community”; the other is “co-located with every hospital” as the “front door” to accident and emergency (A&E).

Perhaps only a tertiary care consultant is able to see a polyclinic located at the front door of A&E as more accessible and less medicalised than the hospital itself. The scarcity and expense of vacant land in London makes the freestanding option less likely and the prospect of primary care controlled by hospital foundation trusts proportionately more so. In whose interests will this work?

The document has an admirable ambition of addressing health inequalities, and it explicitly acknowledges that the most deprived areas with the greatest health needs require better access to high quality health care. But, in the context of a plan that puts an emphasis on productivity, the problem remains that patients with the greatest needs will always need more time. Those on the losing end of health inequalities are much more likely to have multiple physical, mental, and social problems, each of which compounds the others. The report says that “mental health service users should be put in control,” but the emptiness of this rhetoric is underlined by the admission that advice on mental health services was taken from a group made up of 10 chief executives, one management consultant, one “development consultant,” and one race equality director. No clinicians of any sort were included, let alone any of the patients who are to be put “in control.”

Professor Darzi wants a “world-class health care system” for a “world-class city.” Unhappily, the city itself generates enormous socioeconomic inequalities, with obscene differentials in opportunity and life experience. No health service, however perfect, can prevent these differentials being reflected in the health of those who live them. Yet health inequalities are being used as the justification for reorganising health care and disrupting and further fragmenting general practice and primary care. Londoners have a much better chance of a decent health service through incremental improvements that build on those excellent services that already exist, rather than through the visions of a professor and a government neither of whom is able to see, let alone develop, the strengths and potential of generalist medical care.

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Who thought it could possibly be a good idea to ask a tertiary care specialist to redesign the provision of primary care?
Cosmetic surgery gets under Dutch skin

A documentary has seen thousands rally against cosmetic surgery for under-18s, writes Tony Sheldon.

Television programmes in the United States and Italy have been criticised in the past for trivialising cosmetic surgery and misrepresenting the realities of taking such a step (BMJ 2003;327:295 and BMJ 2004;328:520). Now a frank Dutch documentary, in which the film-maker is shown consulting a surgeon on whether to have vaginal surgery, has ignited a campaign in the Netherlands to ban non-essential cosmetic surgery for under-18s.

In Beperkt Houdbaar (Over the Hill), broadcast in the Netherlands this month for a second time, we see Dutch film maker Sunny Bergman visiting a cosmetic surgeon. “You could really, really stand for a laser reduction labioplasty,” the surgeon enthusiastically declares, eventually concluding his critique of Ms Bergman’s vagina with: “You need the full works, my dear.”

The price starts with “laser vaginal rejuvenation for enhancement of sexual gratification, that’s $8000.” The surgeon says, “With that you will have need the full works, my dear.”

Why women feel a need to change their bodies to feel good is tackled head on in Bergman’s provocative documentary. It has sparked a fierce debate on the negative influence of the media and cosmetics industry on women’s self image.

It stresses the huge impact of an idealised cultural norm of youth and beauty served up by television, magazines and the internet, such that by the time every girl reaches 17 she is likely to have seen an estimated 250 000 beauty related images. Every year in the Netherlands 1 000 young women seek cosmetic vaginal surgery—but why?

One factor blamed is today’s manipulation, or “Photoshopping,” of images, almost universal in Dutch glossy and youth magazines. To illustrate this Bergman has her image manipulated with Photoshop—a line brushed out, the upper lips balanced, and eyebrows straightened. You see now the “sexy and glamorous” Photoshop image next to the “ugly sister” of reality.

Since Beperkt Houdbaar was first broadcast in March more than 7000 people, including many Dutch MPs, have signed a manifesto against “the sexualisation of society” where feminine images are defined exclusively by unrealistic ideals of beauty. The Society of Sexuology, comprising professionals working in health and education, has backed the manifesto, in particular its proposal to ban non-essential cosmetic surgery for under-18s. Legal challenges are also being considered against the cosmetics industry and, this month, several magazines are to state if they use manipulated photos or whether they are “Photoshop free.”

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Tackling therapeutic inertia: role of treatment data in quality indicators

Many patients with hypertension remain undertreated despite the apparent rosy picture given by doctors meeting current targets. Different measures are needed to overcome therapeutic inertia, argue Bruce Guthrie, Melanie Inkster, and Tom Fahey.

Inadequate management of risk factors for conditions such as hypertension, diabetes, and coronary heart disease remains an important international challenge. One approach is to set healthcare providers targets for blood pressure, glycated haemoglobin, or cholesterol levels in their populations. Such targets are commonly used as an indicator of quality of health care and are increasingly being incorporated into programmes that pay providers for performance. However, we show that fixed targets fail to identify clear opportunities for improving health care. We propose that future measures should include treatment information, which is more closely linked to better control of risk factors.

Evidence from observational studies

Poor control of hypertension is defined as a failure to meet recommended blood pressure goals. Barriers to controlling hypertension include patient factors, such as non-adherence to lifestyle advice or drug treatment, and healthcare provider factors, including the organisation or environment where care is delivered. As measurement of quality of risk factor management has become routine, more attention has been paid to provider factors generally, and particularly therapeutic inertia—the failure to start new drugs or increase the dose in patients with an abnormal clinical measurement.

Observational studies in the United States have found that therapeutic inertia is common in hypertension, and hypercholesterolaemia, and is associated with poor control of risk factors known to be linked to longer term health problems. In our 2002 observational study of 560 hypertensive patients from eight general practices in Tayside, Scotland, adherence to blood pressure lowering treatment was high (mean 91%). However, in terms of the British Hypertension Society guidelines at the time, had blood pressure was measured again in that consultation, 211 (70%) of whom were taking fewer than three antihypertensive drugs.

Table 1 shows the proportion of consultations in which patients with inadequate control did not have their treatment intensified. Treatment was not intensified in nearly half (45%) of consultations in which the patients had a single suboptimal blood pressure reading (box see bmj.com). Similarly, no intensification occurred in 36% of consultations after two successive suboptimal blood pressure readings, and 27% of those taking fewer than three drugs.

Treatment intensification: definition and predictors

Treatment intensification was defined as either the prescription of a new class of antihypertensive drug or an increase in dose of an already prescribed drug. Intensification was considered to have happened if treatment was changed within six weeks of the consultation, providing that blood pressure was measured again in that period. This was to allow for delay in changing treatment when blood pressure was measured in secondary care or by primary care nurses, with subsequent prescription by general practitioners.

We examined predictors of treatment intensification using a random effects logistic regression model to account for repeated consultations by patients over time, and crude and adjusted odds ratios were calculated. To adjust for changes of treatment that were not an intensification in response to a suboptimal blood pressure, we chose reference categories for blood pressure variables (systolic <140 mm Hg, diastolic <80 mm Hg) below which treatment changes can be assumed to be solely due to other factors (management of coexisting conditions or drug side effects). Odds ratios therefore reflect treatment intensification above this baseline rate of treatment change.

Table 1 | Numbers (percentages) of final consultations in 2002 in which treatment was not intensified among patients with poor control of blood pressure

<table>
<thead>
<tr>
<th></th>
<th>Single measurement ≥ threshold</th>
<th>Two consecutive measurements ≥ threshold</th>
<th>Two consecutive measurements ≥ threshold and taking ≥ 3 antihypertensive drugs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No (%)</td>
<td>95% CI</td>
<td>No (%)</td>
</tr>
<tr>
<td>Optimal control*</td>
<td>163/360 (45)</td>
<td>41 to 50</td>
<td>107/299 (36)</td>
</tr>
<tr>
<td>Audit standard control</td>
<td>75/254 (30)</td>
<td>26 to 34</td>
<td>36/181 (20)</td>
</tr>
</tbody>
</table>

* ≥140/80 mm Hg without diabetes, ≥140/80 mm Hg with diabetes.
† ≥150/90 mm Hg without diabetes, ≥140/85 mm Hg with diabetes (similar to current UK quality and outcomes framework threshold).
Therapeutic inertia persisted in a substantial proportion (16-30%) of consultations when blood pressure control was defined in terms of the less stringent audit criteria. Multivariable analysis showed a strong, graded relation between treatment intensification and increasing systolic or diastolic blood pressure (see table 2, bmj.com). However, doctors were more likely to intensify therapy when blood pressure exceeded 150/85 mm Hg for the current consultation or 150/90 mm Hg for the previous consultation. Intensification was progressively less likely as the number of antihypertensive drugs being taken increased. Our findings are consistent with data from a recent large US study, in which a third of patients with persistent blood pressure ≥160/100 mm Hg had no change in treatment or spontaneous return to lower blood pressure over six months (although the study did not examine if this reflected prescribing decisions or patient adherence).

Evidence from randomised controlled trials

The effectiveness of intensification of therapy in reducing blood pressure and other outcomes is well established. The landmark randomised trial, the hypertension detection and follow-up programme, showed that a “stepped care” approach incorporating regular review, adherence reminders to patients, and an explicit programme of treatment intensification produces substantial falls in blood pressure and reduces all cause mortality. Indeed, a two year post-trial surveillance study showed that blood pressure control returned to usual care levels when the stepped care arm of the study was discontinued. More recently, a multimethod quality improvement intervention (dissemination of practice guidelines and quarterly comparative performance reports allied with academic detailing to share “best practice”) produced a modest improvement in the diagnosis and control of hypertension compared with performance reports alone.

Use of process information to assess care

The UK quality and outcomes framework is the largest pay for performance programme in health care. About a fifth of general practice income is linked to performance targets in guidelines do not neatly translate into robust measures of quality.

Irrespective of the target or standard used, a quality indicator that simply measures the proportion of patients achieving a particular blood pressure or other intermediate outcome does not give any indication of whether and how quality can be improved. An analogy is with road signs. Knowing how far you are from your destination is important, but more helpful is a sign that shows you how to get there.

Intermediate outcome measures that incorporate treatment information can serve several purposes. Firstly, whatever the risk factor target being used, they clearly signpost an opportunity for improving quality and can drive consultation based clinician reminders, recall systems, and decision support systems in practices with electronic medical records. Secondly, they provide a more transparent accounting of performance.

Knowing how far you are from your destination is important, but more helpful is a sign that shows you how to get there.

To be useful, numbers need to be accompanied by directions and missed opportunities for tighter control. In fact, framework performance has been remarkably high. For instance, in Scotland in April 2006, 93.4% of patients with hypertension had had their blood pressure recorded in the previous nine months, and 79.6% had a blood pressure below the payment target of 150/90 mm Hg. Almost all Scottish practices achieved near maximum payment as a result.

Table 3 shows data from the practice of one of the authors, which achieved maximum payment for blood pressure control across all diseases. A quarter of patients do not achieve the quality and outcomes framework target, and nearly half do not achieve the British Hypertension Society guideline levels (although since blood pressure control is assessed on a single reading, not all will have persistently high blood pressure). An obvious interpretation is that blood pressure control is inadequate, but this conclusion is limited by the lack of consensus about what proportion of patients can achieve target blood pressures. This illustrates how aspirational targets in guidelines do not neatly translate into robust measures of quality.

Irrespective of the target or standard used, a quality indicator that simply measures the proportion of patients achieving a particular blood pressure or other intermediate outcome does not give any indication of whether and how quality can be improved. An analogy is with road signs. Knowing how far you are from your destination is important, but more helpful is a sign that shows you how to get there. Adding treatment information clearly identifies a substantial group of patients with uncontrolled blood pressure who have relatively low intensity treatment (≤2 drugs), suggesting therapeutic inertia.

Intermediate outcome measures that incorporate treatment information can serve several purposes. Firstly, whatever the risk factor target being used, they clearly signpost an opportunity for improving quality and can drive consultation based clinician reminders, recall systems, and decision support systems in practices with electronic medical records. Secondly, they provide a more transparent accounting of performance,

<table>
<thead>
<tr>
<th></th>
<th>Controlled</th>
<th>Not controlled</th>
<th>Not measured in past 9 months</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All</td>
<td>≤1 drug</td>
<td>≤2 drugs</td>
</tr>
<tr>
<td>Government target*</td>
<td>494 (66.6)</td>
<td>185 (24.9)</td>
<td>90 (12.1)</td>
</tr>
<tr>
<td>British Hypertension Society Guidelines 2004†</td>
<td>348 (46.9)</td>
<td>323 (43.5)</td>
<td>192 (13.8)</td>
</tr>
</tbody>
</table>

*Quality and outcomes framework target ≤145/85 mm Hg in patients with diabetes; ≤150/90 in other patients.
†Audit standard ≤140/80 mm Hg in patients with coronary heart disease, diabetes, or renal disease; ≤150/90 mm Hg in other patients.
particularly when performance determines pay. Finally, they inform the setting of plausible benchmarks of achievement in quality improvement and pay for performance programmes. They also achieve several desirable technical criteria for managing risk factors in chronic disease. Information on treatment processes is tightly linked to the desired clinical outcome because action to intensify treatment improves the risk factor profile for most patients, reducing the chance of mortality and morbidity.

