Letters

Appraisal makes for effective revalidation (official)

EDITOR—The General Medical Council recently held a "stakeholders' conference" on the revalidation of doctors, at which participants reportedly went along with the educationally improbable proposition that formative assessments ("appraisals") can be summated to provide robust formal revalidation decisions: "five satisfactory appraisals equals revalidation."[1]

Now, reminiscent of the Vatican's 17th century assertion of its Aristotelian dogma of a stationary earth, the GMC is running a series of roadshows to promote its belief.[2] The first meeting took place on 27 May at the Royal College of Physicians, London.

In its revalidation guidance documents for doctors the GMC says that one good professional comparison is with airline pilots.[3] This comparison is helpful. Imagine two airlines, whose pilots' revalidation arrangements are on the following bases:

- Airline A—flight simulator skills tests, including rarely met but crucial challenges; a thorough medical examination
- Airline B—informal personal development plans, agreed privately with a colleague, maybe of their choice; cabin crew and passenger surveys of the gentleness of their landings and the clarity of their communications; a self declaration of sobriety, health, and honesty.

For the sake of argument, let us assume that one in every 15 pilots is shown by research to have at some point in their career an alcohol or other substance abuse problem.[4 5] Which airline would you travel with?

Eppur si muove.

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Competing interests: REW advises a number of royal colleges and faculties on their assessment procedures. He is also a patient who wishes his doctors to be carefully revalidated.

1 *GMC News* April 2003:1.
2 www.revalidationuk.info/news_story.cfm?art=20 (accessed 28 May 2003).
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Cervical cancer screening

Liquid based cytology may be preferred option for UK screening programme

EDITOR—Coste et al studied conventional cervical smear testing, monolayer cytology, and human papillomavirus DNA testing for cervical screening, their results being published as the National Institute for Clinical Excellence (NICE) was deciding whether liquid based cytology should be used in the United Kingdom.[1] Thus the paper must be interpreted in relation to others with assessment of its relevance to the NHS cervical screening programme.

Coste et al's study is small by cervical screening standards.[2 3] Furthermore, it is a split sample study with the traditional smear performed in the usual manner and the monolayer smear performed on residual cells left on the spatula. How the smears were taken is not clear from the paper or the referred paper.[4] Data show that this design is faulty, with fewer endocervical cells left for analysis of the liquid based cytology,[5] as was also found by Coste et al. Might this design fault also have affected the sensitivity that differs from other studies?[2 3]

The NHS cervical screening programme does not use the Bethesda classification system that Coste et al used. In their study all but a few conventional smears were adequate possibly because they were reported by expert cytopathologists. In the United Kingdom 5% of conventional smears are accepted as being inadequate, and introducing liquid based cytology may reduce this figure.

The Kent and Canterbury scandal and others highlighted the difficulties in smear reporting. Monolayer slides are easier to interpret, which may help prevent another regrettable scandal. The current weight of evidence is currently in favour of liquid based cytology. Although interesting and perhaps relevant to France, the study by Coste et al should not influence NICE. It contains faults in its design, is small in relation to other studies, and is irrelevant to the practical aspects of cervical screening in the United Kingdom.

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Competing interests: None declared.

1 Coste J, Cochand-Priollet B, de Cremoux P, Le Galès C, Cartier I, Molinié V, et al. Cross sectional study of conventional cervical smear, monolayer cytology, and human papillomavirus DNA testing for cervical cancer screening. *BMJ* 2003;326:733-7. (5 April.)
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Liquid based cytology is successful

EDITOR—The results of Coste et al should be interpreted with some caution.[1] They raise questions about the validity of such a small group of 2585 and of split sampling. An analysis is required on the amount of training of smear takers, laboratory staff, and cytopathologists. The contrast in appearance between conventional smears and thin layer slides will make it difficult to eliminate bias.

In Lothian 15 practices, which include areas of highest urban deprivation, are now in their fourth year of using ThinPrep samples as part of the routine cervical smear programme. The table shows the results.

Eighty per cent of Lothian's practices have had to continue to use conventional slide cytology, and their results continue to match the "before" data for the 15 practices. Pathology at colposcopy, which like cytology can only be a subjective report, also supports these results.

