Letters

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GMC no longer favours folder of evidence for revalidation

Editor—Wakeford is right to fear that the portfolio based methods for revalidation currently being piloted by the General Medical Council may prove "hideously expensive in time and money, and potentially inaccurate and unfair."[1 2] In a pre-pilot exercise conducted by the GMC, participants experienced difficulty in compiling folders of evidence about their practice because of the lack of systems for collecting relevant data, and they could not provide evidence relating to all sections of *Good Medical Practice* (the GMC's core statement of professional values and responsibilities). None the less, they spent up to two days working on their folders. The dummy revalidation groups who evaluated these folders were unable to recommend revalidation in most cases because of the inadequacy or irrelevance of the data presented.

This process implemented nationally would take up between 1% and 3% of every doctor's time at an administrative cost of at least £50m. These figures are unlikely to be reduced by introducing annual appraisal for all NHS consultants and general practitioners. Quite apart from the inappropriateness of using a formative process as a means of assessment, appraisal is expected to entail reviewing the evidence in each doctor's folder and will not obviate the need to collect and evaluate that evidence. The GMC would, furthermore, be unwise to base revalidation on an NHS process whose quality it is powerless to control.

Fortunately, an alternative, reliable, well validated, and vastly less expensive method exists. The Ramsey peer associate questionnaire combined with a patient satisfaction questionnaire is an accurate measure of doctors' performance technically and in terms of communication, respect for patients, and personal and ethical standards.[3 4] This approach offers a more than adequate basis for confirming the fitness to practise of most doctors and for identifying the few whose practice gives cause for concern. Its advantages over the onerous and costly folder of evidence are so great that it should now replace the folder as the GMC's preferred method.

In addition, legal advice indicates that, although the GMC may require doctors periodically to submit evidence of their fitness to practise, it may not stipulate that the evidence must take a particular form. Even if the GMC were to back the folder it would be open to doctors to submit the results of peer associate and patient questionnaires as an alternative. Given the simplicity and proved validity of the method (which might become commercially available if the GMC did not offer it), many would opt for it, and the GMC would find its preferred approach spurned by the medical profession.

Stephen Brearley *chairman, registration committee, GMC*
Whipps Cross Hospital, London E11 1NR

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Detection of breast cancer

Clinical breast examination is not an acceptable alternative to mammography

Editor—Clinical breast examination is not an acceptable alternative to mammographic screening, as Mittra et al say in their article.[1] Screening for breast cancer is a public health intervention and needs objective criteria for evaluation and quality control. Clinical breast examination is a subjective method with variable interpersonal interpretation. For a public health screening intervention, the sensitivity and specificity of clinical breast examination are too low and variable to accept as a screening test. Clinical breast examination is a detection method acceptable in a doctor-patient relationship where the doctor has the full responsibility for the diagnosis.

The estimate that only 22% of the cancers are detected by mammography remains a hypothetical calculation. Bobo and Lee analysed in a retrospective study all the cancers found by mammography and clinical breast examination in the national programme for early detection of breast cancer in the United States.[2] Of the 3780 cancers reported, on 2224 (59%) records the clinical breast examination was suspicious for cancer. On 1556 (41%) records, the clinical breast examination was normal. In other words, this examination "missed" 41% of cancers. This is almost twice the reported assumption.

Furthermore, it is a misconception that tumours grow exponentially. This is a mathematical projection of cells in virtual circumstances. The initial stage of solid tumour growth is limited by the ability of externally supplied nutrients to diffuse into the tumour. In a later stage the limiting factor for growth is the neovascularisation in the tumour tissue. The exponential growth of a solid tumour type such as breast cancer is dependent on the vascularisation, apoptosis, release of growth factors, the availability of nutrients and oxygen, and the density of the surrounding tumour tissue.[3–5]

Another mathematical error is the assumption that a tumour of 0.5 cm in diameter will become 1 cm after just one doubling. Tumour growth is not a two dimensional multiplication but operates in a three dimensional setting. The mass of a 1 cm tumour is eight times the mass of a 0.5 cm tumour and therefore needs at least three doubling times.

Especially during this crucial growth period from 0.5 cm to 1 cm, the chances for metastasis increase dramatically owing to growth dysfunction, malnutrition, necrosis, and disintegration of cells. It is well demonstrated that mammography screening shifts the stage distribution to smaller tumours in almost all existing programmes. This shift in stage distribution accounts for the better results of treatment with less mutilating surgical interventions.

C J M de Wolf *consultant public health*
University of Geneva, Institut de Médecine Sociale et Préventive, CH-1205 Geneva, Switzerland

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Mammography should be available

Editor—Mittra et al say that impalpable, mammographically detected breast cancers are mostly irrelevant and not worth detecting whereas palpable ones benefit from treatment.[1] The palpability of breast cancer depends on many variables: volume of the breast, location of the cancer in the breast, stromal reaction to the neoplasm, experience of the examiner, and the size of the tumour. Mittra et al say that it takes 29 doubling times for a cancer to reach the size of 0.5 cm, which they think is the average size of cancers detected on screening, and 30 doubling times to reach the size of 1 cm,

which they think is the average size of a palpable tumour; they doubt that one doubling time difference in the detection of breast cancer makes any difference. They also acknowledge that breast self examination (only one extra doubling time) has not shown a survival advantage. We believe that the growth of breast cancer is not always a linear process and that palpability has nothing to do with the biology of the disease.

Many clinicians working in the NHS breast screening programme have the unfortunate direct experience of women presenting with palpable, node positive breast cancers two or three years after a "normal" result on screening mammography, which, on careful reviewing, shows that the lesion was in fact already present, as a small cluster of microcalcifications or other abnormality, and had been missed. Are those the impalpable breast cancers, which in the opinion of Mittra et al are not worth detecting?