However, it is crucial to recognise that intensification is not always appropriate. One obvious way to try to improve blood pressure control would be to reduce the framework target thresholds, which are generally higher than current guidelines. Our proposal is to focus attention on patients with low intensity treatment and blood pressures well above guideline ideal targets, ensuring that patients identified are more likely to benefit from intervention. Many patients treated for hypertension and dyslipidaemia are at the lower end of the risk spectrum. For these patients the trade-off between lifelong drug treatment and modest absolute risk reduction is highest, and patient preference is likely to have the greatest effect on treatment choice. In the face of marginal benefit and informed patient preference, therapeutic inertia can be good care.

As tools to communicate risk and benefit become commonplace, patient preference is likely to become explicitly incorporated into quality of care measures. Being able to account for individual patient preference and circumstances is an important part of proper accounting for quality, but the process has to be transparent so that policymakers and the public can distinguish between rational decisions by clinicians or patients and gaming of the payment system.

In the UK, a first step to proper accountability would be for the published quality of care measures to list reasons why patients have had exceptions reported for particular targets.

In conclusion, we argue that incorporating treatment information into intermediate outcome indicators will signpost how practices can improve management of risk factors by identifying and reducing therapeutic inertia. A first step will be to measure the extent to which opportunities for intensification exist among patients with poorly controlled blood pressure and other intermediate outcomes, and whether this varies by practice and by patient characteristics such as age and socioeconomic status. Subsequent identification of opportunities for intensifying treatment will require multiple methods including prompts and decision support for healthcare providers to make treatment more systematic, together with suitable interventions to promote patient involvement in decision making and to enhance adherence. Use of electronic medical records and linked computerised clinical decision support systems will be central to this integrated approach, although the implementation of these systems in routine practice requires evaluation. This approach also increases accountability by showing whether practices have responded to opportunities to improve intermediate outcomes.

**SUMMARY POINTS**

Failure to respond to abnormal measurements is a major barrier to good control of cardiovascular risk factors.

- Targets for risk factor levels are used to guide current international quality improvement programmes. Meeting these targets does not guarantee good management.

- Quality indicators should incorporate information that reflects the process of care.

- Treatment information would clearly identify opportunities for intervention and improved patient care.

**Contributors and sources:** BG conceived the idea for this analysis of the data, planned and conducted the data analyses in collaboration with the other authors, and led the writing and revision of the article. BG is currently a Harkness fellow in healthcare policy in University of California San Francisco examining international quality assessment methods. MI collected the data, and contributed to the writing and drafting of the paper. TF conceived the original study, obtained funding, supervised data collection, and contributed to the writing and drafting of the paper. TF was chair of the national clinical indicators strategy working group. Quality Improvement Scotland (QIS) 2006-7, and the group was important in formulating ideas that appear in this article. BG is the guarantor.

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Changes in child exposure to environmental tobacco smoke (CHETS) study after implementation of smoke-free legislation in Scotland: national cross sectional survey

Patricia C Akhtar,1 Dorothy B Currie,1 Candace E Currie,1 Sally J Haw2

ABSTRACT

Objective To detect any change in exposure to secondhand smoke among primary schoolchildren after implementation of smoke-free legislation in Scotland in March 2006.

Design Comparison of nationally representative, cross sectional, class based surveys carried out in the same schools before and after legislation.

Setting Scotland.

Participants 2559 primary schoolchildren (primary 7; mean age 11.4 years) surveyed in January 2006 (before smoke-free legislation) and 2424 in January 2007 (after legislation).

Outcome measures Salivary cotinine concentrations, reports of parental smoking, and exposure to tobacco smoke in public and private places before and after legislation.

Results The geometric mean salivary cotinine concentration in non-smoking children fell from 0.36 (95% confidence interval 0.32 to 0.40) ng/ml to 0.22 (0.19 to 0.25) ng/ml after the introduction of smoke-free legislation in Scotland—a 39% reduction. The extent of the fall in cotinine concentration varied according to the number of parent figures in the home who smoked but was statistically significant only among pupils living in households in which neither parent figure smoked (51% fall, from 0.14 (0.13 to 0.16) ng/ml to 0.07 (0.06 to 0.08) ng/ml) and among pupils living in households in which only the father figure smoked (44% fall, from 0.57 (0.47 to 0.70) ng/ml to 0.32 (0.25 to 0.42) ng/ml). Little change occurred in reported exposure to secondhand smoke in pupils’ own homes or in cars, but a small decrease in exposure in other people’s homes was reported. Pupils reported lower exposure in cafes and restaurants and in public transport after legislation.

Conclusions The Scottish smoke-free legislation has reduced exposure to secondhand smoke among young people in Scotland, particularly among groups with lower exposure in the home. We found no evidence of increased secondhand smoke exposure in young people associated with displacement of parental smoking into the home. The Scottish smoke-free legislation has thus had a positive short term impact on young people’s health, but further efforts are needed to promote both smoke-free homes and smoking cessation.

INTRODUCTION

The main source of exposure to secondhand smoke among children is domestic, usually in the home or the car12; the levels of exposure correlate with the prevalence of parental smoking.24 In the home, protection can arise only from voluntary family based restrictions by adults. Children can also be exposed in other contexts, including public places,2 yet this is a little studied area.

On 26 March 2006 Scotland introduced legislation that prohibited smoking in most enclosed public places.56 Studies using objective measures have found that smoke-free legislation is an effective strategy for reducing secondhand smoke exposure in adults.7-9 However, an unintended consequence of smoke-free legislation might be displacement of adult smoking from public places into the home,1011 thus increasing exposure to secondhand smoke among children living with adults who smoke. Evidence from elsewhere, however, does not support this supposition, as smoke-free legislation has been shown to be associated with an increase in smoke-free homes, a tendency to smoke less, and more successful cessation attempts among adults.1214

Here we report results from the changes in child exposure to environmental tobacco smoke (CHETS) study. We examined the impact of the smoke-free legislation on children’s exposure to secondhand smoke at a population level. In addition, we examined whether any evidence exists for increased parental smoking in the home associated with implementation of the Scottish smoke-free legislation.

METHODS

The CHETS study has a repeat cross sectional design. Two nationally representative class based surveys of children in their final year of primary school in Scotland were done in the same schools one year apart, before (January 2006) and after (January 2007) smoke-free legislation. All primary schools on mainland Scotland were included in the sample frame.

We asked each participating school to select one primary 7 class to take part. Researchers administered the survey in the classroom. Pupils completed a questionnaire that included questions on their own smoking
status and that of their friends and parent figures and recent exposure to tobacco smoke in public and private locations. Children were also asked to provide a saliva sample for testing for cotinine, a major metabolite of nicotine and a sensitive indicator of the absorption of smoke products. We excluded pupils who had cotinine concentrations above 15 ng/ml, the accepted cut-off point for active smoking.

We classified parent figures described by their children as smoking “every day” or “sometimes” as smokers. We used the family affluence scale to measure socioeconomic status, and then split the sample into thirds corresponding to those living in low, medium, and high affluence families.

**Statistical analysis**

We assigned cotinine values below the limit of detection (0.1 ng/ml) an imputed value randomly sampled from the left tail of a truncated log normal distribution. We report geometric mean cotinine concentrations. As individual children within a school class may be more similar with respect to secondhand smoke exposure than randomly selected children, standard methods of variance estimation may underestimate the true variance in the population. All analyses reported here take account of stratification and clustering within the survey design.

Changes in exposure to secondhand smoke in private and public locations were based on the number of pupils reporting someone smoking in a location versus all other responses. We used linear regression to assess the differences in mean cotinine concentrations between survey years, adjusting for age and family affluence. We did a separate linear regression analysis to assess the differences in mean cotinine concentrations before and after legislation by number of parent figures who smoked.

**RESULTS**

**Response rates**

In total, 116 (68%) of 170 approached schools agreed to take part in the study before the legislation; 111 of the original 116 schools also participated at follow-up in 2007 (65% of originally approached schools). A total of 2559/2991 (86%) pupils completed the self report questionnaire in 2006, and 2424/2836 (85%) pupils completed the questionnaire in 2007. The final data sets contained 2532 pupil questionnaires and 2403 saliva samples in 2006 and 2389 pupil questionnaires and 2270 saliva samples in 2007. Schools that declined to participate did not have significantly different distributions from participating schools with respect to denomination, urban/rural classification, school size, and proportion of pupils receiving free school meals. Participating schools were representative of Scottish schools with respect to these indicators.

**Sample characteristics**

The mean age of pupils, proportion of boys and girls, and proportion of pupils living in each family structure (see bmj.com) and in each family affluence group were not significantly different before and after legislation. Most pupils in both survey years were classified as non-smokers on the basis of self report and cotinine concentrations below 15 ng/ml.

**Population change in secondhand smoke exposure**

Median cotinine concentration fell from 0.3 ng/ml to 0.2 ng/ml after legislation. The proportion of pupils with cotinine concentration below the limit of detection (0.1 ng/ml) increased from 71% to 78% after legislation. The proportion of pupils with cotinine concentration below 15 ng/ml increased from 93% to 98% after legislation.

<table>
<thead>
<tr>
<th>Location</th>
<th>Yes, someone was smoking there</th>
<th>No-one was smoking there</th>
<th>I wasn’t in this location yesterday</th>
<th>Don’t know</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Home (P=0.747</strong>)**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>668 (27.8)</td>
<td>1550 (64.5)</td>
<td>27 (1.1)</td>
<td>159 (6.6)</td>
<td>2404</td>
</tr>
<tr>
<td>2007</td>
<td>622 (27.4)</td>
<td>1461 (64.3)</td>
<td>19 (0.8)</td>
<td>170 (7.5)</td>
<td>2272</td>
</tr>
<tr>
<td><strong>Car (P=0.817</strong>)**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>155 (6.7)</td>
<td>1448 (62.1)</td>
<td>678 (29.1)</td>
<td>49 (2.1)</td>
<td>2330</td>
</tr>
<tr>
<td>2007</td>
<td>144 (6.5)</td>
<td>1364 (61.3)</td>
<td>669 (30.1)</td>
<td>47 (2.1)</td>
<td>2224</td>
</tr>
<tr>
<td><em><em>Someone else’s home (P=0.029</em>)</em>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>266 (11.6)</td>
<td>599 (26.1)</td>
<td>1319 (57.5)</td>
<td>111 (4.8)</td>
<td>2295</td>
</tr>
<tr>
<td>2007</td>
<td>208 (9.5)</td>
<td>632 (28.9)</td>
<td>1236 (56.4)</td>
<td>114 (5.2)</td>
<td>2190</td>
</tr>
<tr>
<td><em><em>Cafe or restaurant (P&lt;0.001</em>)</em>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>74 (3.2)</td>
<td>96 (4.1)</td>
<td>2125 (91.2)</td>
<td>35 (1.5)</td>
<td>2330</td>
</tr>
<tr>
<td>2007</td>
<td>21 (0.9)</td>
<td>183 (8.2)</td>
<td>1982 (89.3)</td>
<td>33 (1.5)</td>
<td>2219</td>
</tr>
<tr>
<td><em><em>Bus or train (P=0.015</em>)</em>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>36 (1.5)</td>
<td>175 (7.4)</td>
<td>2122 (89.7)</td>
<td>33 (1.4)</td>
<td>2366</td>
</tr>
<tr>
<td>2007</td>
<td>13 (0.6)</td>
<td>211 (9.5)</td>
<td>1972 (88.6)</td>
<td>30 (1.3)</td>
<td>2226</td>
</tr>
<tr>
<td><em><em>Indoor leisure facility (P=0.102</em>)</em>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>60 (2.6)</td>
<td>445 (19.0)</td>
<td>1709 (73.1)</td>
<td>124 (5.3)</td>
<td>2338</td>
</tr>
<tr>
<td>2007</td>
<td>41 (1.9)</td>
<td>487 (22.1)</td>
<td>1560 (70.8)</td>
<td>115 (5.2)</td>
<td>2203</td>
</tr>
</tbody>
</table>

*Tests for changes between survey years based on number of pupils reporting someone smoking in a location versus all other responses (including missing); significance levels for design adjusted χ² analyses shown.
Detection increased from 20% to 34% after legislation. However, the proportion of pupils with higher cotinine concentrations did not change substantially. The adjusted mean cotinine concentration fell by 39% from 0.36 (95% confidence interval 0.32 to 0.40) ng/ml in 2006 to 0.22 (0.19 to 0.25) ng/ml in 2007.

Self-reported exposure to secondhand smoke was higher in private locations than in public locations both before and after legislation (Table 1). Exposure in pupils’ own homes, the most reported location (27.8% in 2006 and 27.4% in 2007), or in a car (6.7% in 2006 and 6.5% in 2007) were similar before and after legislation. In contrast, reported exposure in someone else’s home fell after legislation (11.6% in 2006 vs 9.5% in 2007, P=0.029). Exposure to secondhand smoke in public places was reported by relatively few pupils before and after legislation, but a decline in exposure between survey years was reported in cafes or restaurants (3.2% in 2006 vs 0.9% in 2007, P<0.001) and on buses or trains (1.5% in 2006 vs 0.6% in 2007, P=0.015).