Results of using ThinPrep samples as part of routine cervical smear programme in 15 practices in Lothian

	Year before liquid based cytology	2.5 years of liquid based cytology sampling
Total No of smears	8670	21 802
Unsatisfactory smears (%)	10	0.6
Borderline and CIN grade I (%)	6.6	5.2
CIN grades II and III (%)	1.4	1.5
Negative (%)	82	92.2

CIN=cervical intraepithelial neoplasia.

The reduction in unsatisfactory smears has had an immediate benefit for patients through reduced anxiety and fewer recalls, with a sizeable reduction in primary care and laboratory workload. The sensitivity of detection of high grade lesions ensures a more efficient progression to appropriate treatment.

The Scottish Executive's health department is to be commended on its decision to improve services to Scottish patients by rolling out liquid based cytology across Scotland by 2004. This decision was reached with political consensus and without personal or commercial bias. The recently published guidelines from the National Institute for Clinical Excellence (NICE) should provide further objective analysis for the future of the cytology screening programme.

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Paragraph for This week in the *BMJ* was misleading

EDITOR—Coste et al evaluated different techniques in gynaecological cytology,[1] but I could not find any comments in the paper about whether replacement of the conventional Pap smear by liquid based methods should be reconsidered, although this was highlighted in the accompanying paragraph for This week in the *BMJ*, "New cervical smear tests should not replace conventional ones." I therefore wonder on what basis the *BMJ* editors arrived at this needlessly provocative and unsubstantiated statement in the name of the authors?

I also wonder why the editors of the *BMJ*, which is not a journal dedicated to pathology or cytopathology, should have chosen to review and publish the study by Coste et al and to introduce it in this manner. Perhaps before publication, they should have consulted with the cytology programme in Scotland, which has evaluated these techniques and decided to implement them, and with the NHS itself, which has recently completed studies at two pilot sites in England that evaluate liquid based technology for future implementation and has reported clear advantages over conventional methods for at least one of these technologies.

Perhaps what should be reconsidered is whether the tabloid nature of the editors' comments has any place in the medical literature and whether these comments reflect on the ability of the editors appropriately and objectively to select the manuscripts that are submitted to them.

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Competing interests: The employer of JW has been reimbursed by Cytyc for his travel expenses for attending several European conferences. JW does not own any stocks and has not received any consultant fees, salary, funding for staff, or other support.

1 Coste J, Cochand-Priollet B, de Cremoux P, Le Galès C, Cartier I, Molinié V, et al. Cross sectional study of conventional cervical smear, monolayer cytology, and human papillomavirus DNA testing for cervical cancer screening. *BMJ* 2003;326:733. (5 April.)

Authors' reply

EDITOR—Ind and Whitley, as well as other respondents to our paper on bmj.com, refer to the issue of our split sample design.[1] Many such previous studies show that monolayers are superior to conventional smears (and were used to obtain approval from the Food and Drug Administration for ThinPreps). Now some who praised this design when it favoured monolayers are discovering that it is "flawed" or "faulty" when it gives the opposite results.

Our paper shows that the main issue for monolayer evaluation is not the split sample bias (paucicellular monolayers were negligible, and the results were similar for the subgroup of women with large amounts of material remaining after monolayer preparation). It is instead the workup or verification bias, present whenever the reference test is not systematically used. This bias inflates sensitivity and favours the test with the higher rate of false positive results: the monolayer technique. It increases as the fraction of verified cases diminishes.

Consequently, the large studies cited as contradicting ours are the most biased. To illustrate this massive and ostensibly misunderstood bias, consider the case where the unbiased sensitivities of conventional Pap and monolayer were equal, as in our study for the high grade threshold for lesions greater than or equal to cervical intraepithelial neoplasia grade II (sensitivity = 0.51) on smears (clinical reading). The unbiased specificity of conventional Pap (0.992) was slightly superior to that of monolayers (0.988). If the verification had not been performed for "normal" cytological cases, the "work-up biased" sensitivities would be 0.60 for conventional Pap and 0.66 for monolayers, wrongly implying that monolayers are superior.

The issue of non-interpretable smears and bad samplers is valid. Our study shows that sampling can be good with conventional smears when gynaecologists are well trained and cooperate with cytology laboratories. This way of improving sampling quality seems to be more cost effective than replacing conventional smears by monolayers, a high tech[2] but costly and ineffective technique, driven by strong commercial pressure from companies and multiform conflicts of interest.