The main problem of breast screening is that it does not tell us about the biology of the cancers it detects and can therefore lead in some cases to overtreatment. Mittra et al support their opinion with the results of the Canadian national breast screening study.[2] That study has several flaws,[3] of which the most relevant is that there was a non-blinded randomisation, and more advanced (node positive) cancers were allocated to the mammography group. If the study and the control group had a different average stage of disease at the outset, the beneficial effect of mammography might have been lost. Screening by clinical examination could be less expensive but will also be more labour intensive and difficult to implement on a national scale. Mammography may be an inappropriate use of resources in a developing country with many worse health problems, but this is not a reason why a rich nation should not use it. We agree with Mittra et al that women should be fully informed of the advantages and disadvantages of breast screening.

G Querci della Rovere *consultant surgeon*
Royal Marsden Hospital, Sutton, Surrey SM2 5PT
gquercidellarovere@doctors.org.uk

Ruth Warren *consultant radiologist*
Addenbrooke's Hospital, Cambridge CB2 2QQ

1 Mittra I, Baum M, Thornton H, Houghton J. Is clinical breast examination an acceptable alternative to mammographic screening? *BMJ* 2000;321:1071-3. (28 October.)
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Self examination contributes to reduction in mortality

Editor—Mittra et al repeated several comments about the Canadian national breast screening study that we thought had been put to rest.[1] In particular, we regret their statement, "even if the quality of the mammograms was indeed a weakness of the study. . . ."

We have explained before that criticisms of the quality of mammograms in the study are unwarranted not only because of the excellent mammographic sensitivity achieved in the second Canadian national breast screening study,[2] but also because of rates of cancer detection that even now are not being exceeded in programmes using "modern mammography."[3 4]

In the second study, for women allocated to receive mammography and clinical breast examination, the detection rate at first screen was 7.2/1000, and at subsequent screens 3.0/1000. Mammography alone or together with physical examination detected 76% and 84%, respectively, of these cancers. But perhaps most telling is that for small invasive cancers (smaller than 15 mm in size), the rate at the first screen was 1.8/1000 and at subsequent screens 1.1/1000. Furthermore, of 267 invasive breast cancers found in our mammography arm by screening, 126 (47%) were found by mammography alone.

In spite of mammography detecting small cancers two to five years earlier compared with when the catchup occurred in women screened by physical examination alone, and in spite of mammography detecting more breast cancers, there was no effect on the breast cancer death rate after 13 year follow up.[3]

Obviously mammography in the second Canadian national breast screening study found small cancers with a "good prognosis," which probably grow slowly and are easy to treat even if they are found later by skilled physical examination by a health professional or by self examination. Unfortunately, the mammographically detected cancers with a "good" prognosis do not affect mortality from breast cancer.

Many will not be persuaded by such arguments, especially those who believe the second Canadian study was designed to evaluate the efficacy of breast screening in this age group and disregard the fact that it was designed solely to evaluate the incremental benefit of mammography over and above clinical breast examination. For that reason, we enthusiastically support the call by Mittra et al for a randomised trial comparing mammography with physical examination, to which we would add self examination of the breast, as there is evidence from other analyses of the Canadian study that self examination does contribute to a reduction in mortality from breast cancer if done well.[5]

A B Miller *professor emeritus*
Division of Clinical Epidemiology, Deutsches Krebsforschungszentrum, D-69120 Heidelberg, Germany
a.miller@dkfz-heidelberg.de

C J Baines *professor*
Department of Public Health Sciences, University of Toronto, Toronto, Ontario, Canada M5S 1A8

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Diagnosing suspected ectopic pregnancy

Can we offer completely non-surgical management for ectopic pregnancy?

Editor—In his editorial Ankum discussed using measurements of serum concentrations of human chorionic gonadotrophin and transvaginal scanning to diagnose ectopic pregnancy.[1] These two diagnostic modalities have opened up the possibility of a new era of non-laparoscopic diagnosis. Owing to the inconsistencies in the calibration of assays for human chorionic gonadotrophin and variations in the ability of ultrasonographers, each department should define its own "discriminatory zone" for human chorionic gonadotrophin.[2] Clinicians using non-laparoscopic diagnostic algorithms should be prepared to perform a laparoscopy when the concentration of human chorionic gonadotrophin is <2000 mIU/ml and there is less than a 50% increase in human chorionic gonadotrophin in 48 hours with no intrauterine gestation sac on transvaginal scanning.[3]

Laparoscopy should be used for treatment more often than for the diagnosis of ectopic pregnancy. Are we in a position to offer that? A postal survey showed that only 13% of hospitals in the United Kingdom perform laparoscopic surgery routinely.[4] So most women in Britain who have an ectopic pregnancy have a laparotomy. Currently there is enough evidence in favour of the efficacy of methotrexate in the treatment of ectopic pregnancy, and about 45% of all ectopic pregnancies can be managed with methotrexate.[5] So when the diagnosis is accomplished without laparoscopy, treatment with methotrexate will have the advantage of avoiding the morbidity of surgery. To date there is no randomised trial between laparoscopic salpingectomy and treatment with methotrexate. Until the result of such a trial is available, it would probably be sensible to treat a selected group of women with methotrexate, especially where facilities for laparoscopic surgery are not available.

