Letters

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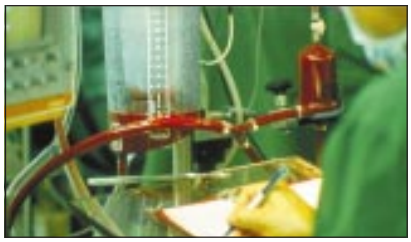
Reducing blood transfusion

BMJ's cover and headline exaggerated importance of study's findings



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Cell salvage reduces the need for transfusion

Editor—The randomised controlled trial on mechanical methods of reducing blood transfusion in cardiac surgery by McGill et al is laudable, but we challenge the *BMJ* for highlighting this paper on the front cover with the headline: "Cell salvage reduces the need for a transfusion."[1] We believe that the journal has a responsibility not to exaggerate the perceived importance of findings, either in press releases or by other means.[2]

The authors themselves highlighted the main limitations of the study in their discussion, and we believe that such declarations are important safeguards against widespread use of the described methods without further scientific evaluation.

The authors comment on the high cost of transfusion, but they did not include a cost analysis in their study. We understand the risks associated with transfusion and agree that these in themselves may justify any added cost. However, introducing strict transfusion guidelines and monitoring their use is certainly a step that should precede the introduction of new equipment.

We have been reinforcing transfusion guidelines for the past two years in our institution and are continuously monitoring blood transfusion in our hospital. Interestingly, when looking at a similar patient population to that of McGill et al, but lacking the research methods and statistics, we have achieved a similar decrease in use of all blood products, mainly by insuring that blood is transfused only when required and blood products given when need is documented (table). Despite our programme, blood products are still administered too often outside the hospital guidelines, and we think that we could decrease their use even further before introducing new expensive equipment to our routine practice. The *BMJ*'s cover may only reinforce incorrect practices by encouraging widespread use of techniques without common sense.

We agree that the combination of acute normovolaemic haemodilution and cell salvage did not confer any benefit in this study, but McGill et al have not explored acute normovolaemic haemodilution as such and therefore no conclusion can be made with certainty about the absence of benefit of acute normovolaemic haemodilution itself. In the author's own words, this study adds to many others that are inconclusive because of the quality of the evidence.

We believe that the *BMJ*'s cover, while attractive, may have mislead readers, and we therefore question the rationale behind such a decision.

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2 Woloshin S, Schwartz LM. Translating research into news. *JAMA* 2002; 287:21:2856-8.

Characteristics of consecutive patients who had elective first time coronary artery bypass graft surgery in Papworth with details of blood products received perioperatively. Values are means (SD) with ranges unless stated otherwise

	Initial survey (6 Apr 2000-11 Aug 2000) (n=255)	Latest survey (12 Nov 2001-5 Jun 2002) (n=255)
No (%) of men	212 (83)	208 (82)
Age (years)	64.6 (8.9), 36-83	65.3 (9.1), 37-83
Weight (kg)	81.3 (14), 44-122	82.0 (14.4), 52-119
Parsonnet score*	7.1 (5.9), 0-36	7.9 (5.9), 0-26
No (%) of patients taking aspirin taken in 72 h before surgery	14 (6)	24 (9)
Blood product received:		
Allogeneic blood		
No of patients	102	94
Units received	1.27 (3.18), 0-43	1.05 (2.04), 0-15
Fresh frozen plasma		
No of patients	26	10
Units received	0.22 (0.73), 0-6	0.10 (0.57), 0-6
Platelets		
No of patients	26	10
Units received	0.16 (0.52), 0-3	0.04 (0.22), 0-2
No of patients given any blood product	107	95

*0=low risk, 25=high risk.

Cell salvage reduces blood use, but does it do so on its own?

Editor—In a prospective randomised study McGill et al showed that cell salvage could reduce the average blood transfusion during first time coronary artery surgery by 0.39 units.[1] Although this was significant, some might question the clinical or financial significance of this finding. We note that the effectiveness of cell salvage seems to have fallen with time. Cell salvage saved an average of 1.9 units per patient in 1987,[2] 0.8 units in 1990,[3] 197 ml (approx. 0.6 units) in 1993,[4] and only 0.39 units in 2002.

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Indeed, it would not be surprising if next year a well conducted study was published showing no demonstrable benefit from cell salvage, and cell salvage is discarded as worthless technology.

The problem for investigators is that cell salvage is just one of a variety of techniques used to reduce blood loss and blood usage during cardiac surgery. For example, McGill et al might have failed to show a benefit from cell salvage if antifibrinolytic drugs had been used in all patients rather than only 40% or if the transfusion trigger had been set at 25% rather than 27%.