### Displacement of parental smoking into the home

In each survey year more than 40% of pupils reported living with a parent figure who smoked (Table 2). Geometric mean cotinine concentration decreased significantly between survey years, as when all pupils were included (adjusted geometric mean cotinine concentration 0.35 (0.32 to 0.38) ng/ml in 2006 and 0.21 (0.19 to 0.23) ng/ml in 2007, P<0.001), and increased significantly across groups (P<0.001) as the number of parent figures who smoked increased. The only interaction term that reached significance was that between survey year and parent figures in the home who smoked. Among pupils living in households with only one parent figure, geometric mean cotinine concentration fell 51% from 0.14 (0.13 to 0.16) ng/ml to 0.07 (0.06 to 0.08) ng/ml. Among pupils with only a father figure who smoked, mean cotinine concentration fell 44% from 0.57 (0.47 to 0.70) ng/ml to 0.32 (0.25 to 0.42) ng/ml. Among pupils living in households with only a mother who smoked or with both parents who smoked, geometric mean cotinine concentration fell 11%, but this was not statistically significant (Table 2).

### Table 2: Geometric mean cotinine concentrations and 95% confidence intervals by number of parent figures who smoke, adjusted for age and family affluence, before and after smoke-free legislation in Scotland

<table>
<thead>
<tr>
<th>Parental smoking status</th>
<th>2006</th>
<th>2007</th>
<th>Ratio (95% CI) of mean cotinine concentration 2007:2006</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neither parent figure smokes</td>
<td>0.14 (0.13 to 0.16)</td>
<td>0.07 (0.06 to 0.08)</td>
<td>0.49 (0.42 to 0.56)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Father figure only smokes</td>
<td>0.57 (0.47 to 0.70)</td>
<td>0.32 (0.25 to 0.42)</td>
<td>0.56 (0.41 to 0.77)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Mother figure only smokes</td>
<td>1.38 (1.18 to 1.62)</td>
<td>1.23 (1.03 to 1.48)</td>
<td>0.89 (0.71 to 1.13)</td>
<td>0.314</td>
</tr>
<tr>
<td>Two parent figures smoke</td>
<td>1.94 (1.71 to 2.21)</td>
<td>1.74 (1.51 to 2.00)</td>
<td>0.89 (0.74 to 1.08)</td>
<td>0.173</td>
</tr>
<tr>
<td>Total</td>
<td>0.35 (0.32 to 0.38)</td>
<td>0.21 (0.19 to 0.23)</td>
<td>0.60 (0.53 to 0.68)</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Cotinine confirmed non-smokers.

### DISCUSSION

#### Main findings

Our study provides evidence of a population level change in exposure to secondhand smoke among children in primary school in Scotland after the introduction of smoke-free legislation. Secondhand smoke exposure fell by 39% between January 2006 and January 2007, as shown by a significant fall in geometric mean cotinine concentration. The greatest proportional reduction occurred among pupils living in households with lower levels of secondhand smoke exposure. Although a reduction occurred among pupils with higher levels of secondhand smoke exposure at home, this was relatively small and not statistically significant. For children with no parents who smoke, we conclude that this reduction must be largely due to lower secondhand smoke exposure in public places outside the home.

Using self-report data, we found evidence of a reduction in secondhand smoke exposure in public places covered by the legislation. A fall in reported exposure to secondhand smoke when visiting other people’s homes occurred after legislation. This finding suggests some modification of smoking behaviour in front of non-family members after the legislation.

We found little evidence of a change between survey years in reported exposure in pupils’ own homes or in cars. As children were only asked to report on whether smoking took place in the home, rather than the extent of smoking, more subtle changes in smoking levels or practices would not be recorded.

This study provides no evidence that the smoke-free legislation has led to displacement of adult smoking from public places into the home.10 20 We found little difference in the reported proportion of parents who smoke or exposure in pupils’ own homes and, regardless of parental smoking status, no evidence of an increase in secondhand smoke exposure as measured by cotinine concentration.

Information on secular changes in cotinine concentrations in this age group before legislation is limited. Findings are available for non-smoking 11-15 year olds in England.21 22 For this group overall, mean cotinine concentration fell by 52% over a 15 year period between 1988 and 2003. The change in levels in our study, a 39% fall in cotinine concentration in a single year, is an order of magnitude higher than the average
Passive smoking poses a significant health risk to adults and children. Smoke-free legislation has been shown to be effective in improving the health and wellbeing of adults.

WHAT THIS STUDY ADDS

Exposure to secondhand smoke among children in their final year of primary school in Scotland fell after the introduction of smoke-free legislation. This reduction occurred particularly among groups with lower secondhand smoke exposure in the home. No evidence of increased secondhand smoke exposure in young people associated with displacement of parental smoking into the home was found.

annual change seen in the English studies. This change in Scotland can arguably be attributed to the introduction of the Scottish smoke-free legislation.

Strengths of the study

This study evaluates national legislation and is based on a large nationally representative sample, which permits population-level inference. We used an objective measure of exposure to secondhand smoke. Basing the survey in schools may have encouraged more honest reporting of parental smoking than if the survey had been done at home with parent figures present in the house.

Limitations of the study

A longitudinal study design with repeat measures is more robust, but we chose a repeat cross-sectional design, as with a longitudinal design the effects of the smoke-free legislation could not have been disentangled from changes in the likelihood of secondhand smoke exposure associated with behavioural changes owing to pupils maturing. Use of the same schools before and after legislation minimised the variation between years in pupils’ characteristics.

The school take-up at baseline was lower than expected given response rates in another national survey among this age group in Scotland. However, we detected no systematic bias in the final sample of schools arising from non-participation.

Children were asked only to report exposure to secondhand smoke on the day before the survey. Compared with our cotinine validated measures, which reflect secondhand smoke exposure in the previous three to five days, the self-report data may underestimate secondhand smoke exposure.

Conclusions

The Scottish smoke-free legislation has made progress towards promoting health in children by reducing exposure to secondhand smoke. Nevertheless, little impact has been made on the higher levels of exposure in the home experienced by children whose mother figure or both parent figures smoke. Nineteen per cent of children in our sample were still exposed to secondhand smoke at a level (≥1.7 ng/ml) that has been shown to be harmful to arterial health. Our findings underline the importance of continuing to raise awareness of the health risks of passive smoking, supporting adults to implement smoke-free policies in their homes and cars, and promoting smoking cessation. Communication to adults that even low levels of secondhand smoke exposure can pose substantial health risk to children of all ages is particularly important.

We thank ABS Labs, London, who analysed salivary cotinine, MVA Consultancy for managing the fieldwork, Scottish local education authorities for granting permission to approach schools under their authority, pupils and teachers of all participating schools, Emily Healy, research administrator, Child and Adolescent Health Research Unit (CAHRU) for providing assistance with this paper, Kate Levin (CAHRU), Joanna Todd (CAHRU), and Rebecca Smith (CAHRU) for providing useful comments on drafts of this paper, and independent reviewers for providing comments on this paper.

Contributors: See bmj.com.

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Competing interests: None declared.

Ethical approval: School of Education Ethics Committee, University of Edinburgh. Provenance and peer review: Non-commissioned; externally peer reviewed.


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15 Royal College of Physicians. Going smoke-free: the medical case for clean air in the home, at work and in public places. A report on
Changes in exposure of adult non-smokers to secondhand smoke after implementation of smoke-free legislation in Scotland: national cross sectional survey

Sally J Haw, Laurence Gruer

Objective: To measure change in adult non-smokers' exposure to secondhand smoke in public and private places after smoke-free legislation was implemented in Scotland.

Design: Repeat cross sectional survey.

Setting: Scotland.

Participants: Scottish adults, aged 18 to 74 years, recruited and interviewed in their homes.

Intervention: Comprehensive smoke-free legislation that prohibits smoking in virtually all enclosed public places and workplaces, including bars, restaurants, and cafes.

Outcome measures: Salivary cotinine, self reported exposure to smoke in public and private places, and self reported smoking restriction in homes and in cars.

Results: Overall, geometric mean cotinine concentrations in adult non-smokers fell by 39% (95% confidence interval 29% to 47%), from 0.43 ng/ml at baseline to 0.26 ng/ml after legislation (P<0.001). In non-smokers from non-smoking households, geometric mean cotinine concentrations fell by 49% (40% to 56%), from 0.35 ng/ml to 0.26 ng/ml (P<0.001). The 16% fall in cotinine concentrations in non-smokers from smoking households was not statistically significant. Reduction in exposure to secondhand smoke was associated with a reduction after legislation in reported exposure to secondhand smoke in public places (pubs, other workplaces, and public transport) but not in homes and cars. We found no evidence of displacement of smoking from public places into the home.

Conclusions: Implementation of Scotland's smoke-free legislation has been accompanied within one year by a large reduction in exposure to secondhand smoke, which has been greatest in non-smokers living in non-smoking households. Non-smokers living in smoking households continue to have high levels of exposure to secondhand smoke.

INTRODUCTION

On 26 March 2006 comprehensive legislation was implemented in Scotland to prohibit smoking in virtually all enclosed public places and workplaces, including bars, restaurants and cafes.1 A subsequent study of air quality in a random sample of 41 pubs in Scotland has reported an overall 86% reduction in small airborne particles (PM2.5)—an air marker of secondhand smoke—two months after implementation of the legislation.2 This is consistent with studies from other countries where similar legislation has been introduced.3,4

Our study is part of a comprehensive evaluation of Scotland’s smoke-free legislation.5 It aimed to determine if a measurable change occurred in exposure to secondhand smoke in adult non-smokers after implementation of the Scottish smoke-free legislation; to assess whether overall changes in secondhand exposure were related to exposure in public or private spaces; and to determine if any evidence existed of increased exposure to secondhand smoke among non-smokers living with smokers, associated with displacement of smoking into the home.

METHODS

Survey

Data on adult exposure to secondhand smoke were collected as part of the health education population survey, using a repeat cross sectional design before and after implementation of the legislation. This survey has been conducted in most years since 1996 to monitor health related knowledge and behaviour.6 Data are collected twice a year in two waves. For this study, survey waves conducted between 1 September and 20 November 2005 and between 9 January and 25 March 2006
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provided baseline data. Post-legislation data were collected in two waves between 1 September and 10 December 2006 and between 8 January and 2 April 2007.

Addresses from mainland Scotland were selected from the Royal Mail’s postal address file using a rolling, multistage, clustered random sampling strategy. See bmj.com for sampling strategy.

One week before the start of fieldwork, a letter was sent to all selected addresses informing the occupier that the household had been chosen to take part in the survey and that an interviewer would be calling on them in the near future.

People aged 16 to 74 years were eligible to participate in the study.

Interviews
Study participants were interviewed at home by trained interviewers. Data on a range of health behaviours were collected by using computer assisted personal interviewing. The smoking module included self reported smoking status, date of cessation, and use of nicotine replacement therapy. Data were collected on the participants’ experience of smoking restrictions in public places (work, pubs, and public transport) and private places (home and car) and on reported exposure to secondhand smoke in these different locations. The questionnaire is available at www.healthscotland.com/scotlands-health/evaluation/policy-evaluation/smoking.aspx. All respondents were asked to provide a sample of saliva to test for cotinine, a metabolite of nicotine, and a stable, highly specific and sensitive biomarker of both active and passive absorption of tobacco smoke (see bmj.com).

Definition of smoking status and the assessment of outcomes
We based assessment of change in exposure to secondhand smoke in non-smokers on self reported non-smoking status (never smoker or ex-smoker), confirmed by salivary cotinine concentration. Respondents who were using nicotine replacement therapy were excluded from the analysis, as were “smoking deceivers”—respondents who reported that they were non-smokers but had a cotinine concentration above 15 ng/ml, the accepted threshold for active smoking. Assessments of changes in location of exposure to secondhand smoke and smoking restriction in homes and cars in non-smokers are based on self reported smoking status alone.

RESULTS
Sample
The response rates in the four successive waves—70%, 71%, 66%, and 71%—compare well with other UK national surveys, which have response rates of around 66%. A total of 1815 participants were recruited to the baseline survey and 1834 to the post-legislation survey. The profiles of the weighted samples were similar in sex, age, marital status, and smoking status. However, respondents in the post-legislation sample were more likely to have more than 11 years’ education (P<0.01) and less likely to live in the most deprived areas (P<0.001).

The prevalence of smoking was 35.6% (646/1815) in the pre-legislation sample and 35.1% (644/1834) in the post-legislation sample. Exclusion of smokers yielded final sample sizes of 1170 before legislation and 1190 after legislation. Baseline characteristics of the two samples were similar, but the non-smokers recruited after implementation of the legislation were less likely to live in the most deprived areas (P<0.001) (see bmj.com).

Provision of saliva sample for testing for cotinine
Valid cotinine measurements were available for 627 (53.6%) baseline respondents and 592 (49.7%) respondents recruited after the legislation. Compared with those who did not, respondents who had a valid cotinine measurement were more likely to be male (50.5% v 49.5%; P<0.05) and have 11 or more years of education (53.7% v 45.6%; P<0.001). They were also less likely to be 55 years or older (26.8% v 30.2%; P<0.01) and to live in areas in Carstairs deprivation categories 6 and 7 (10.6% v 14.6%; P=0.001) (see table 1 on bmj.com).