Ashis K Sau *specialist registrar in obstetrics and gynaecology*
Department of Obstetrics and Gynaecology, Kent and Canterbury Hospital, Canterbury CT1 3NG
ashis@sau3.freeserve.co.uk

Mita Sau *specialist registrar in obstetrics and gynaecology*
Department of Obstetric and Gynaecology, Farnborough Hospital, Orpington, Kent BR6 8ND

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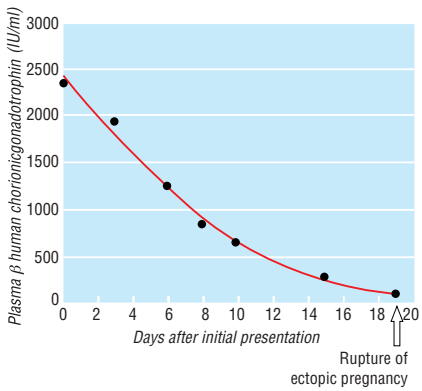
Patients with falling concentrations of β human chorionic gonadotrophin should be seen regularly

EDITOR—Although I agree with much of what Ankum said in his editorial on diagnosing ectopic pregnancy,[1] I have concerns on the wisdom of measuring serial serum concentrations of β human chorionic gonadotrophin in cases of possible ectopic pregnancy and have previously published a case report on falling serial serum concentrations and ectopic pregnancy.[2]

A woman presented with six weeks' amenorrhoea and light vaginal bleeding but no abdominal pain or discomfort. Examination of the abdomen and pelvis yielded normal results, as did transvaginal scanning. Serum concentration of β human chorionic gonadotrophin was initially 2367 IU/ml. The presumptive diagnosis was complete miscarriage, but she was followed up for 19 days, with β human chorionic gonadotrophin concentration being measured six times. The concentration fell smoothly and steadily to 97 IU/ml on the 19th day (figure). She remained well. That night, less than 12 hours after having blood taken, she became unwell with severe abdominal pain. Laparoscopy showed haematoperitoneum of 1000 ml of fresh blood with a ruptured ectopic pregnancy.

If patients are followed up by measuring concentrations of β human chorionic gonadotrophin, there are four possibilities. At least doubling is suggestive of an early viable intrauterine pregnancy. Patients can be followed up with repeat measurements and transvaginal scanning until a viable intrauterine pregnancy is seen. A suboptimal rise or plateau, with unequivocal results on vaginal scanning, has been taken as an indication for laparoscopy. Falling concentrations of β human chorionic gonadotrophin have been taken to reflect a non-viable pregnancy, for which intervention is not necessary for so called trophoblastic regression.[3]



Serial β human chorionic gonadotrophin concentrations in woman with ectopic pregnancy in whom pregnancy could not be identified on transvaginal scanning

Although in most cases falling concentrations of β human chorionic gonadotrophin are reassuring, this is not so in all cases. Tubal rupture can still result, even at low concentrations. This contradicts Ankum, who says that monitoring falling concentrations of β human chorionic gonadotrophin selects a self limiting form of ectopic pregnancy for which no intervention is necessary. If patients are monitored in this manner doctors and nurses should be vigilant and wary of a continuing ectopic pregnancy that can rupture. The patients should be informed of the small risks entailed in such management and the importance of mentioning any abdominal discomfort or pain. Patients with falling concentrations of β human chorionic gonadotrophin should be seen and their status reviewed regularly and concentrations monitored until they reach the values for a non-pregnant woman. Diagnostic laparoscopy should be considered, even with minimal symptoms and low concentrations of β human chorionic gonadotrophin.

Laurie Montgomery Irvine *consultant obstetrician and gynaecologist*
Watford General Hospital, Watford WD1 8HB

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Kitemarking the west wind

Website labels are analogous to food labels

EDITOR—We disagree with several of the ideas expressed by Delamothe in his editorial—for example, that we cope without the help of kitemarks and gateways in the real world.[1 2] Book reviews, television programmes, even the *BMJ* are all counterparts of "infomediaries." There is also consensus that any gateway, kitemark, or trustmark cannot and does not intend to guarantee the "accuracy" or completeness of information,[3] as implied by the editorial. Instead, they should be seen and used as tools to increase transparency.

The European Union project MedCERTAIN (MedPICS Certification and Rating of Trustworthy and Assessed Health Information on the Net) will use the concept of a third generation of trustmark, which must be discriminated from traditional kitemarks. The approach can best be explained by drawing an analogy to food labels. In order to direct consumers to a healthy diet we are not telling them which products to eat specifically; instead we educate consumers about healthy constituents of a diet, encourage food providers to use clear labels telling consumers important facts—for example, how much fat and sodium the food contains—and regulate how these labels are displayed, and what they must contain. Together, these measures empower and encourage consumers to make informed choices. We hope that the MedCERTAIN trustmark will play a similar part on the world wide web, by educating users and encouraging information providers to label their services, but also by monitoring and evaluating these labels to prevent misuse and by making transparent what others say about the service. Information providers certified by MedCERTAIN will display electronic labels using a standardised vocabulary (MedPICS), containing all relevant information allowing consumers to judge the quality of an information provider themselves and to select information that is relevant and appropriate for their individual needs. Moreover, users may set their own preferences by using a special browser add on to get automatic alerts and advice if a site does not meet their individual requirements. This concept of "downstream filtering" is different from attempts of upstream filtering such as the dot.health proposal of the World Health Organization.[4] Our decentralised system depends on building a network of developers, users, information providers, and evaluators, much as the Cochrane Collaboration built a network in its field. The Heidelberg Collaboration for Critical Appraisal of Health Information hopes to be an initiative to help lay people, patients, and professionals to identify health information useful to them—for example, by developing and sharing methods with an international network of colleagues.[5]

Gunther Eysenbach *project coordinator, MedCERTAIN*
ey@yi.com

Gabriel Yihune *researcher*
Unit for Cybermedicine and eHealth, Department of Clinical Social Medicine, Bergheimer Strasser 58, D-69115 Heidelberg, Germany

Kristian Lampe *medical officer*
Finnish Office for Health Care Technology Assessment, National Research and Development Centre for Welfare and Health, Box 220, 00531 Helsinki, Finland

Phil Cross *senior technical researcher*
Dan Brickley *technical director, MedCERTAIN*
Institute for Learning and Research Technology, University of Bristol, Bristol BS8 1HH

All authors are consortium members of the European Union project MedCERTAIN (www.medcertain.org).

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NHS Direct Online has important role

EDITOR— Our experience with NHS Direct Online (www.nhsdirect.nhs.uk) over the past year has shown that kitemarking information on the web[1] is of equal interest to healthcare professionals, patient groups, and commercial companies.