So should cell salvage be used during cardiac surgery? The answer, in our opinion, is almost certainly yes. However, it must be seen as just one part of an integrated, multidisciplinary approach to blood conservation. We must identify all the technical, pharmacological, and clinical blood conservation methods available, optimise each method, and then build them into a comprehensive integrated approach to blood conservation. A comprehensive approach is most beneficial,[5] even though the efficacy of individual elements may be difficult to prove.

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2 Breyer RH, Engelman RM, Rousou JA, Lemeshow S. Blood conservation for myocardial revascularisation. Is it cost effective? *JTCVS* 1987;93:512-22.
3 Hall RI, Schweiger IM, Finlayson DC. The benefit of the hemonetic cell saver apparatus during cardiac surgery. *Can J Anaes* 1990;37:618-23.
4 Laub GW, Dharan M, Riebman JB, Chen C, Moore R, Bailey BM, et al. The impact of intraoperative autotransfusion on cardiac surgery. A prospective randomised controlled trial. *Chest* 1993;104:686-9.
5 Helm RE, Rosengart TK, Gomez M, Klemperer JD. Comprehensive multimodal blood conservation: 100 consecutive CABG operations without transfusion. *Ann Thorac Surg* 1998;65:125-36.

Some important points were missing from the study

Editor—McGill et al investigated reducing blood transfusion in cardiac surgery.[1] Off pump coronary artery bypass grafting is rapidly gaining popularity and significantly decreases blood product requirements in randomised and observational studies.[2–4] How did McGill et al treat patients scheduled for such grafting? Presumably they were not invited to take part in the study (not mentioned in the exclusion criteria). Indeed, the study and the accompanying science commentary by Berger are silent about off pump coronary artery bypass grafting.

An important piece of information missing from the paper is the volume of blood scavenged by the cell saver during the course of the operation. In the cell saver group, was a cardiotomy suction used during the course of the bypass? This would result in considerably less volume being scavenged by the cell saver. If it had not been used, the conclusions drawn about the benefits of using cell saver may be erroneous. The benefits could be due to avoiding cardiotomy suction, which is known to cause haemolysis during cardiac surgery.[5] Most cardiac units using the cell saver routinely wash only the blood scavenged by the cell saver (and then only if it is a significant amount), not the residual in the cardiopulmonary bypass circuit. In this study the blood from the cardiopulmonary bypass circuit was washed in the cell saver group. In the control group, however, the residual blood in the bypass circuit was not washed. Typically, the haemoglobin concentration of the blood in the pump at the end of bypass is 60-80 g/l. Washing this blood would have resulted in a slightly higher packed cell volume for the control group and possibly a decreased need for blood transfusion (as the protocol for blood transfusion was strictly the haemoglobin value in the postoperative period).

We question the use of logistic regression to adjust for the effect of the surgeon. How do the adjusted odds ratios compare with the univariate ratios in the table? In comparing the percentages of patients receiving blood products, what was the need to control for the surgeon, given that there was a protocol in place to guide postoperative blood transfusion?

These observations notwithstanding, this paper highlights the immense potential that exists from decreasing blood product usage in routine cardiac surgery.

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2 Mack MJ. Pro-beating heart surgery for coronary revascularization: is it the most important development since the introduction of the heart-lung machine? *Ann Thorac Surg* 2000;70:1774-8.
3 Angelini GD, Taylor FC, Reeves BC, Ascione R. Early and midterm outcome after off-pump and on-pump surgery in beating heart against cardioplegic arrest studies (BHACAS 1 and 2): a pooled analysis of two randomised controlled trials. *Lancet* 2002;359:1194-9.
4 Zamvar V, Khan NU, Madhavan A, Kulatilake ENP, Butchart EG. Clinical outcomes in coronary artery bypass graft surgery: comparision of off-pump and on-pump techniques. *Heart Surgery Forum* 2002;5:109-13.
5 Sobel M, Dyke CM. Hemorrhagic and thrombotic complications of cardiac surgery. In: Baue AE, Geha AS, Hammond GL, Laks H, Naunheim KS, eds. *Glenn's thoracic and cardiovascular surgery*. Stamford, CT: Appleton and Lange, 1996:1793-809.

Focus should be on improving patients' ability to make own blood

Editor—McGill et al and Berger make a good case for reducing dependence on blood transfusion in surgery.[1 2] The recent chief medical officers' conference on better blood transfusion II was also directed towards that end and in addition pointed to the likely implosion of the donor population and blood scarcity in the near future.