Changes in exposures to secondhand smoke in adult non-smokers
Cotinine measurements for 627 non-smokers recruited pre-legislation and 592 non-smokers recruited post-legislation were analysed to assess change in exposure to secondhand smoke. Before legislation the median and mode values were 0.4 ng/ml and 0.3 ng/ml respectively, with a range of <0.1 ng/ml (below the level of detection) to 10.5 ng/ml. After legislation the range was wider (<0.1 ng/ml to 13.7 ng/ml) but the median fell to 0.2 ng/ml and the mode to <0.1 ng/ml. The distribution of cotinine values shifted (figure), with an increase in the proportion of samples below the level of detection (0.1 ng/ml), from 11.3% (71 samples) before legislation to 27.6% (163) afterwards.

The impact of the smoke-free legislation on exposure to secondhand smoke (log cotinine) was evaluated using analysis of covariance. Two independent variables (smoking ban and household smoking status (non-smoking household v households with at least one smoker)) and three covariates (sex, years in education, and deprivation category of residence) were included in the model.

The overall geometric mean cotinine for non-smokers fell from 0.43 ng/ml at baseline to 0.26 ng/ml after legislation—a 39% adjusted reduction in mean cotinine after implementation of the legislation (P<0.001; table). The interaction between implementation of legislation and household smoking status was highly significant. The geometric mean for non-smokers living in non-smoking households fell from 0.35 ng/ml to 0.18 ng/ml, representing a 49% reduction in mean cotinine in this group (P<0.001; table). For non-smokers living in smoking households the fall did not reach statistical significance.
Complete smoking bans in cars were more common than in homes (see table 4 on bmj.com), but after sex, deprivation category of residence, and years of education were controlled for, no change in the pattern of reported smoking restrictions in cars was observed after implementation of the legislation either overall or within the two non-smoker subgroups.

**DISCUSSION**

**Main findings**

This study provides evidence of a large reduction in secondhand smoke exposure in non-smoking adults in Scotland after implementation of legislation banning smoking in enclosed public spaces. The geometric mean salivary cotinine concentrations in adult non-smokers fell from 0.47 ng/ml at baseline to 0.26 ng/ml after the legislation, representing a 39% reduction in exposure to secondhand smoke. There was a reduction in reported exposure to secondhand smoke in public places (pubs, other workplaces, and public transport) but not in private places (homes and cars). We also found no evidence of displacement of smoking into the home after implementation of Scotland’s smoke-free legislation.

**Strengths and weaknesses of the study**

The study recruited representative samples of the Scottish population and had response rates exceeding those of other recent UK national household surveys. Both self reported and biovalidated markers of smoking status and exposure to secondhand smoke were collected. The baseline and post-legislation data were collected in the same period of the year, exactly one year apart. Our repeat cross sectional design is less robust than a longitudinal design. The samples recruited before and after legislation showed some small socioeconomic differences but these differences were controlled for in the analyses, making systematic bias unlikely. The compliance rates for provision of saliva sample for testing for cotinine were disappointing but similar to rates achieved by other UK surveys. There were small socioeconomic differences between respondents who agreed and those who refused to provide saliva samples, but these were controlled for in the analyses, making systematic bias unlikely. It was not feasible to include a control group from outside Scotland.

**Other studies**

A survey in the United States found that between 1988 and 2000 median cotinine concentrations declined by...
WHAT IS ALREADY KNOWN ON THIS TOPIC

Exposure to secondhand smoke is associated with considerable morbidity and mortality in non-smokers. Smoking bans have been shown to be effective in reducing exposure to secondhand smoke in some locations.

WHAT THIS STUDY ADDS

Legislation to prohibit smoking in public places resulted in a large reduction in adult non-smokers’ exposure to secondhand smoke across a whole population. After implementation of the legislation, exposure to secondhand smoke was reduced in all public places and workplaces but not in the home or private cars. The main beneficiaries of the legislation seem to be non-smokers living in non-smoking homes. The legislation did not result in increased exposure to secondhand smoke in the homes of non-smokers who lived with other smokers.

more than 70% in adult non-smokers. A 52% drop in mean salivary cotinine was seen in English schoolchildren between 1988 and 2003. These data indicate a gradual reduction in exposure to secondhand smoke in both countries. The 39% reduction in mean cotinine concentrations in Scottish adults in our study has occurred in only one year. Most if not all of this reduction is likely to be due to the implementation of the Scottish smoke-free legislation. This strongly suggests that the legislation has rapidly reduced secondhand smoke exposure at a population level.

Similar improvements in air quality in bars and workplaces, as well as reductions in self-reported exposure to secondhand smoke in public places, have been reported from elsewhere after implementation of smoke-free legislation. A four country study failed to find evidence of displacement of smoking from public places into the home and found that smoke-free legislation stimulated the adoption of smoke-free homes.

Our findings are also almost identical to those of a parallel study of secondhand smoke exposure in Scottish schoolchildren.

Implications

The reductions in exposure to secondhand smoke of the order observed in Scotland may generate immediate health gains in the Scottish population as well as longer term reductions in morbidity and mortality related to secondhand smoke. However, to our knowledge, no data are yet available to relate a reduction of this magnitude in mean cotinine concentrations in adult non-smokers to actual improvements in health at a population level. Furthermore, our study indicates that, to date, a significant reduction in exposure to secondhand smoke occurred only in non-smokers living in non-smoking households.

The now large differential in exposure to secondhand smoke between non-smokers who live in smoking and non-smoking households underlines the importance of developing interventions designed to reduce smoking in the home and in cars.

Legislation on smoking in private homes is unlikely to be effective, acceptable, or desirable, although there may be more public acceptance of restrictions on smoking in cars, especially when children are being transported. More could also be done to raise awareness of the health risks to adults and children associated with exposure to secondhand smoke. In particular, the finding that non-smokers exposed to low levels of tobacco smoke (relative to exposure of active smokers) are still at heightened risk of coronary heart disease needs to be communicated clearly. Quitting smoking is probably the most effective way of reducing secondhand smoke exposure in the home; smoking cessation services must continue to be promoted, with clear links made to the potential improvements in the health of non-smokers.

We thank Ruth Gosling, Sally Malam, and staff at BMRB Social Research, who conducted the health education population survey and prepared the database; Sonnda Catto of NHS Health Scotland who managed the commissioning of the health education population survey; and Colin Fureyab, Mira Dog, and staff at ABS Laboratory, who advised on and performed the cotinine assays. We also thank Patricia Akhtar and Dorothy Currie of Child and Adolescent Health Research Unit, University of Edinburgh, and Rob Elton, independent consultant, for support with the analysis and presentation of results.

Contributors: See bmj.com

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Competing interests: None declared.

Provenance and peer review: Not commissioned; externally peer reviewed.

Smoking in the home after the smoke-free legislation in Scotland: qualitative study

Richard Phillips,1 Amanda Amos,1 Deborah Ritchie,2 Sarah Cunningham-Burley,3 Claudia Martin3

ABSTRACT
Objective To explore the accounts of smokers and non-smokers (who live with smokers) of smoking in their homes and cars after the Scottish smoke-free legislation; to examine the reported impact of the legislation on smoking in the home; and to consider the implications for future initiatives aimed at reducing children’s exposure to secondhand smoke in the home.

Design and setting A qualitative cross sectional study involving semistructured interviews conducted across Scotland shortly after the implementation of the legislation on 26 March 2006.

Participants A purposively selected sample of 50 adults (aged 18-75) drawn from all socioeconomic groups, included smokers living with smokers, smokers living with non-smokers, and non-smokers living with smokers.

Results Passive smoking was a well recognised term. Respondents had varied understandings of the risks of secondhand smoke, with a few rejecting evidence of such risks. Children, however, were perceived as vulnerable. Most reported that they restricted smoking in their homes, with a range of restrictions across social classes and home smoking profiles. Spatial, relational, health, and aesthetic factors influenced the development of restrictions. Children and grandchildren were important considerations in the development and modification of restrictions. Other strategies were also used to mitigate against secondhand smoke, such as opening windows. The meaning of the home as somewhere private and social identity were important underlying factors.

Conclusions These data suggest two normative discourses around smoking in the home. The first relates to acceptable social identity as a hospitable person who is not anti-smoker. The second relates to moral identity as a caring parent or grandparent. Awareness of the risks of secondhand smoke, despite ambivalence about health messages and the fluidity of smoking restrictions, provides clear opportunities for public health initiatives to support people attain smoke-free homes.

INTRODUCTION
Exposure to secondhand smoke is an important cause of premature mortality and morbidity,1-3 and children are more vulnerable than adults to the effects on health. In 2003, over 80% of children aged 8-15 years in Scotland reported being exposed to secondhand smoke,2 and around 40% lived in a home with at least one smoker. The 2005 health education population survey found that less than half (42%) of homes in Scotland had total smoking bans.9

Interventions to reduce children’s exposure to secondhand smoke in the home have involved media campaigns or brief counselling sessions with parents and have had little success.9 10 This is perhaps not surprising as we know little about why people do or do not restrict smoking in their homes.4 Even less is known about influences on smoking restrictions in cars.

Two qualitative studies have generated insights about the factors that parents perceive as barriers to reducing their children’s exposure to secondhand smoke in the home.11-13 These include difficulties associated with the supervision of children, lack of appropriate space to smoke outside the home, a desire to smoke in comfort or privacy, and concerns about the negative reactions of family and friends.12 13 These studies were limited in that they involved only disadvantaged smokers who had preschool children12 13 and who wanted to increase home restrictions and lived in high rise accommodation.11

The introduction of legislation on smoke-free public places in Scotland in March 200614 provided a unique opportunity to explore the social meaning of restrictions in the home. We carried out a qualitative study in Scotland shortly after the introduction of the legislation. We explored the accounts of smokers and non-smokers of the strategies they use to regulate smoking in their homes and cars; and examined the reported impact of the legislation on smoking in the home to identify potential enablers and barriers to reducing exposure in the home.

METHODS
Study design and participants—We carried out qualitative semistructured interviews with 50 smokers and non-smokers who lived with smokers across Scotland. Respondents were purposively recruited from Wave 10 (September-November 2005) of the health education population survey.15 We sampled on three characteristics: composition of smokers in the household, socioeconomic group (AB [professional, managerial and technical], C [skilled non-manual and manual], D [partly skilled and unskilled]), and sex (table). We invited 106 people to take part in the study. Fifty of the 54 eligible respondents were interviewed.

Interviews—Interviews were conducted between June and September 2006 in respondents’ homes. We developed interview topic guides for the three types of participant: smoker living alone or with...
Box 1 | Knowledge and understandings of risks of secondhand smoke

“Well they say it does, but I don’t believe that is true. It is just one of these things I don’t believe, they say people die from passive smoking, I don’t accept it” 69 year old man, former smoker (C)

“I couldn’t put an age on it because I don’t think they should, even if they are older it has a less effect, then it is bad for them to see other people doing it because it means they want to do it themselves or they might want to try it” 49 year old woman, non-smoker (C)

another smoker, smoker living with a non-smoker, and non-smoker living with a smoker. Respondents used a day grid to describe a typical day in relation to smoking or exposure to smoke.16 17 Smokers identified times and places when they smoked. Non-smokers identified when and where they were exposed to smoke. All respondents were asked to describe any smoking restrictions in their home or car, how they had developed and were maintained, and what might lead to breaches. Respondents were asked what they understood by passive smoking and whether they thought any people were more at risk. We sought respondents’ views about and experiences of the smoke-free legislation and whether this had affected smoking in their home or their social life.

Analysis—We transcribed the tape recorded interviews and analysed transcripts thematically, moving from initial descriptive codes to more conceptual analytical coding. All authors were involved in the analysis, with at least two reading each transcript and agreeing on coding categories and themes. A modified grounded theory approach was taken whereby themes were revised iteratively as the fieldwork and analysis progressed.18

RESULTS
Knowledge and understanding of risks of secondhand smoke
Passive smoking was a well recognised term, though respondents’ understanding of and views about the health risks varied. Most (36) indicated that they believed that exposure to secondhand smoke represented some form of risk. A smaller group of respondents (eight), all smokers, were more ambivalent about whether secondhand smoke was a health risk, yet reported a reluctance to expose children or grandchildren to secondhand smoke. A few respondents (six), all but one of whom were smokers, stated firmly that they did not believe that passive smoking was a health risk (box 1). Smokers who lived only with smokers or on their own were less likely than other respondents to believe that secondhand smoke was a health risk. There was no apparent difference in acceptance of risk by socioeconomic group.

Respondents drew on personal experiences around the visible effects of secondhand smoke on themselves and others, their knowledge about the health effects of active smoking and external sources of information including media coverage, and health professionals’ advice. Many thought that children were particularly at risk because they were still developing. There were diverse views concerning when “vulnerable” children became less vulnerable (see box 1).

Restrictions in the home
Patterns of restrictions
There was a range of restrictions across all the household smoking profiles and socioeconomic groups (box 2). These restrictions were primarily spatial in nature—respondents described specific rooms or locations inside or outside the home where smoking was or was not permitted. These comprised a total ban inside the home (nine); smoking allowed in one specific room or at an outside door (10); smoking allowed in several rooms (25); no restrictions (six). Smokers who lived only with smokers or on their own were more likely to report having no restrictions, and respondents from socioeconomic group D were least likely to have a total ban.