Government policy has been the driving force behind the kitemarking agenda. The Department of Health promised access to accredited information both for professionals (through the National Electronic Library for Health) and for patients (through NHS Direct).[2] Subsequent policies have continued the theme, including the NHS plan.

Worthy statements in policy documents often display an ignorance of the complexities involved in retrospective evaluation of health information. Although there is some agreement on broad quality criteria, the consensus often breaks down when we try to codify these criteria and establish objective measurements. The situation is complicated further by the numerous groups seeking to establish their own ethical codes and quality rating schemes, often with laudable intentions but little systematic development or evaluation. NHS Direct Online has experimented with the DISCERN instrument for rating written patient information.[3] Although not designed for web based information, DISCERN has been subject to tests of its reliability and validity.[4] Even so, it does have serious limitations and could not be used as the basis of a more comprehensive kitemarking scheme without substantial additional work.

Implementing kitemarking schemes also means we have to deal with economic realities: Is kitemarking cost effective? Establishing and running a comprehensive kitemarking system of British health websites would involve tens if not hundreds of people including subject experts, information professionals, designers, etc. The costs could run into millions of pounds and involve untold bureaucracy. Is this a sensible and appropriate way to spend taxpayers' money? What measurable benefits might it have for patient care?

I believe that NHS Direct Online has a legitimate part to play in helping citizens to access some of the better resources for health information that are available and providing them with up to date information about the NHS. But ultimately, we are just as likely to be judged on the reputation we establish and the integrity we display as an organisation than by the logos, kitemarks, and attendant paraphernalia that we chose to decorate our site with.

Mat Jordan *content manager*
NHS Direct Online, Winchester SO22 5DH
mjordan@hfht.org

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Uncertainty about clinical equipoise

Clinical equipoise and the uncertainty principles both require further scrutiny

EDITOR—The exchange between Weijer et al and Enkin addresses the question of under what circumstances and for what reasons entering patients in clinical trials can be morally justified.[1] It is important to see, however, that the issues are a good deal more complicated. There are problems on both sides, but I will focus on clinical equipoise.

This concept inadvertently conflates two distinct concepts, and neither one provides a convincing resolution of the moral dilemma posed by clinical trials.[2 3] Most of the essay by Weijer et al focuses on just one of these, which should really be termed "community equipoise" (the situation where not all within the community of "experts" have come to agreement that one treatment is superior to another). Enkin raises one problem with this criterion: that it fails to take seriously the clinical and moral judgment of the individual physician. But a closer look at community equipoise shows in addition that, once we understand that a policy decision (to stop the trial, announce the results, approve the drug, etc) requires a greater amount of evidence than does an individual decision to choose what is best for one's present patient, then community equipoise will typically be disturbed long before we obtain the predetermined level of statistical significance required to support the policy decision.

The concluding suggestions made by Weijer et al, concerning their preferred criterion embodying a pragmatic approach, involve instead a distinct contrast—clinical (as opposed to theoretical) equipoise. Thus these comments will not help make the case for community over individual equipoise. For it is one thing to distinguish two kinds of questions, a theoretical question about whether a drug has a causal effect on the incidence of a certain simple, well-defined outcome, and a practical or clinical question about whether that drug is a better treatment overall for a certain set of patients than is another drug. But it is a different matter to distinguish two modes of assessment of either one of these questions: "What do I think concerning whether there is evidence for the claim?" or, "Is there community agreement concerning this?" For there to be hope of attaining community agreement on these matters, both clinical equipoise and the uncertainty principle will require further scrutiny.

Fred Gifford *professor of philosophy*
Michigan State University, East Lansing, MI 48824, USA
gifford@msu.edu

1 Weijer C, Shapiro S, Glass K, Enkin M. For and against: Clinical equipoise and not the uncertainty principle is the moral underpinning of the randomised controlled trial. *BMJ* 2000; 321:756-8. (23 September.)
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Equipoise and uncertainty principle are not mutually exclusive

EDITOR—The debate about the usage of equipoise versus the uncertainty principle as an entry criterion for a randomised trial is misplaced.[1] These are not two mutually exclusive concepts, and equipoise simply represents the point (or distribution) of maximum uncertainty.[2 3] In decision analysis, this is the situation where a patient is indifferent between treatment options.[3 4] The question would be better phrased as, "How much uncertainty can we accept before entering a patient into a trial and by whom (patients, physicians, and community)?" Intertwined with this question is the question of a relation between not knowing, uncertainty, and equipoise, previously discussed by one of us.[4] This relation was also noted by Bradford Hill, who in 1963 wrote that we should accept randomisation "only in our state of ignorance, the treatment given [being] a matter of indifference."[5] It is surprising to witness that little empirical work has been done to resolve issues that were put forward before the clinical community almost 40 years ago.

R J Lilford *professor of research of public health and epidemiology*
University of Birmingham, Birmingham B15 2TT

Benjamin Djulbegovic *associate professor of oncology and medicine*
djulbebm@moffitt.usf.edu

H Lee Moffitt Cancer Centre and Research Institute at the University of South Florida, Division of Blood and Bone Marrow Transplant, Tampa, FL 33612, USA

1 Weijer C, Shapiro S, Glass K, Enkin M. For and against: Clinical equipoise and not the uncertainty principle is the moral underpinning of the randomised controlled trial. *BMJ* 2000; 321:756-8. (23 September.)
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There is another exchange on equipoise and uncertainty

EDITOR—With reference to the article by Weijer et al,[1] there is another Canadian exchange on equipoise, between Shapiro, Glass, and myself.[2 3] My response included a passage that might be relevant here. If a term is to do more good than harm in human affairs, it must pass at least the following three tests. First, consistency: it must mean roughly the same thing to everybody who uses it. Second, reality: it must describe something that is real. Third, utility: it must be frequently used to aid and justify decisions.