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Competing interests: None declared.

1 Electronic responses. Cross sectional study of conventional cervical smear, monolayer cytology, and human papillomavirus DNA testing for cervical cancer screening. bmj.com 2003. bmj.com/cgi/eletters/326/7392/733 (accessed 8 July 2003).
2 Herbert A, Johnson J. Is it reality or illusion that liquid-based cytology is better than conventional cervical smears? *Cytopathology* 2001;12:383-9.

Evaluating computerised health information systems

See also editorial by Booth

Opportunities were missed

EDITOR—Littlejohns et al describe a failed attempt to implement a computerised information system among 42 hospitals in the Limpopo province of South Africa. They provide a typology of possible reasons for this failure, retrospectively summarising the lessons learnt.[1]

Implementing an information system can be viewed as an organisational innovation process that contributes to the mainte-

nance and improvement of its overall performance and effectiveness.[2] Some users may find themselves in a greater position of power and influence with the introduction of access to previously impenetrable organisational information, while others who have traditionally enjoyed legitimate power may find their power eroded by the innovation. If this potential problem is not dealt with during the implementation process, these people could militate against the process through incomplete implementation, rejection, or even sabotage.[3]

Littlejohns et al also viewed implementation as a clinical intervention and used randomised controlled trials of users as their study method to evaluate the system's effectiveness. Given that innovation implementation is a complex, longitudinal process entailing phases that evolve over time and comprise many layers of social interactions,[4] this positivist research strategy seems misguided. Organisational learning and progressive user empowerment need to be accounted for in any information system evaluative framework in which both the user and the innovation are fluid and evolving. Real success may be achieved by iteratively recognising and accounting for the changes in human factors in organisations that arise during implementation. These include redistribution of responsibility, alteration in management structures, and changes in attitudes.[3] Success also requires accounting for these phenomena in the chosen study methods.

Thus, innovation process theory for examining implementation of information systems is particularly relevant to understanding the relation between inputs to and outputs from the system, including the actions of key stakeholders and their collective effects on overall organisational change.[5]

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Competing interests: None declared.

1 Littlejohns P, Wyatt JC, Garvican L. Evaluating computerised health information systems: hard lessons still to be learnt. *BMJ* 2003;326:860-3. (19 April.)
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Article contains inaccuracies

Editor—As one of the "special advisory group of experts" in the Limpopo project, I would like to comment on the article by Littlejohns et al.[1] There are several misleading inaccuracies, some self evident: pharmacy management was not part of the IBM contract (correctly reflected in box 2).

Paradoxically, investments in information technology continue despite the lack of impact on the productivity of health professionals. Unless all the relevant decision makers are crazy, they would not be spending large sums on projects with no benefits whatsoever.

Neither client nor contractor was insensible to the "lessons" at the initiation of the project. Contractual and "real life" reasons prevented their application. The Limpopo project was high risk, dependent on expected developments (unrealised) of our parlous rural infrastructure, and organisational change (imperceptible). Ideal circumstances will remain elusive for years.

Evaluation, yes—but how and when? The usual yardsticks are inadequate, including the return on investment that is the industry standard. The timing is even more critical. The huge culture shift involved in transitioning from paper based to online, real time operations, requires years, not months. Experience gained elsewhere may not be helpful.

Premature measurement may lead to premature termination. Under similar circumstances in Gauteng province, South Africa, the participating hospitals in another large information systems project showed few objective benefits after the third year. Yet in the current (fifth) year, there is a notable difference—hardly a paragon of success, but indubitably a palpable hit.

Even the bedevilled Limpopo project was starting to deliver—it was declared a failure by a new decision maker, with different priorities and indifferent grasp.

Perhaps the money could have been spent on aspirin, but there is a necessary (expensive) first step in moving into the information age. It is instructive to compare the amount wasted here, with the amount quoted by the authors for one large hospital. Perhaps some lessons have been learnt, after all.

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1 Littlejohns P, Wyatt JC, Garvican L. Evaluating computerised health information systems: hard lessons still to be learnt. *BMJ* 2003;326:860-3. (19 April.)