Most respondents reported that they were concerned with the smell of tobacco smoke in their home and described actions to reduce or manage smoke or exposure in their homes (such as opening windows, lighting candles). All respondents with partial or no restrictions described how they would temporarily modify these in particular circumstances. For example, partial restrictions would become stricter in the presence of children and grandchildren, or relaxed if adult visitors were smokers.

How and why restrictions were developed
Respondents often had more than one reason for having restrictions on smoking (box 3). Aesthetic concerns were mostly about the smell of smoke. Health reasons related mainly to concerns about not exposing children and grandchildren and, in a few cases, adult non-smokers to the health risks of smoke. Respondents expressed concern about smoking in front of children, thus acting as a role model. Some also talked about pressure from children or from other family members not to smoke. Other less common health reasons included concerns around hygiene and safety.

Most respondents presented these changes as being unproblematic, with little conflict over decision
Details of participants interviewed about smoking in their homes

<table>
<thead>
<tr>
<th>Socioeconomic group*</th>
<th>Smokers living alone or with smokers only</th>
<th>Smokers living with any non-smokers</th>
<th>Non-smokers living with any smokers</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Men</td>
<td>Women</td>
<td>Men</td>
</tr>
<tr>
<td>A-B</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>C1-C2</td>
<td>5</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>D</td>
<td>4</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
<td>13</td>
<td>7</td>
</tr>
</tbody>
</table>

*AB (professional, managerial and technical), C1 (skilled non-manual), C2 (skilled manual), D (partly skilled and unskilled).
The desire to be seen as behaving in morally and socially acceptable ways, concerns about children and grandchildren not becoming smokers, desire to be seen as behaving in morally and socially acceptable ways, other attempts, both aesthetic and health related, to moderate or remove the perceived negative aspects of smoke in the home, social norms about the unacceptability of smoking in the home among family and friends, including pressure from children, and social norms about the unacceptable smoking in the home are priorities. In addition to concerns about reducing children’s exposure to the possible health risks of secondhand smoke were considerations about the future consequences of children seeing adults smoke. The desire to be seen to act in socially and morally acceptable ways seemed to be tempered by other imperatives and needs. These included the need to smoke, the desire to smoke in comfort and private, understandings of the risks of secondhand smoke, and social norms.

While some respondents were convinced that secondhand smoke was a health risk others were much less certain, and some indicated a level of resistance to such messages. This is perhaps not surprising given that evidence and education about the health risks of secondhand smoke is relatively recent compared with that on active smoking. Some smokers might resist messages that could have consequences for their smoking, home lives, and routines. Ambivalence about health messages needs also to be understood as a more general phenomenon, relating to a distrust of scientific knowledge and resistance to externally imposed restraints on individual behaviours.

**Enablers and barriers to creating smoke-free homes**

<table>
<thead>
<tr>
<th>Enablers include:</th>
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<tbody>
<tr>
<td>• The increasing level of restrictions and the reported modification of partial or no restrictions in some circumstances</td>
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<tr>
<td>• The higher level of restrictions in cars</td>
</tr>
<tr>
<td>• Increasing awareness of the risks of secondhand smoke, particularly in relation to children</td>
</tr>
<tr>
<td>• Concerns about children and grandchildren not becoming smokers</td>
</tr>
<tr>
<td>• Desire to be seen as behaving in morally and socially acceptable ways</td>
</tr>
<tr>
<td>• Other attempts, both aesthetic and health related, to moderate or remove the perceived negative aspects of smoke in the home</td>
</tr>
<tr>
<td>• Social norms about the unacceptability of smoking in the home among family and friends, including pressure from children</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Barriers include:</th>
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<tbody>
<tr>
<td>• Limited understanding of and resistance to messages about the health risks of secondhand smoke</td>
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<tr>
<td>• Beliefs about the effectiveness of ways of removing or managing secondhand smoke in the home</td>
</tr>
<tr>
<td>• The need to smoke and smoker identity</td>
</tr>
<tr>
<td>• The home (and car) perceived as a private space, protected from public controls and sanctions</td>
</tr>
<tr>
<td>• Social norms among family and friends about the acceptability of smoking in the home</td>
</tr>
</tbody>
</table>

**Box 4**

Increasing restrictions. In addition to concerns about reducing children’s exposure to the possible health risks of secondhand smoke were considerations about the future consequences of children seeing adults smoke. The desire to be seen to act in socially and morally acceptable ways seemed to be tempered by other imperatives and needs. These included the need to smoke, the desire to smoke in comfort and private, understandings of the risks of secondhand smoke, and social norms.

While some respondents were convinced that secondhand smoke was a health risk others were much less certain, and some indicated a level of resistance to such messages. This is perhaps not surprising given that evidence and education about the health risks of secondhand smoke is relatively recent compared with that on active smoking. Some smokers might resist messages that could have consequences for their smoking, home lives, and routines. Ambivalence about health messages needs also to be understood as a more general phenomenon, relating to a distrust of scientific knowledge and resistance to externally imposed restraints on individual behaviours.

**Strengths and limitations**

One strength of our study was the diverse range of respondents in terms of age, socioeconomic group, location, and household smoking profile. This meant that it was not possible to explore in depth the views and experiences of certain groups who may face particular challenges around addressing secondhand smoke in the home, such as those living in homes where space is restricted or lack outside space. Another limitation was the retrospective nature of the study, which may have made it difficult for respondents to assess the impact of the legislation on their knowledge, attitudes, and behaviour. It may also be that such changes take longer to occur than the period covered in this study.

**Implications**

Reducing secondhand smoke in the home and car requires a coordinated approach involving national and local action aimed at reducing smoking among adults and protecting children and non-smokers from secondhand smoke in smoking homes. Comprehensive smoke-free legislation can help achieve these aims. Our findings indicate that smoking restrictions in the home are shaped by a range of sociocultural influences and other factors that create enablers, and barriers for future public health initiatives on this issue (Box 4). Initiatives to reduce secondhand smoke in the home could include media campaigns and tailored advice and support for individuals from health and other professionals on how to develop more effective smoke-free strategies in the home and car.

**What is already known on this topic**

Exposure to secondhand smoke is an important cause of morbidity in children, and the main source of exposure is in the home. Little is known about why people do or do not restrict smoking in their homes and the enablers and barriers to reducing children’s exposure in the home.

**What this study adds**

Most people restrict smoking in their home but the extent and likely effectiveness vary. Spatial, health, relational, and aesthetic factors are influential and protection of children and grandchildren is a priority. There were diverse views about the smoke-free legislation; few thought it had influenced their smoking in the home. Awareness of the risks of secondhand smoke, despite ambivalence about health messages and the fluidity of smoking restrictions, provides opportunities for public health initiatives to support people to achieve smoke-free homes.

**Contributors:** See bmj.com.

**Funding:** NHSS Health Scotland and the Scottish Executive. The views expressed in this paper are those of the authors and not necessarily those of the funders.

**Competing interests:** None declared.

**Ethical approval:** The study complied with the code of practice on ethical standards for social research involving human respondents operating in public health sciences at Edinburgh University.

**Provenance and peer review:** Non-commissioned, peer reviewed.
A 76 year old woman was referred acutely after two syncopal episodes. She had a history of depression and Alzheimer’s disease. No cardiac problems were reported. On admission her blood pressure was 160/112 mm Hg but she had a sinus bradycardia (42 beats/min) and the cardiac monitor showed paroxysmal ventricular tachycardia (torsade de pointes). The resting electrocardiogram showed gross prolongation of the QT segment (corrected QT interval 590-777 ms). She was treated with intravenous magnesium, an infusion of isoprenaline, and then temporary cardiac pacing (100 beats/min) with complete suppression of the dysrhythmia. Initial biochemistry (serum potassium, magnesium, and calcium) gave normal results, and the 12 hour troponin T (0.08 µg/l) was borderline. Her drug history included donepezil 10 mg (for two years), omeprazole 20 mg, escitalopram 10 mg, and propranolol 80 mg (started five days before admission for an essential tremor and anxiety symptoms). Donepezil, escitalopram, and propranolol were discontinued, and the QT interval normalised (corrected QT interval 436 ms). Depressive symptoms were treated with mirtazapine, and the patient required nursing home care. Subsequent review of the notes showed that a normal electrocardiogram had been obtained 18 months previously during investigation of palpitations.

About 3% of prescriptions in the United Kingdom represent non-cardiac drugs with proarrhythmic potential.1 The drugs associated with prolonged QT interval include antiarrhythmics, antidepressants, antimicrobials, tricyclic antidepressants, and selective serotonin re-uptake inhibitors.2 QT prolongation with acetylcholinesterase inhibitors (rivastigmine) has been reported.3 Adverse effects reported for donepezil include bradycardia (uncommon) and heart block (rare). The data sheet for donepezil refers to “potential for synergistic activity with ... betablocking agents which have an effect on cardiac conduction.” Escitalopram is very rarely associated with prolongation of the QT interval. It inhibits CYP 2D6, the enzyme responsible for the metabolism of donepezil, and escitalopram metabolism is inhibited by omeprazole.

Doctors need to be aware of potential drug interactions with donepezil. Calculating the corrected QT interval may be a life saving arithmetical exercise when elderly patients are treated for dementia.

Funding: None
Competing interests: None declared


**DRUG POINTS**

**Calculate the QT interval in patients taking drugs for dementia**

Andrew Leitch, Peter McGinness, David Wallbridge

12 Robinson J, Kirkcaldy A. You think that I was here? A meta-analysis of mothers’ use of space within their homes. Health Place 2007 doi: 10.1016/j.healthplace.2007.03.001.
13 Robinson J, Kirkcaldy A. Disadvantaged mothers, young children and smoking in the home: mothers’ use of space within their homes. Health Place 2007 doi: 10.1016/j.healthplace.2007.03.001.

Accepted: 31 July 2007
Adult coeliac disease

Andrew D Hopper,1 Marios Hadjivassiliou,2 Sohail Butt,3 David S Sanders1

The prevalence of coeliac disease is 0.5-1% in international population studies. The delay in diagnosis is reported to range from 4.5 years to 9.0 years.12 Patients may present on numerous occasions to both primary and secondary care without coeliac disease being considered.3 Currently, for every adult patient in whom the disease is diagnosed, eight cases are estimated to go undetected.4

What is coeliac disease and why is it more common now?

Coeliac disease (or gluten sensitive enteropathy) is defined as a state of heightened immunological responsiveness to ingested gluten (from wheat, barley, or rye) in genetically susceptible individuals. Coeliac disease has historically been considered to be an uncommon gastrointestinal condition. In addition, most clinicians expect to recognise infant or childhood presentations with overt symptoms of malabsorption (or failure to thrive).5

A paradigm shift has occurred, however, in our conceptual understanding of coeliac disease. Recent international studies assessing the prevalence of coeliac disease in the general population have consistently reported that coeliac disease affects 0.5-1% of all adults.2 Adult presentations are now more frequent than paediatric (a ratio of 9:1, according to the 2005 membership data of the Coeliac UK charity). Patients most commonly present during their 40s.2

Patients with adult coeliac disease rarely present with symptoms suggestive of malabsorption (low body mass index accounts for 5% of all cases diagnosed, with most having either a normal or overweight body mass index6). Far more commonly they describe non-specific or subtle gastrointestinal symptoms (for example, non-specific abdominal pain, symptoms similar to those of irritable bowel syndrome, or even upper gastrointestinal symptoms5). Any gastrointestinal presentation of coeliac disease is now broadly described as the typical (classic) form. However, a substantial proportion of patients have no gastrointestinal symptoms but present with extraintestinal manifestations (box) and/or recognised associated conditions (table). This manner of presentation is now called the atypical or silent form (figure). Patients who present in this way may initially be overlooked because of the lack of gastrointestinal symptoms.78 Finally, some individuals may have the potential to develop coeliac disease (figure).

The increasing recognition of coeliac disease is attributed to several factors: new serological assays; advances in flexible endoscopy, allowing clinicians to take duodenal biopsies easily at the time of gastroscopy; and the realisation that patients often do not have gastrointestinal symptoms.

Diagnosis

What serological tests should be performed?

Immunoglobulin (Ig) G and IgA gliadin antibodies lack sensitivity by comparison with IgA endomysial antibody. However, there are limitations to the use of endomysial antibody:

- Oesophagus from the rhesus monkey (an endangered species) or human umbilical cord are still required as a substrate to test for endomysial antibodies in serum
- The test is qualitative, involving subjective interpretation of the immunofluorescence staining
- Endomysial antibody can be negative in patients with lesser degrees of villous atrophy.