The term equipoise fails all three tests.

Consistency—Published definitions of equipoise vary, and new, often conflicting, ones are still being generated that defeat attempts to distinguish any theoretical versus clinical distinction. Some users define it as a perfect balance of evidence and would take odds of 1:1 on a bet, only to be contra-

dicted by others to whom it means that the data suggest but do not prove efficacy and safety. Some permit its ownership by individual clinicians and patients, but a letter in this issue insists that equipoise, unlike uncertainty, can never be possessed by individual trialists. Shapiro and Glass define equipoise as uncertainty that rests with the expert clinical community as a whole. By using my transparent, old fashioned term (uncertainty) to define their opaque, new one (equipoise) they render things wonderfully clear, but leave me wondering why on earth they cling to such an arcane, confusing word. None the less, we seem to be in agreement that, at the community level, uncertainty over the efficacy and safety of a treatment provides a proper basis for conducting a randomised controlled trial.

Reality—A recent report to the health technology assessment programme of the British NHS has summarised it best. There is some ingenuity in the equipoise theory, although its constraints seem bizarre if one tries to apply the theory in practice.

Utility—The term equipoise just has not been found useful at the coalface. A search I conducted last October identified only 52 hits for equipoise (a text word that maps to no MeSH terms or trees at all), and none of them came from the reports of trials. A similar search yielded 292 860 hits for uncertainty, and it was commonly used in primary reports of actual randomised controlled trials as a justification for their execution. Moreover, uncertainty maps to the MeSH tree of probability, the first branch of which is Bayes's theorem (a formula for reassessing uncertainty in the face of new evidence).

David L Sackett *director*
Trout Research and Education Centre at Irish Lake, RR 1, Markdale, Ontario, Canada N0C 1H0
sackett@bmts.com

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Sexually transmitted infections in people with HIV infection

Editor—The study by Catchpole et al looked at the seroprevalence of HIV-1 infection in homosexual and bisexual men presenting with an acute sexually transmitted infection.[1] Sexually transmitted infections facilitate the transmission of HIV. Herpes simplex type 2 infection and primary syphilis increase the infectivity of HIV by compromising mucosal surfaces.[2] Gonococcal and chlamydial urethritis increase shedding of HIV-1 in semen, therefore increasing the risk of HIV transmission risk.[3] Further studies have shown the effectiveness of antimicrobial treatment in reducing the HIV viral load in semen, and randomised controlled population studies have shown that the control of sexually transmitted infections decreases HIV infection rates.[4–5] The sexual health of HIV positive people has, however, so far been comparatively neglected.

The case notes of 86 out of 92 patients with HIV who attended the genitourinary medicine department in Glasgow between April 1998 and April 1999 were reviewed, comprising 67 men (mean age 44 years) and 19 women (31 years). Thirty three men and seven women received full sexual health screening at the time of their HIV diagnosis. In this cohort, four cases of gonorrhoea, three of herpes infection, one case of chlamydia infection, and seven cases of warts were diagnosed after the initial HIV diagnosis. Thirty two men and 12 women had no record of sexual behaviour documented in their case notes. These data show that people with HIV infection remain at risk of acquiring and transmitting sexual infections and HIV and are a neglected population for targeting initiatives for the prevention of HIV infection.

There are several obstacles to offering sexual infection tests in HIV clinics. People with HIV may not be perceived to be at continuing risk of transmitting the virus owing to the (often false) assumption that this population has discontinued sexual relationships. Time constraints or embarrassment may make it difficult to broach the subject of sex and the possibility of acquiring sexual infections. Also, patients may themselves feel that they are unable to divulge their continued sexual activity for fear of being judged, or compromising the long term relationship with the care provider.

Further prospective studies into the sexual behaviour of HIV positive people are required, and the sexual health of this population should be considered as a routine part of care, especially since antiretroviral treatment has improved survival and the quality of life in this population.

Ambreen M Butt *specialist registrar genitourinary medicine*
Glasgow NHS Trust
ambreenmorrison@yahoo.com

C Johnman *senior house officer*
R Nandwani *clinical director*
Genitourinary Medicine, Sandyford Initiative, Glasgow G3 7NB

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A healthy old age: realistic or futile goal?

Older people need to be encouraged to exercise

Editor—Four out of 10 people older than 50 are totally inactive, yet over half of sedentary people in this age group believe that they take part in enough physical activity to keep fit.[1] Further paradoxes help explain this stark picture of low awareness and lost opportunity are highlighted by McMurdo.[2] For the frailest older people, being sedentary is a greater risk than being active,[3] but carers and professionals may encourage individual people to be less active. The minister for public health has called exercise the best buy in public health (Y Cooper, Royal College of Physicians, London, June 2000), yet exercise services have a history of minimal funding in the NHS, and leisure spending by local authorities mainly supports those already committed to exercise. Physical activity for younger people is a greater health policy priority, although programmes focusing on older people may be more effective.[4] And in spite of the positive research, few training programmes have given practitioners the skills to lead safe and effective exercise for frailer older people.

Improving health and tackling inequalities are the twin goals of the NHS. Compared with younger age groups, frailer older people have less access to exercise, even though they value the opportunity when it arises. Evidence based training courses are now available to help exercise leaders promote the independence of older people more effectively. The resulting exercise sessions give those involved an enjoyable and positive health improvement experience. New funding tends to bring about the quickest and most effective change in working practice, helping to galvanise partnership work between the NHS and local authorities. If we follow the example of smoking cessation services, designated funding linked to quality assurance guidelines may be the best way to convert sceptics and make an active independent older life more of an expectation.