Health professionals should be closely involved in implementation

Editor—Littlejohns et al identified the reasons for failure to implement a hospital information system in South Africa,[1] but they do not emphasise the need for health professionals to be closely involved.

In 1997 we conducted a field test of prototype tools and information flows over six months, with the overall goal of developing a computerised health information system at the three university teaching hospitals (totalling 1500 beds) in Abidjan, Côte d'Ivoire.

In each hospital the system was managed by a team from the administrative department, without a hospital doctor or trained epidemiologist. Before the field test, in five voluntary clinical departments in each hospital, administrative staff underwent intensive training for three weeks. Project presentation workshops with clinicians and nurses were organised in all hospitals, and a ministry of health supervisory team (epidemiologists) was responsible for technical implementation and follow up.

After six months the assessment showed a major failure in implementing the system for three main reasons:

- Heavy administrative workload generated by management's inadequate medical and epidemiological education
- Limited involvement of medical teams, possibly because of the responsibilities attributed to the administrative departments
- Difficulty perceived among practitioners of implementing a health information system that was not judged to be a public health priority, partly because of insufficient knowledge about the goals and functions of a computerised system.[2]

One of the recommendations of the evaluation was to create specific medical information units with highly specialised epidemiologists in each hospital. Another was to involve healthcare professionals in the project to include exhaustive information about functions and an informational approach to decision making, as well as the advantages and limitations of health information systems.[3]

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Competing interests: None declared.

1 Littlejohns P, Wyatt JC, Garvican L. Evaluating computerised health information systems: hard lessons still to be learnt. *BMJ* 2003;326:860-3. (19 April.)
2 Osunlaja AA, Olabode JA. Role of an effective hospital information system in a depressed economy. *Methods Inf Med* 1997;36:141-3.
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We are still getting information technology wrong

Editor—Littlejohns et al evaluated computerised health information systems.[1] After his departure from the Department of Health, Lord Hunt said that his greatest fear was that "we won't get the doctors on board." Like most clinicians and other "hands on" NHS staff (I suspect), I favour a bottom up approach to information technology in the NHS.

If Lord Hunt believes that the doctors and nurses will make or break it, why is more not being done to involve us? My experience is that NHS staff are generally interested in

the potential benefits of information technology but believe that they lack the knowledge or skills or that they do not want "outsiders" telling them how to do their jobs. Existing processes seem to do little to improve this picture and, I believe, threaten the success of the national programme.

Resistance to changes in information technology can be reduced by involving clinical staff in training and development processes. Given that widespread participation may be difficult to achieve, "clinical champions" need to be relied on to drive things forward. This is not an easy task. Meetings often clash with clinical commitments, and it is not feasible to cancel a clinic at short notice to attend an information technology meeting. Trusts must recognise the importance of information technology in the clinical process (and clinicians in the information technology process) and be prepared to release doctors from clinical sessions to have an active role.

Highly trained professionals require equal standing in the decision making processes, along with managers and information technology professionals. Systems should be in place so that interested clinicians are involved at all stages in analysing, designing, implementing, and evaluating systems. Clinicians' involvement may not happen by chance—it needs active encouragement.

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1 Littlejohns P, Wyatt JC, Garvican L. Evaluating computerised health information systems: hard lessons still to be learnt. *BMJ* 2003;326:860-3. (19 April.)

Impact of DOTS and DOTS-plus on multidrug resistant TB

DOTS-plus strengthens, not weakens, DOTS programmes

Editor—In their decision analysis Sterling et al hypothesise but offer no evidence that the efficacy of DOTS (directly observed treatment, short course) has ever been diminished by DOTS-plus.[1] On the contrary, under the current rigorous procedure for obtaining second line drugs at drastically reduced prices, the Green Light Committee of the World Health Organization assures that only programmes with demonstrably strong DOTS and DOTS-plus components are approved, and then only under the continuous, close supervision of the committee.[2]

Sterling et al used a 47% cure rate for multidrug resistant tuberculosis under DOTS, but the US Centers for Disease Control and Prevention reported cure rates as low as 5% in Russia.[3] Moreover, Migliori et al acknowledged a 25% rate of late failures among patients with chronic multidrug resistant tuberculosis in Russia who were smear negative (and thus considered cured) at the end of treatment, indicating that the true cure rate would be much lower than 47%.[4]

For treatment of multidrug resistant tuberculosis with DOTS-plus Sterling et al used a 47% cure rate, but Mitnick et al have recently reported a cure rate exceeding 80% in the same setting.[5] The cost data used in the authors' analysis do not reflect the greatly discounted prices of the Green Light Committee for second line drugs, whereas the cost used for basic DOTS drugs in India are among the lowest in the world.