The more recent development of IgA tissue transglutaminase antibody has provided the clinician with an alternative to endomysial antibody. Current reports validating tissue transglutaminase antibody in clinical practice give a sensitivity of 91-95% and a negative

### Symptoms in patients presenting with coeliac disease

<table>
<thead>
<tr>
<th>Gastrointestinal presenting symptoms</th>
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<tbody>
<tr>
<td>Abdominal pain</td>
</tr>
<tr>
<td>Diarrhoea</td>
</tr>
<tr>
<td>Steatorrhoea</td>
</tr>
<tr>
<td>Bloating</td>
</tr>
<tr>
<td>Non-specific gastrointestinal symptoms</td>
</tr>
<tr>
<td>Weight loss</td>
</tr>
<tr>
<td>Fatigue or “tired all the time”</td>
</tr>
<tr>
<td>Arthralgia, arthritis, and myalgia</td>
</tr>
<tr>
<td>Skin rash (dermatitis herpetiformis)</td>
</tr>
<tr>
<td>and aphthous ulcers</td>
</tr>
<tr>
<td>Depression or neurological symptoms</td>
</tr>
</tbody>
</table>

*Although these symptoms are common in primary care, we suggest that clinicians should test patients if symptoms are persistent or recurrent, if multiple symptoms are present, or if secondary care referral is being considered
reached a sufficient standard to recommend this.11 It for duodenal biopsy, but serological tests have not serology has been proposed as a possible replacement information of the diagnosis by means of duodenal biopsy. In the presence of a positive antibody the patient should be referred to a gastroenterologist for confirmation of the diagnosis by means of duodenal biopsy. Serology has been proposed as a possible replacement for duodenal biopsy, but serological tests have not reached a sufficient standard to recommend this.11 It is therefore essential to advise patients to continue eating a normal diet (that is, containing gluten) until a biopsy is performed as withdrawal of gluten may result in an equivocal or normal biopsy result.

What are the pitfalls in duodenal biopsy and what is antibody negative coeliac disease?

In the presence of a positive antibody the patient should be referred to a gastroenterologist for confirmation of the diagnosis by means of duodenal biopsy. Serology has been proposed as a possible replacement for duodenal biopsy, but serological tests have not reached a sufficient standard to recommend this.11 It is therefore essential to advise patients to continue eating a normal diet (that is, containing gluten) until a biopsy is performed as withdrawal of gluten may result in an equivocal or normal biopsy result.

Histological demonstration of small bowel villous atrophy remains the optimal method for making the diagnosis of coeliac disease. Seronegative (antibody negative) coeliac disease can occur, even in the presence of a normal serum IgA. The prevalence of seronegative coeliac disease is 6.4-9.1% of all diagnosed cases.12 Therefore a duodenal biopsy should be performed in patients in whom coeliac disease is strongly suspected even if they have a negative coeliac antibody profile. Seronegative coeliac disease may occur in patients who have more severe disease (these individuals are often older). Conversely, both tissue transglutaminase antibody and endomysial antibody may also be negative in patients with less severe mucosal lesions.9 For these cases, confirming the diagnosis with a histological and symptomatic response to a gluten-free diet as well as supportive HLA typing ensures that patients are not incorrectly diagnosed as having coeliac disease.

When considering symptomatic individuals with a family history of coeliac disease (first degree relative), even if the serology is negative a referral to a gastroenterologist for HLA typing (with possible duodenal biopsy) may be warranted. This strategy will ensure that the number of cases missed is minimised.15

What are the risks for people with coeliac disease?

Recent population based studies suggest that patients with coeliac disease have only a modestly increased risk of malignancy and mortality. This risk seems to fall as time from diagnosis increases (in those patients who comply with a gluten-free diet).16-18 Although small bowel lymphoma may be 50 times more common in someone with coeliac disease, the annual incidence is low (0.5-1 per million people), so the absolute risk for patients with coeliac disease is modest. At the time of diagnosis reduced bone mineral density (osteoporosis or osteopenia) has been shown in 40% of patients with coeliac disease.9-10 The reduced bone mineral density also translates to an increased risk of fracture,16 but this risk is modest, with recent studies describing a rate ratio of 1.9 for hip fractures (compared with healthy controls).17 Current recommendations suggest that all patients with coeliac disease should have dual energy x ray absorptiometry either at presentation or follow-up.18

**TIPS FOR NON-SPECIALISTS**

- Case finding for coeliac disease with recognition of a collection of symptoms and associated diseases will increase detection
- Not all patients with coeliac disease experience weight loss or gastrointestinal symptoms
- Patients in whom coeliac disease is suspected should be advised to avoid starting a gluten-free diet until diagnostic confirmation with duodenal biopsy
- Compliance with a gluten-free diet can be improved by specialist long term follow-up
We suggest testing patients if they have other or several associated conditions, symptoms (see box), or if a secondary care referral is being considered.†† Functional hyposplenism has been shown to occur in 30% of patients with coeliac disease—for this reason, Haemophilus influenzae, pneumococcal, and annual influenza vaccination should be offered to the patient if there is evidence of hyposplenism on a blood film.19

In general, all the potential complications described are either reversible or avoidable by complying with a gluten-free diet. With specific regard to reduced bone mineral density, following a gluten-free diet may either maintain or improve the density.††

The initial improvement in quality of life after one year of starting a gluten-free diet may not be sustained at the same level in the long term. However, although patients with coeliac disease may have a poorer quality of life than controls, it is still an improvement compared with their life before diagnosis, particularly for the patients who presented with typical symptoms.™

Who should be tested and what are the unresolved controversies?

Coeliac disease should be considered and tested for when several symptoms and/or disease associations are identified (see box and table). The prevalence of coeliac disease among first degree relatives is reported as 4-22.5%,™ so they too should receive counselling and be offered testing.

Some might argue that coeliac disease fulfills the tenets of any screening programme, but when would we decide to screen? At what age and how often thereafter? Serological markers may be highly sensitive and specific, but the value of these tests decreases when they are used in the general population. Although the investigational process for population screening and case finding may be the same, there is an important ethical difference between them. If a patient seeks medical help, then the physician is trying to diagnose the underlying condition. This would be classified as case finding and clearly it is the patient who has initiated the consultation and in some sense is giving consent for investigation. However, individuals who were not patients but have been found to have coeliac disease through a screening programme may have considered investigating themselves to be “well,” and it is the physician or healthcare system that is identifying them as potentially ill.™

Despite some evidence showing that overall quality of life is improved in screen detected patients, this benefit seems to be short lived, with subsequent poor compliance with a gluten-free diet.™

Management

Patients who have a positive antibody or in whom coeliac disease is strongly suspected should be referred to a gastroenterologist. A biopsy before starting a gluten-free diet is mandatory. Histological confirmation ensures validity of the diagnosis, allows an assessment of the degree of histological severity as a baseline (should symptoms not improve), and influences any advice about family screening.

<table>
<thead>
<tr>
<th>Conditions shown to be associated with coeliac disease</th>
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<tbody>
<tr>
<td>Associated conditions</td>
</tr>
<tr>
<td>Group 1*</td>
</tr>
<tr>
<td>Dermatitis herpetiformis</td>
</tr>
<tr>
<td>Recurrent aphthous ulcers</td>
</tr>
<tr>
<td>Iron deficiency anaemia</td>
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<tr>
<td>Irritable bowel</td>
</tr>
<tr>
<td>Group 2†</td>
</tr>
<tr>
<td>Abnormal liver biochemistry</td>
</tr>
<tr>
<td>Infertility</td>
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<tr>
<td>Osteopenia or osteoporosis</td>
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<tr>
<td>Down’s syndrome</td>
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<tr>
<td>Thyroid disease</td>
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<tr>
<td>Type 1 diabetes</td>
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<tr>
<td>Ataxia of unknown cause</td>
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<tr>
<td>Addison’s disease</td>
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<tr>
<td>Alopecia areata</td>
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</tbody>
</table>

*We recommend testing for coeliac disease in accordance with current national guidelines and reviews.™™ However, these guidelines and the prevalence studies in this table are primarily from secondary care.

††We suggest testing patients if they have other or several associated conditions, symptoms (see box), or if a secondary care referral is being considered.

†††We recommend testing for coeliac disease in accordance with current national guidelines and reviews.™™ However, these guidelines and the prevalence studies in this table are primarily from secondary care.

†‡‡We suggest testing patients if they have other or several associated conditions, symptoms (see box), or if a secondary care referral is being considered.
Confirmation of the diagnosis based on resolution of symptoms with gluten exclusion alone may ultimately result in confusion for the patient. This point can be illustrated in patients with irritable bowel syndrome who have had a normal duodenal biopsy but who may benefit from a gluten-free diet.\textsuperscript{w15}

A gluten-free diet can be a major and initially overwhelming undertaking. However, it is the cornerstone of treatment in coeliac disease. For this reason, expert dietetic advice is essential. A dietitian’s role enables improvement of symptoms and avoidance of nutritional deficiencies related to both the coeliac disease and a subsequent gluten-free diet. The dietitian’s role encompasses education about iron, folate, vitamin B-12, fibre, calcium, and vitamin D.\textsuperscript{21}

The role increases further when advice is required for the weight gain that can occur when the small bowel recovers. Compliance with a gluten-free diet may be compromised by a lack of education, limited medical support (from doctors and dietitians), or the absence of symptoms at the time of diagnosis (or in screen detected patients).\textsuperscript{w19} Compliance can be assessed by repeating the duodenal biopsy, antibody testing (levels should normalise on a gluten-free diet), dietary history, and symptom resolution.

Patients are recommended to have a yearly follow-up with a dietitian or doctor to help compliance, as the best evidence to date is that regular specialist follow-up improves compliance.\textsuperscript{23} Patient surveys show that the optimal follow-up is an appointment with a dietitian in a dedicated clinic but with specialist medical expertise available (concurrently) should they require it.\textsuperscript{w16}

Reasons for lapses in a gluten-free diet include poor palatability, the absence of a recurrence of symptoms after lapses, high cost of gluten-free products, and the unspecified presence of gluten in food and medications.\textsuperscript{24} Patients who are established on a gluten-free diet may be able to reintroduce oats. Oats have been shown to be safe in several long term studies,\textsuperscript{w17} although cross contamination with wheat flour has been shown (and occasionally “molecular mimicry”), which may result in a recurrence of symptoms.\textsuperscript{w17, w18}

If symptoms persist despite a gluten-free diet, the most common reason is inadvertent non-compliance. However, several other conditions are linked to coeliac disease and can cause persisting symptoms, so a gastroenterological opinion should be sought.\textsuperscript{w19}

Conclusion

Many alternatives to a gluten-free diet are being evaluated (see “Ongoing research” box). However, an important aspect of the new therapies is that they could have as yet unreported side effects or complications, whereas a gluten-free diet is safe.\textsuperscript{25}

In conclusion, adult coeliac disease is common with many undetected cases still present in the community. We and others have shown a delay in diagnosis in patients with coeliac disease—perhaps the important change in our clinical practice (both in primary and secondary care) is to have a low threshold for case finding and serological testing.

Contributors: ADH designed and drafted the article and is the guarantor. MH and SB revised the article and approved the final manuscript. DSS designed and revised the article and approved the final manuscript.

Competing interests: DSS is an associate medical adviser for the charity Coeliac UK and is chairman of the small bowel and nutrition committee of the British Society of Gastroenterology; SB is on the medical advisory council for Coeliac UK. These are honorary posts with no financial benefits. SB has also received reimbursement for attending symposiums and fees for consulting from SFS (makers of gluten-free food).

Provenance and peer review: Commissioned and externally peer reviewed.
Trust me

In recent months, much has been written about the UK government’s efforts to undermine doctors, to reduce us from autonomous professionals to tick-box automatons. With the forced implementation of the Medical Training Application Service (MTAS), the government has begun to succeed. But there are some things that it cannot eradicate, much as it would love to.

Five years ago June and her husband were both diagnosed with cancer within a year of each other. They both underwent treatment, and June has just been given her five-year clean bill of health. Her husband was not so lucky. Three years ago last weekend he died, a few days short of their 40th wedding anniversary. June has been heartbroken ever since, but has marched on through life and copes well. She lost all her faith in the medical profession the day her husband lost his battle and blames his doctors for her loss.

In July the erratic weather conditions caused flash floods in the village, and June was trapped in her home by rising water levels. My neighbour asked me for my help, as June was refusing to leave her home, and all her husband’s things behind—her reminders of her previous happiness.

I was beginning to despair of ever helping June to safety and was clutching at any persuasive argument I could summon, but to no avail. It was getting increasingly dark and cold, and June was starting to shiver from being in her wet clothes too long. And then I heard myself say it: “Trust me, June, I’m a doctor.” Quietly she nodded and started packing an overnight bag. My neighbour and I helped her to safety through the flood, and when she was dry and warm, with a mug of hot sweet tea and a stiff gin and tonic inside her, she went to her daughter’s home willingly.

June is an ordinary person with an ordinary experience of ill health and loss. But she gained extraordinary strength from the fact that I was a doctor, and she trusted me. That makes it all worth while. And whatever the government does to my career in the coming months and years, it can’t take that away from me.

Competing interests: I have been unsuccessful in the recent MTAS lottery and am grasping at anything resembling hope or goodwill.

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Dickey W, McConnell JB. How many hospital visits does it take before upstairs, and my neighbour, who knows June well, persuade her out of her house to stay with her family memories of her husband.


Dickey W, McConnell JB. How many hospital visits does it take before upstairs, and my neighbour, who knows June well, persuade her out of her house to stay with her family memories of her husband.