Piers Simey *physical activity adviser*
Merton, Sutton, and Wandsworth Health Authority, Mitcham, Surrey CR4 4TP
piers.simey@mswha.sthames.nhs.uk

Dawn Skelton *senior research fellow*
University College London Institute of Human Performance, Royal National Orthopaedic Hospital, Stanmore HA7 4LP

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Exercise programmes benefit even those who are most severely disabled

EDITOR—McMurdo argued that the idea of an appropriate degree of exercise is starting to be considered.[1] She suggested that walking, dancing, bowling, and gardening are all ways in which older people can improve or maintain their fitness.

We at the Age Concern Institute of Gerontology at King's College in London recently completed a randomised controlled trial of a standardised exercise programme (Look After Yourself (LAY)) in a group of 203 older people (mean age 79) living in south London. This programme was an initiative by the health authority to combat heart disease and was adapted for older people in the mid-1990s. The low intensity, low impact aerobic programme ran for eight weeks (one session a week) and participants were assessed before, during, and three months after it. We found that the programme not only benefited the more independent participants but also resulted in obvious improvement in participants with severe disability—for example, in range of motion, satisfaction with life, and the ability to lift weighted bags.

Participants with severe disability undertook a very low intensity programme and yet still improved. The findings suggest that the functional threshold of many frail older people is such that exercise programmes of even a very low intensity can result in noticeable improvement in activities of daily living.

Matthew Parsons *senior lecturer in gerontology*
Faculty of Medical and Health Sciences, University of Auckland, Private Bag 92019, Auckland, New Zealand
m.parsons@auckland.ac.nz

1 McMurdo MET. A healthy old age: realistic or futile goal? *BMJ* 2000;321:1149-51. (4 November.)

Training showed noticeable improvement in elderly women

EDITOR—McMurdo in her article noted that research was needed on incentives and opportunities for older people to adopt a healthy lifestyle.[1]

We worked with a group of women aged 74 years and over and successfully showed a substantial increase in strength, balance, flexibility, and functional ability.[2] The research included 20 women matched for age and randomly assigned to either a control or a training group. Measurements before and after training were obtained from nine women (median age 81), and results before and after control and after training were obtained from nine women (median age 81). Strength, anthropometry, flexibility, balance, and functional ability were measured. Training comprised one supervised session (one hour) and two unsupervised home sessions (supported by an exercise booklet) per week for eight weeks. The training stimulus was one to three sets of four to eight repetitions of each exercise, using elastic tubing, tin cans, or sponge balls for resistance.

Training associated improvements of 9-55% were achieved in quadriceps and handgrip strength, flexibility, balance, and selected tests of functional ability. This research was performed in conjunction with a local general practice. Members of the research group have subsequently continued with weekly exercise classes, which are well attended. The scheme could easily and cheaply be adopted by general practitioners in order to encourage older people to adopt a healthy lifestyle.

Ann McLaughlin *physiotherapist*
London W5 3TU
whizz.phys@virgin.net

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Who should care for people with learning disabilities?

GPs need extra time to provide better services for these patients

EDITOR—In his personal view Sellar advocates the development of a general practitioner for people with an intellectual handicap.[1] He envisages a vocational training programme that might include psychiatry; developmental paediatrics; general medicine; neurology; cardiology; behavioural science; rehabilitative medicine; ear, nose, and throat work; ophthalmology; and genetics. Surely exposure to these specialties is part of undergraduate and vocational training for general practice.

The training of doctors in medical and social issues related to patients with learning disabilities in the community should indeed be a priority,[2] but the question is, which doctors? Psychiatrists or general practitioners? If general practitioners, should they be specialist general practitioners or the general practitioner with whom the patient is actually registered? General practitioners are grateful for the advice of consultant psychiatrists in learning disabilities, particularly regarding anticonvulsant, antipsychotic, and other central nervous system drugs. But psychiatrists see only 25-30% of the patients with learning disabilities, whereas over 85% of these patients see their general practitioner in any year.

On average, each general practitioner in the United Kingdom has six or seven such patients. General practitioners have a pivotal role in liaising with and accessing specialist care on behalf of their patients. In a large practice one partner might develop skill in managing patients with learning disabilities, but at present general practitioners regard themselves as responsible for the medical care of these patients.[3]

Primary care groups and large organisations for the care of people with learning disabilities might wish to identify and employ a general practitioner/physician specialist. Although training is advocated for general practitioners,[4] demand for and supply at undergraduate and postgraduate levels remains sparse. General practitioners often think that they do not have the necessary skills to manage people with learning disabilities and that they need to refer patients to their psychiatrist colleagues.

Some people with learning disabilities presenting with behavioural problems may turn out to have to have fairly common medical conditions such as ear wax, urinary tract infections, dyspepsia, and constipation. People with learning disabilities often have several disabilities, so multiple interventions are appropriate; they need carers to advocate on their behalf because they often have communication problems. As well as some training, what general practitioners actually need is extra time and therefore additional reimbursement[5] if they are going to provide a better service for their patients with intellectual impairment.

Graham Martin *chair, Royal College of General Practitioners learning disabilities working group*
Red Roofs Surgery, Nuneaton, Warwickshire CV11 5TW
graham-martin@redroofs31.freeserve.co.uk

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Community learning disability nurses must get recognition they deserve

EDITOR—Within the NHS it is clearly important to have clinicians who maintain the profile of skills needed to look after people with complex problems including learning disabilities.[1] It is even more important to organise and manage learning disability services in a system that is coherent, equitable, and responsive to service users.[2]

To organise and deliver the range of skilled community care that service users need, clinicians rely to a great extent on one professional group: community learning disability nurses. The kaleidoscopic reorganisation of London's health and social services (new acute and mental health trusts, primary care trusts, social care organisations, educational groupings, and health authorities) has left these nurses as an utterly unwanted Cinderella group.[3]

Nobody with money or influence is putting people with learning disabilities among the priorities for their local health economy. Without training, recruiting, and retaining sufficient highly motivated nurses, community teams will fall apart. The losers (the patients) do not have a loud enough voice to be noticed if their services sink.