Finally, the authors acknowledge that their model did not include the DOTS-plus benefit of preventing further transmission of and mortality from multiple drug resistance—a serious omission. DOTS-plus is now an essential part of global management of tuberculosis, reinforcing the primary goals of control of the disease. It is no more competitive with DOTS than is treating other life threatening diseases such as malaria or pneumonia.

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EAN thanks Donna Barry, Mercedes C Becerra, Arachu Castro, Paul E Farmer, Mary C Smith Fawzi, Rajesh Gupta, Jim Y Kim, Carole Mitnick, Joia S Mukherjee, and Michael L Rich for their contribution to this letter.

Competing interests: None declared.

1 Sterling TR, Lehmann HP, Frieden TR. Impact of DOTS compared with DOTS-plus on multidrug resistant tuberculosis and tuberculosis deaths: decision analysis. *BMJ* 2003; 326: 574-80. (15 March.)
2 Gupta R, Cegielski JP, Espinal MA, Henkens M, Kim JY, Lambregts-Van Weezenbeek CS, et al. Increasing transparency in partnerships for health—introducing the Green Light Committee. *Trop Med Int Health* 2002;7:970-6.
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5 Mitnick C, Bayona J, Palacios E, Shin S, Furin J, Alcantara F, et al. Community-based therapy for multidrug-resistant tuberculosis in Lima, Peru. *N Engl J Med* 2003;348:119-28.

Authors' reply

Editor—Health systems have limited budgets and capacity so resources for DOTS-plus may be unavailable for DOTS (directly observed treatment, short course), which can reduce programme effectiveness. Lack of financial and human resources are primary reasons for the current low global implementation rate of DOTS.

Mitnick et al provide encouraging results, although they reported on only 75 of 731 (10%) of the cases of multidrug resistant tuberculosis referred for evaluation.[1] Knowing the effectiveness of DOTS-plus among larger, more representative populations would be of great value.

We performed additional sensitivity analyses using the low cure rates for multidrug resistant tuberculosis under DOTS that Nardell describes, and cure rates under DOTS-plus as high as 80%. The results of the analysis did not change—if DOTS-plus reduces the effectiveness of DOTS even slightly it increases the number of patient deaths.

The cost estimates for second line DOTS-plus drugs were based on data from India and are not substantially different from those reported by the Green Light Committee in 2001 and 2002.[2]

Markov models cannot represent epidemics and disease transmission. In some circumstances such as crowded prisons failure to treat multidrug resistant tuberculosis would likely result in widespread transmission. But in settings with non-immunocompromised populations without access to DOTS and widespread poor quality non-DOTS treatment, success would best be achieved through phased implementation of DOTS, followed by DOTS-plus if resources allow. This is consistent with the Green Light Committee policy that Nardell describes.

As doctors we advocate for the maximum resources to cure every patient. That multidrug resistant tuberculosis is curable brings with it an ethical mandate for us to advocate for its treatment. But as public health practitioners, an additional ethic—ensuring maximum overall societal benefit—also applies. It would be irresponsible for any decision maker not to account for potential negative impacts of DOTS-plus or any other health programme.

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Competing interests: TRF was on loan from the Centers for Disease Control and Prevention to the World Health Organization (Regional Office for South East Asia, New Delhi, India) from 1996-2002 but is no longer affiliated to WHO. The results of this study could benefit WHO because they support WHO recommendations for treating tuberculosis, which could increase funding for the organisation.

1 Mitnick C, Bayona J, Palacios E, Shin S, Furin J, Alcantara F, et al. Community-based therapy for multidrug-resistant tuberculosis in Lima, Peru. *N Engl J Med* 2003;348:119-128.
2 MDR-TB treatment regimen costs. Available at: www.who.int/gtb/policyrd/images/drug-prices-&-pilot-proje.gif (accessed 10 July 2003).