RATIONAL IMAGING

A painful hip

Philip J O’Connor

If you suspect a patient has a fractured hip but radiographs are normal, how else can you confirm this diagnosis?

The patient

A previously fit and well 86 year old man presented with acute pain in the left hip after a fall. He had no medical history of note. Hip movement was painful on examination, but no deformity or diagnostic features were present. No fractures were seen on anteroposterior and lateral radiographs of the hip (fig 1).

What test do I order?

Only 1% of all fractured necks of femur are radio graphically occult,1 but this figure is higher in selected study groups.2 3 Patients have undisplaced fractures at presentation, and they can be identified with a variety of approaches.

Repeat radiographs

Repeat radiographs are indicated if initial radiographs were inadequate or if a time delay has occurred between initial presentation and the decision to image further. Radiographs should be centred on the affected hip with a true lateral obtained if no fracture is seen on the anteroposterior view. If no fracture is seen on either of these views then an internal rotation film or angled view of the hip can be performed.4 In cases where an inadvertent delay has occurred, the working diagnosis has usually been a soft tissue injury but the patient has failed to mobilise as expected. A time delay of several days allows resorption to occur around the fracture site or cortical displacement to occur, which renders the fracture radiographically visible.

Bone scintigraphy

Bone scintigraphy assesses increased bone turnover at the fracture site. Results of this test are positive 24 hours after fracture in young adults but may take up to 72 hours in older patients.2 4 The time difference is caused by variations in vascularity and bone turnover in younger and older patients. This test is particularly useful if provision of magnetic resonance imaging is poor or if patients should not undergo magnetic resonance imaging. Scintigraphy is an excellent exclusion of bone injury but positive findings are non-specific. Various pathologies, such as arthropathy or tumour, can produce focally increased activity in the proximal femur that can mimic fracture.5

Ultrasound

Ultrasound is useful for showing soft tissue changes and also provides a limited view of bone surface in patients who have undergone trauma.10 The hip is the deepest joint in the body, however, so sonography is not usually valuable for assessing bone surface change at this site. Irregularity of the bone surface is common in elderly patients, which further reduces the usefulness of ultrasound in diagnosing fractures. It can show effusion or haemorrhage in the joints of patients with hip fractures, but it rarely directly visualises fractures.
Ultrasound findings are non-specific so this technique has a limited role in hip trauma.

Computed tomography

Computed tomography can be used to diagnose hip fractures. Studies that detail hip fractures tend to look at acetabular fractures and few data are available for femoral neck fractures. This is probably because patients with femoral neck fractures often have osteoporosis with little fracture displacement. This makes computed tomography less reliable for demonstrating fractures in the femoral neck than in other areas of the body (fig 2).

Magnetic resonance imaging

Fracture detection using magnetic resonance imaging relies less on showing cortical or trabecular discontinuity than radiography or computed tomography. The presence of oedema around fracture sites helps delineate the fracture margins. In most patients limited sequencing means the imaging can be completed within 15 minutes. This technique has good sensitivity and specificity for femoral neck fractures and also shows soft tissue injuries that are often present in isolation or associated with such fractures. Early magnetic resonance imaging is more cost effective than other diagnostic strategies. It has 100% accuracy; scintigraphy is slightly less accurate, with a sensitivity of 93% and specificity of 95%.

Outcome

Magnetic resonance imaging confirmed the presence of a complete fracture of the femoral neck. This was confirmed at surgery and treated successfully (fig 3).

Contributors: PI/OC is guarantor.
Funding: None.
Competing interests: None declared.
Provenance and peer review: Commissioned; externally peer reviewed.

References


Endpiece

The whole

The cure of many diseases is unknown to the physicians of Hellas, because they are ignorant of the whole, which ought to be studied also; for the part can never be well unless the whole is well . . . this is the great error of our day in the treatment of the human body, that the physicians separate the soul from the body.

Plato (Greek philosopher, c427–347 BC)

Submitted by Nageena Hussain, senior house officer in anaesthetics, Heart of England NHS Trust
The dangers of disease specific aid programmes

**PERSONAL VIEW Roger England**

Last week saw the launch of the new International Health Partnership that Prime Minister Gordon Brown hopes will accelerate progress towards achieving the United Nations’ millennium development goals for health (see News p 532). Will the partnership make a difference? Certainly, the joint press releases with Chancellor Merkel of Germany made the right noises (www.number-10.gov.uk/output/Page13047.pdf). Politicians are realising, perhaps, that throwing money at countries through disease specific global programmes might make good press, but it is not the way to help Africa.

Although international aid to developing countries for health has doubled to $14bn (£7bn; €10bn) since 2000, much of the increase is tied to individual diseases and is delivered outside of recipient countries’ planning and budgeting systems, causing big problems for the recipients. Money for combating HIV and AIDS is the worst. This now exceeds the whole health budget of many of the recipient countries, such as Uganda (figure). It distorts countries’ efforts to deal with their problems, because most of this new aid is delivered “off budget,” resulting in separate plans, operations, and monitoring—all in parallel with government systems. Just as countries are strengthening their budgeting processes and linking planned expenditure to activities, donors are earmarking aid to their own priorities, not those of international lobby groups. No one is funding this adequately, and no international body is equipped to provide the technical support countries need. The obvious candidate, the World Health Organization, suffers from serious constitutional and institutional flaws and is chronically under funded.

What can Mr Brown’s new International Health Partnership do to redress this? Firstly, participating donor governments can stop funding global programmes that do not put their money through recipient countries’ planning and budgeting processes—withstanding money from the Global Fund, for example, until it joins the sector wide, basket fund arrangements that countries have established to combine donor and domestic financing.

Secondly, the partnership can press for the Global Fund to become a truly global health fund—not a three diseases fund—so that financing can be better coordinated even before funds get to countries and so that countries will have more predictable funding with which to invest in longer term plans.

Thirdly, it can provide real support to countries that are seriously reforming their systems. Such support must extend beyond encouragement and advice: it must start with paying for the extra costs of decentralisation and of moving services out of government to independent bodies. It will have more predictable funding with which to achieve that without a better international system for aid. Disease specific programmes do a disservice to this ambition, and the International Health Partnership must not only recognise this but be bold enough to act.

Roger England is chairman, Health Systems Workshop, Grenada, West Indies. roger.england@healthsystemsworkshop.org

<table>
<thead>
<tr>
<th>Year</th>
<th>Global Fund to Fight AIDS, Tuberculosis and Malaria</th>
<th>US president’s emergency plan for AIDS relief</th>
<th>World Bank multi-country AIDS programme</th>
<th>Amount of funding (£m)</th>
</tr>
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<tbody>
<tr>
<td>2002</td>
<td>120</td>
<td>80</td>
<td>40</td>
<td>340</td>
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<td>2003</td>
<td>120</td>
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International agencies’ funding of HIV and AIDS programmes in Uganda

Donors must face squarely the reality that staff shortages and lack of quality health care result from the miserable level of earnings in the public sector, and they should use aid money to pay staff more if they perform. It doesn’t matter whether the staff are employed by public or private organisations or are self employed. Already, 60% of health spending in sub-Saharan Africa is private, and reform minded governments are looking at how purchasing those services can raise quality for public consumers.

Finally, the partnership can lead a complete rethink of the millennium development goals, not because we are not going to meet them, but because they are more trouble than they are worth—and always were. They were cobbled together to make politicians look grand for the UN millennium declaration in 2000. Targets were set in the absence of any idea of how they were going to be met, how much it would cost, or where the money was coming from. The “one size fits all” target percentage reductions mean that countries that have achieved a lot in the past have big difficulties in meeting the goals, and gains (or lack of them) take no account of distribution across socioeconomic groupings. They are a factor in the rise of disease specific global programmes instead of sector-wide reforms.

We will not achieve better health care for the world’s poor without better national health systems to fund and deliver it, and we will not achieve that without a better international system for aid. Disease specific programmes do a disservice to this ambition, and the International Health Partnership must not only recognise this but be bold enough to act.

Roger England is chairman, Health Systems Workshop, Grenada, West Indies. roger.england@healthsystemsworkshop.org
An inconvenient truth

As a child I was good with a knife. Preparing 4 kg of potatoes in 10 minutes—anything was preferable to milking the goat. No ready meals for us. At school the air was thick with the smell of burnt toast and the sound of bubbling cauldrons of custard, for home economics classes were compulsory. At university I worked in a restaurant washing dishes, graduated to vegetable preparation, and eventually specialised in making the starters. Later, armed with a Delia Smith idiot’s guide cookbook, I discovered a passion for food and cooking. Cooking, however, has become mere “entertainment,” ever more voyeurism, and about the celebrities rather than the food. We are losing our food culture.

This is the era of the convenience meal in all its guises. Our main streets are full of takeaways: fish and chips, Chinese, kebabs, pizza, and Indian. But at least there is a degree of honesty in these colourful shop fronts. We pull into the supermarkets and stuff our trolleys with ready meals of couscous, duck, Jambalaya, deluding ourselves that this is proper food, but these are just takeaways too, processed imitations of real food, stuffed full of hidden calories, salt, and preservatives.

But our children fare the worst; in a society that venerates the needs of children they have become culinary Neapoleses. They eat only what they like, and so what they like becomes all that is offered. Junk explanations are offered: food “allergies” or “intolerance.” Behind the closed doors of many of our most affluent households, no one cooks, and kids get processed foods, with fat chance of escaping obesity or eating disorders. Our society is “allergic” to accepting responsibly, so it is all the fault of advertising and the food industry. Our children’s diet is parental passivity at its worst. All the excuses about time or cost are just that: excuses. We got what we wanted—wealth, comfort, and, above all else, convenience—but on the way we have lost much.

The 

Lancet

has just published evidence that food additives adversely affect conduct (doi: 10.1016/S0140-6736(07)61306-3). This is not much of a surprise. But the real issue is our consumption of processed convenience foods. We need to value our traditional food culture, reconnect with food production, and see cooking as importantly as we do the “three Rs.” Schools should relinquish their blinkered obsession with academic performance and instead be filled with the smell of burnt custard. Likewise, families should give up the pointless merry go round of tutors and extracurricular lessons and use this time to prepare food together. Children can learn to do something positive with knives rather than just seeing them as something that teenage gang members wield. Let them cut their fingers and burn their hands. Believe me, this is considerably safer than milking a goat.

Des Spence is a general practitioner, Glasgow destwo@yahoo.co.uk

Forceps at dawn

In one of his early films David Niven was a doctor in an Alpine sanatorium. Barbara Stanwyck was his patient, a beautiful concert pianist dying from consumption. When she became distressed in the night he appeared immediately, hair immaculately parted, his face filled with debonair concern.

This scene from an otherwise forgettable movie often comes to mind as the phone beside my bed lets rip with its infernal ringing and vibrating. (At 3 am, why do the registrars call my mobile instead of my home number? I suppose I should take it as a sly compliment.)

You don’t go to the labour ward in pyjamas. It will only amuse the midwives, frighten the patient, and disillusion the trainees, who will assume your valet has resigned. In fact you rarely need to rush. The more urgent the call, the more likely the registrars are to have sorted things out by the time you arrive. But you keep slip-on shoes ready and a shirt with cufflinks inserted. At traffic lights you do up your bow tie. Best to be legal.

After 25 years of this, your emotions are predictable. You start with self pity, particularly if it is raining and your up-and-over garage door empties itself down the back of your neck. You become sanctimonious as you drive past drunks emerging from the closed doors of many of our most affluent households, no one cooks, and kids get processed foods, with fat chance of escaping obesity or eating disorders. Our society is “allergic” to accepting responsibly, so it is all the fault of advertising and the food industry. Our children’s diet is parental passivity at its worst. All the excuses about time or cost are just that: excuses. We got what we wanted—wealth, comfort, and, above all else, convenience—but on the way we have lost much.

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Live and let die

Stefan Zweig was an Austrian writer who was a close friend of Freud's. He occupies more or less the same place in German letters as the literary doctor Somerset Maugham in British—that is to say, he is viewed with suspicion by the literati because, although brilliantly intelligent and immensely cultivated, what he wrote was so intensely readable. To be really great, at least nowadays, you have to be difficult to understand.

Like Somerset Maugham he wrote short stories and novellas in which the most intense passion is described with almost clinical detachment. Like Maugham, Zweig understood that human nature was best examined in the petri dish of marginality and social isolation. Like Maugham, he is able to conjure an atmosphere in a few simple words.

In his novella Amok the narrator—obviously Zweig himself, just as Maugham is often his own narrator—describes a shipboard meeting with a German doctor who has been working in what were then (in 1912) the Dutch East Indies. The doctor avoids all human contact on board ship and meets Zweig by accident in the dead of night. He then tells Zweig his story.

Fleeing disgrace in Germany, where he had had a once promising career, he signs up to the Dutch colonial service and is posted to a remote station in Java, which he does not leave for seven years. Deprived of European company, one day a very superior English woman, the wife of a rich Dutch merchant who is away on business, comes to his remote station to ask him to perform an abortion. In her husband's absence she has had an affair and wishes to preserve her reputation.