This government listens to readers of the *BMJ*, and copies of the journal find their way into all the fledgling organisations mentioned above. During this financial year all the clinical disciplines with an interest in effective learning disability care need to pull together to ensure that key colleagues—

community learning disability nurses—get the recognition and esteem that they deserve in managing the transitions towards a new NHS. If we need to pilot new types of teamwork in the community the first few joint health and social care trusts might provide the best environment to test the mettle of those teams.

Woody Caan *public health specialist in research and development*
International Centre for Health and Society, University College London, London WC1E 6BT
woody@public-health.ucl.ac.uk

WC is a member of the steering group for the National Electronic Library for Learning Disabilities.

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Screening for central hypothyroidism is unjustified

Editor—If we do enough tests on enough people we will always pick up abnormalities; we must also take account of the false positive rate of any testing strategy. These points are missing from Waise and Belchetz's article on unsuspected central hypothyroidism.[1]

Most patients in general practice for whom measurement of thyroid stimulating hormone concentration is requested have vague symptoms. This has a firm foundation: the incidence of primary subclinical hypothyroidism is high.[2] It seems inappropriate to apply a further test—to look for central hypothyroidism—to this group. All the cases reported by Waise and Belchetz had clinical evidence suggestive of the diagnosis, and this suggests that attention should be directed to clinical investigation, not additional testing.

Another pitfall of the strategy described for detecting central hypothyroidism is the analytical requirements. Assays of free thyroxine are invariably affected by concurrent illness.[3 4] If laboratories were to assay free thyroxine and thyroid stimulating hormone concentrations in all samples received for untreated patients from general practice the picture of central hypothyroidism—a low free thyroxine and a normal thyroid stimulating hormone concentration—would be found in many because of concurrent systemic illness. This in turn would lead to expensive and unnecessary follow up.

What is needed is a randomised controlled trial comparing a group in which both free thyroxine and thyroid stimulating hormone concentrations are measured with one in which thyroid stimulating hormone concentration alone is measured. The false positive rate, clinical outcome, and costs (including subsequent visits to a consultant) could then be determined for the patients with central hypothyroidism who are detected.

When such data are available it may be possible to argue that there is a sufficient cost benefit to justify the increased central funding that would be required for all laboratories to offer a front line testing strategy of measurement of free thyroxine and thyroid stimulating hormone concentrations. Until then we must ask, what other disease with an incidence of <50 cases per million population do we screen for?

Alun Price *chief medical laboratory scientific officer, department of clinical chemistry*
alun.price@bigfoot.com

A P Weetman *dean of medical school*
University of Sheffield, Northern General Hospital, Sheffield S5 7AU

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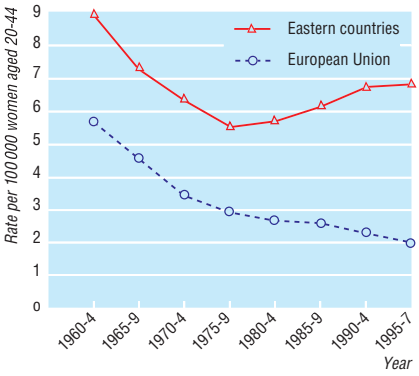
Inequalities in health in Europe

Editor—Marmot and Bobak analysed the increased inequalities in health in eastern Europe.[1] Cervical cancer is an avoidable cause of death and a relevant indicator of women's health. National death certification data do not allow analysis of mortality from cervical cancer in Europe since 20-65% of deaths from uterine cancers are certified reliably as uterus, unspecified.[2] Most deaths from uterine cancer in women aged under 45 arise from the cervix.

We analysed age standardised death certification rates from uterine cancer in women aged 20-44 in the 15 countries of the European Union and in six eastern European countries providing reliable data to the World Health Organization's database for 1960-97.[2] In the European Union death rates declined from 5.6/100 000 in 1960-4 to 2.0/100 000 in 1995-7. In contrast, after a fall from 8.9 to 5.5/100 000 between 1960-4 and 1975-9, death rates from all uterine cancers in eastern Europe rose to 6.8 in 1995-7 (figure). Thus in recent years the difference in mortality from cervical cancer between the European Union and selected east European countries was over threefold. In Russia mortality from cervical cancer in young women rose from 3.1/100 000 in 1980-4 to 4.2/100 000 in 1995-7.

These trends are essentially owing to the use of cervical screening. Organised screening programmes were first adopted in the 1970s in selected Nordic countries and the Netherlands, which showed earlier declines in mortality from cervical cancer.[3] However, opportunistic screening as operated in France, Germany, and Italy also had a relevant impact on cervical cancer rates, at least in young women, although in the 1980s



Trends in age standardised (world population) death certification rates of uterine cancer per 100 000 women aged 20-44 in European Union and eastern Europe (Bulgaria, Czech Republic, Hungary, Poland, Romania, and Slovakia) from 1960-4 to 1995-7

inadequate screening contributed to over 80% of cervical cancers in Italy.[4] The gross excess of mortality from cervical cancer still observed in eastern Europe is therefore largely attributable to inadequate screening implementation and underlines the importance of implementing rational and organised screening programmes.

Other factors may, however, also have a role. The increases observed in eastern Europe since the early 1980s are likely to be due to changed sexual habits in younger generations, with increased exposure to herpesvirus, but a minor role of other risk factors for cervical cancer, including tobacco and oral contraceptives, is also feasible.[5] Cervical cancer represents a relevant indicator of the worsening women's health conditions in eastern Europe and an important avoidable cause of death.