TB should be diagnosed before using a fluoroquinolone

Editor—Initial symptoms of tuberculosis are likely to be ignored by patients. Factors related to healthcare providers, however, are much more likely to cause the delay in diagnosing tuberculosis. The findings of Rodger et al help in confirming the bias of healthcare providers that resulted in delayed diagnosis of tuberculosis in white people and women.[1]

Another important provider related factor that has been held responsible for

delayed diagnosis of tuberculosis is inadvertent use of a fluoroquinolone as a single drug in undiagnosed tuberculosis, leading to suppression of early symptoms and delay in the diagnosis.[2] After the cases initially reported by us[2] I continue to see many such cases regularly in which the diagnosis of tuberculosis is delayed because of the indiscriminate use of fluoroquinolones.

The use of these potent broad spectrum antimicrobials is rising worldwide. Especially in developing countries these are being routinely prescribed as first line drugs for any case of fever, trivial respiratory tract infections, and minor gastrointestinal upsets. So far no warning has become associated with their use in a patient in whom the possibility of tuberculosis cannot be ruled out.

Fluoroquinolones are also precious antituberculous agents. The World Health Organization is already ringing alarm bells about multidrug resistant tuberculosis, and generic resistance against fluoroquinolone among strains of *Mycobacterium tuberculosis* is on the rise. Is it not time to put fluoroquinolones to a more restricted use and issue a warning about their use in conditions where the diagnosis of tuberculosis—either pulmonary or extrapulmonary—cannot be ruled out? To prevent emergence of fluoroquinolone resistance in *M tuberculosis* and to avoid the delay in the diagnosis of the disease caused by it, we may need to diagnose tuberculosis or rule it out before using a fluoroquinolone.

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Competing interests: None declared.

1 Rodger A, Jaffar S, Paynter S, Hayward A, Carless J, Maguire H. Delay in the diagnosis of pulmonary tuberculosis, London, 1998-2000: analysis of surveillance data. *BMJ* 2003;326:909-10.
2 Agarwal A, Agarwal V. Inadvertent use of ciprofloxacin as a single drug in undiagnosed tuberculosis. *J Assoc Physicians India* 1997;45:747.

Comparing cannabis with tobacco

Arithmetic does not add up

Editor—The editorial by Henry et al comparing cannabis with tobacco implies that in the future as many as 30 000 deaths a year in Britain may be caused by smoking cannabis.[1] But this conclusion seems to have been based on a series of questionable assumptions.

To expose the lungs to the same amount of tar as an average cigarette smoker (15-20 a day), cannabis users would have to smoke four to five times a day, every day of the week. In fact, surveys show that a large majority in Britain are occasional "weekend" users, and few fall into the high use category of four to five times a day.

Another important factor is that unlike cigarette smokers most cannabis smokers tend to stop when they reach their 30s. Long term surveys of cigarette smokers showed that those who stop before the age of 35 had only a very slightly increased risk of lung cancer. If the risks of cannabis smoking equate to those of tobacco and most users give up before the age of 35 they may run little additional medical risk.

According to the editorial, the more potent forms of cannabis available nowadays carry an increased medical risk but tetrahydrocannabinol, the active chemical ingredient in herbal cannabis, is not known to be harmful to the lungs. Users of more potent forms of cannabis inhale less often and less deeply, while obtaining the same amount of the substance. They may thus benefit from a reduced exposure to potentially harmful tar. Cannabis cannot be considered to be completely harmless , but the arithmetic in this editorial simply does not add up.

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Competing interests: None declared.

1 Henry JA, Oldfield WLG, Kon OM. Comparing cannabis with tobacco. *BMJ* 2003; 326:942-3. (3 May.)

Those who start taking cannabis young have the greatest problems

Editor—Henry et al compare cannabis with tobacco.[1] Through the North East Council for Addictions (NECA) I have contact with cannabis users in the north east of England. Many young people (including 1% of schoolchildren) smoke at least five (up to 15) spliffs daily or inhale from "buckets." Thus they obtain high concentrations of cannabis smoke containing all the constituents of tobacco smoke (except nicotine), including carbon monoxide, bronchial irritants, and carcinogens. Young people may start smoking at the age of 8 years, and more and more smokers are continuing for longer—into their 40s and 50s.