The doctor has no moral qualms—he has helped women before in this situation—and though strictly abortion is illegal, the law permits him to make up some kind of medical excuse to perform it. The woman asks that he leave the colony as soon as he has performed the operation and offers him a sum of money that will yield the equivalent of his pension. In a moment of madness, after which he acts like a man suffering from amok, the mental condition in which, because of an emotional crisis, a previously sane man runs around stabbing people, the doctor offers to perform the abortion if she will sleep with him.

She refuses his offer with contempt and has an abortion performed by a local midwife. Too late, the doctor is called in to watch her die from haemorrhage and infection. On her deathbed she extracts a promise from him never to reveal what has happened to her.

Going home penniless and morally broken, the doctor rejects Zweig's feeble offer of help, inherently inadequate to the situation.

“Among the ‘rights of man’ there is a right which no one can take away, the right to croak when and where and how one pleases, without ‘a helping hand’.”

And the doctor does indeed commit suicide.

Ten years after the British publication of Amok, Zweig, having seen the writing on the wall in his native Austria, was a British subject living in exile in Brazil. The Nazis having scored victory after victory in Europe, Zweig thought they would win the war, and he and his wife swallowed a fatal dose of Veronal, the very sleeping draught the doctor in Amok had used regularly to procure sleep from his troubled conscience.

Theodore Dalrymple is a writer and retired doctor.
Inside the Ethics Committee
BBC Radio 4, Wednesdays 8 pm to 8.45 pm, 29 August, 5 September, and 12 September (repeated Saturdays at 10.15 am)
www.bbc.co.uk/radio4/science/ethicscommittee.shtml
Rating: ★★★★☆

No patient is an island
A radio series about the work of ethics committees, which demonstrates the web of personal and professional relationships that surround the patient journey, impresses Daniel K Sokol

David, a middle aged man with severe learning difficulties, has high grade lymphoma. With prolonged chemotherapy, the chances of cure are roughly 50%. The treatment, however, may prove traumatic for David, who is unable to speak and who earlier experienced great distress when undergoing computed tomography. Might palliative care be a better option?

Although clinical ethics committees (CECs) are a desirable and increasingly common addition to healthcare institutions in the United Kingdom, they are, in my experience, underused. “We need more cases” is an oft-heard refrain among committee members. Whatever the reasons for this paucity of referrals, BBC Radio 4’s new series of Inside the Ethics Committee should raise awareness of the existence of CECs and convince even the ethic-sceptic clinician that reasoned discussion of a case can lead to fruitful conclusions.

Hosted by Vivienne Parry, each programme presents a thorny case and examines the ethical issues with a panel of three experts, usually a mixture of clinicians and ethicists. The astute reader will already have noted that the resemblance to an actual CEC is limited, given the differences in size and constitution. It is thus a mini-committee, devoid of chaplain, lay person, and the other usual suspects. Another difference, and a great strength of the programme, is the involvement of key participants in the case. In the case of David described above, we hear from his psychiatrist, the manager of his care home, and a hospital clinician. In the second case, involving a severely anorexic 27 year old woman (Kate) requesting palliative care, we hear from the patient herself, her initial desire to improve her ballet dancing, and her descent into a world of fear, hopelessness, and guilt. We picture the situation through the words of Kate’s mother and the psychiatrist who treated her following a paracetamol overdose. These multiple narratives highlight the complexity of the situation, the real life nature of the case, and the fact that patients are not isolated units, but embedded in a web of personal and professional relationships. No patient is an island, as the poet might have said.

The various voices also prompt us to reflect on what is easily forgotten: that CECs deal with matters of consequence and that, to assume this considerable responsibility, committee members should be suitably trained.

There is a danger, in this kind of programme, of digressing from the matter at hand. Vivienne Parry, the guiding Virgil, excels in her role, keeping the discussion focused and flowing. In the case of David, she asks perceptive questions on the pitfalls of substituted judgment and the subjective nature of assessing another person’s quality of life, a theme that extends into the anorexia case. There is indeed increasing evidence that we are poor assessors not only of other people’s quality of life but also the quality of our own life in the future. Harvard psychologist Daniel Gilbert, in Stumbling on Happiness (London: Harper Perennial, 2006) remarks that “most of us have a tough time imagining a tomorrow that is terribly different from today” and, to illustrate, “teenagers get tattoos because they are confident that DEATH ROCKS will always be an appealing motto.”

With the exception of a few comments, the guests are articulate and well informed and the mix of expertise adds a welcome variety to the comments. They raise issues, such as the evaluation of best interests, the limits of respect for autonomy, and the status of advance directives in psychiatry, that although only touched upon in the programme could be developed further in a discussion group. One guest, for example, mentions the case of a competent patient with anorexia nervosa who, fearing that she will irrationally refuse treatment when below a certain weight, asks the health professionals to treat her if this should happen. This is sometimes referred to as a “Ulysses contract,” recalling Ulysses’s request to be tied to his ship’s mast before passing the island of the sirens and not to be released whatever he may say or do. Such contracts raise a wealth of practical and philosophical issues about desires, rationality, and autonomy.

So what happened to David? The actual CEC decided against chemotherapy, allowing David to return to his care home. Inside our mini-committee, two members concurred, and one disagreed. As for Kate, both CECs rejected her request for palliative care and suggested a compromise solution. The third programme examines the case of a healthcare worker who sustained a needlestick injury when treating one of the unconscious victims of the 2005 London bombings. Can she request an HIV test without the patient’s consent?

Although I shall not tattoo “Inside the Ethics Committee rocks” on my arm, this is an intelligent and engaging programme.

Daniel K Sokol is lecturer in ethics and law, St George’s, University of London daniel.sokol@talk21.com

Competing interests: One of the guests in the series is a colleague of DKS.
Alan Murray Baker
Former adviser in tropical medicine and public health East Africa, Medical Research Council, and Overseas Development Administration (b 1926; q Cambridge/St Bartholomew’s Hospital, London, 1950; MA, DPH), died from septic shock, almost 20 years after liver transplantation, on 10 May 2007.

Murray Baker spent his national service in the Royal Army Medical Corps in Kenya, and then became district medical officer and principal of the Schools of Hygiene and Public Health at Mbale, Uganda. In 1964, as the administrative dean of Makerere Medical College, he enabled it to provide large numbers of well trained doctors for an expanded health service in the newly independent East African territories. He was then appointed to the Medical Research Council, and later to the Overseas Development Administration to further Britain’s contribution to the health services of Commonwealth countries. He leaves a wife, Betty, four children, and four grandchildren.

David Allbrook

William Keith Davidson
Former general practitioner Glasgow, and medicopolitician (b 1926; q Glasgow 1949; CBE, FRCPG, DPA), d 21 May 2007.

Keith Davidson ended his national service with the rank of major as medical officer in charge of Holland and Belgium. After demobilisation he went into partnership with his father in law in Chryston and Ruchazie, where he worked for 39 years. He was very active in medicopolitics. Having first been co-opted on to the Glasgow local medical committee in 1957, he eventually became chairman of the BMA’s Scottish Council in 1978. In 1982 he was awarded a CBE and appointed vice president of the BMA. The first general practitioner to chair the Scottish Health Services Planning Council, in 1984, he was also a member of the General Medical Council in 1984-94, being especially concerned with disciplinary hearings. He leaves a wife, Mary; two children; and two granddaughters.

Mary W A Davidson

Albert Henry Hands
Former chief medical adviser British Leyland (b 1916; q Liverpool 1939; MRCGP), d 25 April 2007.

In 1941 Albert Henry Hands (“Harry”) served with the Royal Air Force Volunteer Reserve as medical officer to 602 (City of Glasgow) Squadron, then equipped with Spitfires and stationed at Kenley. He was later posted to India and Ceylon and, with 136 Squadron, to the Cocos Keeling Islands in the Indian Ocean, where a runway was established on the beach. Harry was a keen and proficient cricketer and hockey player in his younger years, and enjoyed golf in his native Lancashire. He retired at 71. He leaves a wife, Joyce; two children; and two grandchildren.

C A H Hands

Patricia Jordan (née Arnold)
Former locum consultant psychiatrist Stanley Royd Hospital, Wakefield, West Yorkshire (b 1925; q Royal Free, London, 1949; DObstRCOG, DPM), died from ischaemic heart disease on 9 July 2007. Patricia Jordan (“Pat”) was active in the Family Planning Association during 1956-79 while working full time as junior hospital medical officer in geriatric medicine. Her career changed when she became interested in psychiatry, with an emphasis on psychosexual disorders. As associate specialist and locum consultant at Wakefield and Pontefract during 1978-85, she inaugurated clinics solely for such disorders, also teaching junior staff. Her profound Christian faith strengthened her professional work. Pat was wheelchair-bound for her last few years but managed to stay in her own home, receiving many visitors and regularly attending church. Predeceased by her husband, Warren, in 2004, she leaves three children and five grandchildren.

Peter Ham

Thomas Symington
Former professor of pathology Glasgow and director Chester Beatty Cancer Research Institute, London (b 1915; q Glasgow 1941; FRSE, MD, FRCPath), d 30 April 2007. Tom Symington’s research on the adrenal gland first established the functional zonation of the adrenal cortex. His department became renowned world wide as a centre of excellence for research and produced 11 future professors of pathology. He also set up a highly regarded BSc course in pathology and was instrumental in setting up medical schools in Nairobi and Dar es Salaam. As director of the Chester Beatty Cancer Research Institute his multidisciplinary approach to research extended to overall patient care and a crusade for muliprofessional expert teams in treating cancer. He was knighted in 1978. In retirement he campaigned to establish a hospice for patients with cancer in Ayr. Predeceased by his wife, Margaret, in 2004 and by a son in 1977, he leaves two children and five grandchildren.

Alan Symington
The first time a doctor or medical student watches a patient go from being fully alert and talking to apnoeic and pulseless in a matter of minutes, the event is likely to stay with them for the rest of their life. Two accounts of such experiences by junior doctors are movingly described in Academic Emergency Medicine (2007;14:825-6). Sometimes this may happen in the middle of nowhere, where medical facilities and resources are scarce—but it can also happen in a centre of excellence where, despite everything that is available to save lives, a life is lost.

Most vaccines act by neutralising viral antibodies, thereby reducing viral entry into target cells. Monkey models have shown that this protects against HIV. New animal research shows this protective effect comes not just from neutralised antibodies but also from activated cell mediated “effector” cells (Nature 2007;449:101-4). The effector cells act against free viral cells as well as targeting infected cells, suggesting that an HIV vaccine should tackle both cell mediated immunity and antibody immunity.

In Australia, pharmacists can “hand make” compounds of drugs in novel delivery systems that are not regulated by the Therapeutic Goods Administration. Compounded hormone replacement therapy (“bioidentical” HRT) is commonly made up into tablets or creams. Three cases of endometrial cancer occurred in women taking bioidentical HRT (Medical Journal of Australia 2007;187:244-5), suggesting that some of these handmade compounds contain insufficient progesterone to prevent endometrial hyperplasia.

A systematic review suggests we still don’t know whether delayed onset post-traumatic stress disorder exists. The diagnosis was introduced in DSM-III in 1980, and the data show that it’s rare. Discrepancies in data on prevalence may be explained by problems in definition. Researchers say studying delayed onset post-traumatic stress disorder would be easier if the definition included the likelihood of previous symptoms becoming exacerbated or reactivated (American Journal of Psychiatry 2007;14:1319-26).

Another dimension of the suitability of doctors for their intended career is discussed in the Annals of the Royal College of Surgeons of England (2007;89:591-5). Dexterity and technical skills are fundamental to surgery but aren’t assessed during selection. A survey of nine surgical training programmes in the London Deanery found that candidates’ practical skills were assessed in three specialties (ENT, plastic surgery, and general surgery)—but once trainees were selected, no specialty tested for visuospatial or technical ability.

The 2007 Medsin National Conference for about 400 UK based medical students will be held in Dundee on 26-28 October. With a theme of “lots of people, lots of problems,” it will be covering topics such as migration, urbanisation, development, and population. Dundee University is looking for sponsorship from companies, organisations, and individuals. If you can help please email Emma Baird (e.j.baird@dundee.ac.uk).

The recipient of the UK’s first canine knee replacement is Grace, a 7 year old bearded collie with severe arthritis (Veterinary Record 2007;161:284). Euthanasia had been considered because she didn’t tolerate non-steroidal anti-inflammatory drugs. The femoral component of the replacement knee is made of cobalt chrome and is not cemented; long term stability comes from the bone growing into tiny beads on the surface of the prosthesis. The polyethylene tibial component is cemented, and there’s no patellar component.

A 71 year old patient who had had red eyes for a week was referred to the casualty department of the local eye hospital with a provisional diagnosis of trachoma. Examination showed no reduced vision, clear corneas, and a pseudomembrane on the palpebral conjunctiva of both lower lids. This pseudomembrane was caused by simple viral conjunctivitis; even a mild adenoviral conjunctivitis can lead to formation of pseudomembrane. Although it looks frightening, it usually resolves completely.

Ali M Al-Ani specialist training registrar Kanna Ramaesh consultant, Tennent Institute of Ophthalmology, Gartnavel General Hospital, Glasgow G12 0YN alialani@yahoo.com

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