Fabio Levi *director*
Registre vaudois des tumeurs, Centre Hospitalier Universitaire Vaudois, 1011 Lausanne, Switzerland
fabio.levi@inst.hospvd.ch

Franca Lucchini *staff scientist*
Institut universitaire de médecine sociale et préventive, CH-1005 Lausanne

Silvia Franceschi *head*
Unit of Field and Intervention Studies, International Agency for Research on Cancer, F-69372 Lyons, France

Eva Negri *head*
Unit of Epidemiological Methods, Istituto di Ricerche Farmacologiche Mario Negri, I-20157 Milan, Italy

Carlo La Vecchia *associate professor of epidemiology*
Università degli Studi di Milano, 20133 Milan

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Audit of oxygen prescribing

Treatment needs to be adjusted

EDITOR—The results of the audit of oxygen prescribing by Dodd et al raise numerous issues.[1] The audit focused solely on the prescribed input rather than a measure of outcome. No reference was made to adjusting treatment with regard to the patient's oxygen saturation.[2] Realistic goals for desired saturation would reduce the risks of either continued hypoxia or excessive treatment in severe chronic obstructive pulmonary disease.

The spectre of carbon dioxide narcosis was again raised. Intensivists repeatedly find that seriously hypoxic and exhausted patients have had their oxygen treatment reduced because of a raised arterial concentration of carbon dioxide.[3] Guidelines issued by the British Thoracic Society for the management of chronic obstructive pulmonary disease state that the aim of initial treatment is to raise the arterial oxygen concentrations (to ≥6.6 kPa) and that a fall in arterial pH to less than 7.26 (equivalent to a hydrogen ion concentration of 54 nmol/l) gives cause for concern.[4] The main focus is not on concentrations of carbon dioxide.

A few patients require careful titration of oxygen treatment, but the current widespread assumption that everyone with a diagnosis of chronic obstructive pulmonary disease should therefore have their oxygen treatment drastically restricted is dangerous. Where there is a suspicion of a retention of carbon dioxide, further history should be sought to avoid increasing hypoxia in an already exhausted patient.

Andrew Inglis *consultant intensivist*
Southern General Hospital, Glasgow G51 4TF

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Oxygen prescribing has implications in neonatal care

EDITOR—As paediatricians we acknowledge the important points introduced by Dodd et al in their audit of oxygen prescribing and the use of an oxygen prescription chart.[1] There have been no randomised controlled trials of oxygen treatment in infants, and most of our practice is based on observational studies.[2] Many paediatric units do not prescribe oxygen on a formal chart such as the one suggested. Preterm infants and older babies with chronic lung disease require precise oxygen treatment, and the method of prescribing oxygen to these infants should be urgently reviewed in light of this audit.

There are potential hazards of inaccurate prescribing and administration of oxygen in neonatal care. Oxygen treatment in ventilated preterm infants must be closely monitored to reduce the incidence of potentially blinding retinopathy of prematurity.[3] Furthermore, it has been shown that adequate oxygen treatment in babies with chronic lung disease helps prevent pulmonary hypertension and promote growth.[2 4] Appropriate oxygen treatment in this population may also be a factor in reducing the incidence of the sudden infant death syndrome.[5]

With improvements in neonatal care we are seeing increasing numbers of infants with chronic lung disease on our neonatal units and paediatric wards. A telephone survey, conducted by our unit of six level 3 neonatal intensive care units in the United Kingdom showed that none had a specific protocol for the administration or monitoring of oxygen treatment. This aspect of infant care needs further evaluation. The audit by Dodd et al should prompt us to develop guidelines to ensure adequate assessment, monitoring, and prescribing of oxygen requirements in this specific group of infants.

A Reece *specialist registrar in paediatrics*
L Alsford *consultant paediatrician*
A Shah *consultant paediatrician*
Arvind@n-m-h.fsnet.co.uk
North Middlesex Hospital, London N18 1QX

1 Dodd ME, Kellet F, Davis A, Simpson JCG, Webb AK, Haworth CS, et al. Audit of oxygen prescribing before and after the introduction of a prescription chart. *BMJ* 2000;321:864-5. (7 October.)
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Complications with reformulated One-Alpha vitamin D

EDITOR—We have recently seen a child who was prescribed supplements of One-Alpha vitamin D (alfacalcidol; Leo, Princes Risborough, Buckinghamshire) and a calcium supplement as a preventive measure against osteopenia in the treatment of her juvenile polyarthritis. The dose recommended by her paediatrician was 40 ng/kg, a total daily dose of 800 ng.

The child presented with polyuria and a suspected urinary infection. An ultrasound scan of the kidneys showed nephrocalcinosis, and biochemical investigations showed raised concentrations of urea of 9.8 mmol/l, creatinine 120 µmol/l, and calcium 3.68 mmol/l. Creatinine clearance was reduced to 30 ml/mm/1.73m^2. The formulation of alfacalcidol was changed in August 2000 so that the original solution had been changed to oral drops with 10 times the concentration of alfacalcidol. Investigation found that the child had been receiving the same volume of the new drop preparation as she had previously been taking of the alfacalcidol solution. Withdrawal of the alfacalcidol preparation and the calcium supplements resulted in a return of her calcium concentrations and renal function to normal after one week.

Other prescribers should be aware of this potentially serious complication of this new high strength formulation, which contains 2 µg/ml, compared with the discontinued solution, which contained only 0.2 µg/ml. If the alfacalcidol solution is prescribed in ml there is a danger of patients receiving 10 times the correct dose.

M Savage *consultant paediatric nephrologist*
Royal Belfast Hospital for Sick Children, Belfast BT12 6BE

Correction

Explosions may occur if dry ice is placed in airtight transport containers

An error occurred in this letter by Sally Sharp and colleagues (17 February, p 434). In the second sentence of the fourth paragraph the wrong conversion factor was used to convert vapour pressure from bars to the SI unit of Pascals, the correct factor being 1 bar = 10^5 Pa. The sentence should read: "When warmed to 20°C solid carbon dioxide exerts a huge vapour pressure (5730 kPa [57.3 bar; not 28.7 Pa as published]), yet the safety data sheet of at least one manufacturer and the Health and Safety Executive's website (www.open.gov.uk/hse/hsehome.htm) contain no reference to the explosion hazard."