Unlike tobacco (nicotine) cannabinoids also have adverse psychiatric effects. A large amount of evidence shows that young and adolescent users are especially vulnerable to these effects.[2 3] Those starting to use cannabis while in their early teens are more likely to suffer intellectual and emotional impairment; escalate to weekly or daily use; become dependent; progress to other illicit drugs; become anxious, depressed, and suicidal; and be involved in delinquency and crime than those starting later.[4 5]

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Services are needed for acute and chronic effects of cannabis

Editor—Henry et al draw attention to the damaging effects of cannabis and the potential problems likely to emerge from its increasing use.[1]

There are many aspects to this debate, not least the inevitability of the progress to further use, although other countries have shown this to peak in young people and to deteriorate subsequently. It is also, like most addiction problems, complicated by there being many different side effects, some more serious than others. Like alcohol, cannabis is likely to cause acute physical and psychological as well as long term damage.

Research therefore is urgently required in all these areas. My colleagues and my recent study showed the relation between dose and at least some complications.[2] It makes intuitive sense that, like other drugs of intoxication, the harmful effects of cannabis are likely to be dose related. The public health message, therefore, becomes like that of illegal drugs—not being geared towards total abstinence so much as minimising the damage and diverting habitual users from the most serious complications.

Cannabis used in small quantities—less than 2 g or 3 g per day—presents quite a different prospect from more heavy use. Truly recreational use (intermittent, infrequent, and non-dependent type use) must present less of a poor prognosis than dependent type use. Patients with dependent type use, similarly to opiate and alcohol use of this sort, are more likely to be unemployed, marginalised, and in the poorer part of the population. In my clinical experience, self medication with cannabis is often a control mechanism for an otherwise unrewarding lifestyle.

Rather than becoming absorbed with the mechanisms for control or the morality of use of the drug, the NHS requires an urgent response to another healthcare imperative, that of providing services for the acute effects of and the chronic damage caused by another largely ignored (by the NHS) addictive drug.

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Competing interests: None declared.

1 Henry JA, Oldfield WLG, Kon OM. Comparing cannabis with tobacco. *BMJ* 2003; 326:942-3. (3 May.)
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British Heart Foundation speaks out in support of paper

Editor—The paper by Bush et al on understanding the influences on smoking in Bangladeshi and Pakistani adults raises a number of interesting points and identifies solutions whose efficacy the British Heart Foundation recognises.[1]

For the past five years we have funded "Asian Quitline," a free telephone helpline that provides culturally appropriate smoking cessation advice in five Asian languages. We have also funded smoking cessation

programmes that have been run during the month of Ramadan. This campaign specifically addresses the needs of people from the Pakistani and Bangladeshi communities. Moreover at that time of the year we have also run smoking cessation training programmes aimed at religious leaders, who have been encouraged to deliver sermons addressing the issue of smoking in Islam and to provide basic information on quitting smoking. They are also encouraged to refer members of their congregation to existing smoking helplines and cessation services.

Compared with the indigenous population these ethnic communities have a higher incidence of heart disease, so quitting smoking is particularly important.

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Competing interests: None declared.

1 Bush J, White M, Kai J, Rankin J, Bhopal R. Understanding influences on smoking in Bangladeshi and Pakistani adults: community based, qualitative study. *BMJ* 2003;326:962. (3 May.)

Terminology for our times

Others will have similar examples

Editor—Hayward is correct that readers will have examples of VOMIT (victims of modern imaging technology) of their own.[1]

Ours is prenatal diagnosis. During the past decade the numbers of parents made anxious before the birth of their baby by ultrasound "soft markers" has increased hugely. These, usually seen at the time of the routine 20 week gestation anomaly scan, are not abnormalities but normal variations in appearance which, if present, increase the risk, but are not diagnostic for, a chromosome anomaly such as Down's syndrome. There is no doubt that most fetuses with these markers will be normal babies and also that by reporting them more Down's syndrome babies are detected prenatally.[2 3]

The history of marker scanning shows a similar exponential rise in volume and accuracy of information acquired against a background of firstly increasing and then reducing invasiveness. Unique to fetal VOMIT is that the invasive tests (such as amniocentesis) may lead to the loss of a healthy fetus by miscarriage. We also have little knowledge of the long term effects of raised maternal stress hormones on the unborn.

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Competing interests: None declared.

1 Hayward R. VOMIT (victims of modern imaging technology)—an acronym for our times. *BMJ* 2003;326:1273. (5 June.)
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Excluding every diagnosis is not necessary

Editor—The acronym VOMIT, coined by Hayward,[1] should undergo the substitution of "investigational" for "imaging," since cautions apply to such tests as urine analysis for microscopic haematuria. If more tests are performed on a normal patient, the chance of an abnormal result increases.

Requesters of tests should examine their motives, particularly in those patients with symptoms that are so common that the expectation of treatable disease is low. Requests can always be "justified," but the motive for many is "passing the buck," which has to stop somewhere.

Radiologists regularly assume the burden of not reporting findings that could be described as abnormal. They know they may be wrong but feel that reporting anything other than "normal" or some condition with which the clinician is comfortable by virtue of familiarity, will result in endless further examinations until the goal of absolute certainty of normality is reached. This is not achievable save by someone else assuming the uncertainty and not declaring it.

In neither of Hayward's examples was there any urgency because no action can be taken in the near future, and it is the responsibility of the doctor to make this clear. Such firmness would itself have provided some comfort, but in neither case can absolute reassurance be truthfully given in the short term.

It is not necessary or possible to exclude every diagnosis that a doctor has been able to think up, regardless of pretest likelihood. This practice is consuming an inordinate amount of resources and is no substitute for careful history and physical examination.

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1 Hayward R. VOMIT (victims of modern imaging technology)—an acronym for our times. *BMJ* 2003;326:1273. (5 June.)

Not just imaging is concerned

Editor—The problem raised by Hayward in his personal view is seen not only with imaging investigations but with virtually all tests.[1] In my experience, the less experienced an investigator is with a given test, the more likely he or she is to assign unwarranted significance to an abnormal test result—and then refer the patient to someone who does understand the test, and who dismisses it as irrelevant on clinical features alone, which were readily apparent with a solid history and clinical examination.

If I had £1 for every patient I've been referred with back pain because they have a low titre for positive rheumatoid factor or antinuclear antibody (neither of which have any diagnostic value in this context), I'd be rich.

The misuses of magnetic resonance imaging are merely more obvious because the test is more expensive and rationed than most. Because of the variety of sequences available, it is also more vulnerable to the investigator asking the wrong diagnostic question, getting the wrong sequence performed, and getting no useful answer while wasting considerable resources.

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Competing interests: As a rheumatologist, MLG enjoys ordering lots and lots of tests, although he thinks he knows when to order magnetic resonance imaging and when to resist the temptation to confuse himself further.

1 Hayward R. VOMIT (victims of modern imaging technology)—an acronym for our times. *BMJ* 2003;326:1273. (5 June.)

"Lucragram" is well known term

Editor—With reference to the article by Zinn,[1] radiologists and radiographers have a word for an unnecessary chest x ray film taken to assuage a vexatious patient's obsessive presumption of disease. The film is always normal and described as a "lucragram." It is a nice little earner for all concerned.

Not nearly as big an earner as a whole body scan, however. These radiology entrepreneurial juggernauts have turned over phenomenal amounts by scaring punters into believing that they could have a life threatening disease lurking below their skin. Bring on even tougher legislation. Outlaw them altogether.

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1 Zinn C. New South Wales Cracks down on commercial scanning. *BMJ* 2003;326:1350. (19 June.)

Teaching materials should enhance the spoken word

Editor—In the ABC of learning and teaching in medicine Farrow did not point out the greatest and most common pitfall of the use of teaching materials.[1]

All too frequently lecturers, using sophisticated aids, display quantities of written information on a screen which they then proceed to read with their backs to their listeners. Aids should enhance the spoken word, not replace it. Good lecturers are usually exhibitionists, and training at a drama school may be of greater relevance than learning how to use PowerPoint.

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Competing interests: None declared.

1 Farrow R. ABC of learning and teaching in medicine: Creating teaching materials. *BMJ* 2003;326:921-3. (26 April.)