But why is the focus still on trying to improve blood transfusion rather than patients' ability to make their own blood? Why has the past 12 years of experience in renal medicine not got through to the collective consciousness in making the point that there are alternatives to transfusion that are safer and more effective.

The use of recombinant human erythropoietin in the United Kingdom now lags embarrassingly behind the rest of Europe (table) (M Bexon, personal communication). The reason for this may be partly the magnificent job that the British Blood Transfusion Services have done in maintaining the noble altruism of donors, but it is also because blood is perceived to be safe, readily available, and free. None of these is entirely true, least of all the cost of blood, but this latter perception makes alternatives seem unduly costly. Until the funding for transfusion is placed in the hands of users and until savings made at this point can be traded against the cost of alternatives, patients will continue to be unnecessarily exposed to allogeneic transfusions.

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2 Berger A. Science commentary: Why is it important to reduce the need for blood transfusion and how can it be done? *BMJ* 2002;324:1302-3. (1 June.)

Most important transfusion risks go unnoticed by public and politics

Editor—In her scientific commentary on the importance of reducing the need for blood transfusion Berger mentions prion disease and infections with blood transmissible viruses as risks of blood transfusion.[1]

The risk associated with prions is currently hypothetical. The risk associated with typical transfusion transmitted viruses such as HIV and hepatitis C virus is currently far below 1 in 1 million in Germany, and that associated with hepatitis B virus is below 1 in 100 000 (table). Public attention to these remote problems would possibly be justified if there were no other risks of blood transfusion, but this is not the case.

Other very much more substantial risks exist. Hébert et al found an excess mortality for most subgroups of transfused intensive care patients associated with a too liberal transfusion practice.[2] For these subgroups

Treatment of anaemia in patients with cancer in Europe

	France	Germany	Italy	Spain	United Kingdom
Transfusion (%)	59	67	34	59	95
Erythropoietin and intravenous iron (%)	42	33	66	41	5

Risks from blood transfusion

Size of risk	Risk
1:100	Possible excess mortality from too liberal transfusion regimen for people under 55 and those with acute physiology and chronic health evaluation II score ⩽ 20[2]
1:400	Transfusion error in prospective study[5]
1:5000	Transfusion associated lung injury[3]
1:10 000	Bacterial contamination of blood product
1:40 000	ABO transfusion error in several retrospective studies[4]
1:50 000	Death from transfusion associated lung injury[3]
<1:100 000	Infection with hepatitis B virus
1:700 000	Death from bacterial infection of blood product, fatal haemolytic transfusion reaction due to error[4]
1:5 000 000	Infection with hepatitis C virus (on nuclear amplification testing), HIV infection (on antibody screening)

the excess mortality may be in the range of 1%. Transfusion associated lung injury is still not a well enough known possibly fatal consequence of transfusion and, even if known, it is rarely recognised. It is caused by antibodies in the donor plasma against white blood cells of the transfusion recipient. Several studies found the incidence of transfusion associated lung injury to be 1 in 5000 transfusions or 1 in 1000-2500 patients transfused, with a mortality of 5-10%.[3] The resulting risk of 1 in 50 000 exceeds by a factor of 100 the risk of an HIV infection by blood transfusion in Germany (about 1 a year, in 5 000 000 transfusions).

Giving blood to someone other than the intended recipient may give rise to possibly deadly haemolytic transfusion reaction. The frequency of retrospectively detected transfusions to the wrong patient was between 1 in 19 000 and 1 in 36 000 in several studies.[4] However, the Belgium SAnGUIS-study, in which transfusions to the wrong patient were analysed prospectively, found a frequency of about 1 in 400.[5] Companies delivering letters and parcels around the world have shown that a failure rate is attainable which is orders of magnitude lower. Owing to the lack of Rh negative blood (or the incapacity to make it available in time wherever it is necessary) transfusing Rh negative patients with Rh positive blood may be the only option in emergencies. The resulting long term risk of immunisation is completely unknown. Finally, there is ample evidence that bacterial contamination of blood units causes far greater morbidity and mortality than virus transmission.

As the risk stemming from virus transmission is already among the most remote transfusion risks, further interventions—for example, the polymerase chain reaction for HIV for single donations as discussed in Germany—will hardly influence the total risk resulting from transfusion but will divert resources from more effective interventions. The more frequent but not yet well assessed risks mentioned above should be carefully analysed in clinically and epidemiologically meaningful studies. If the preliminary estimates outlined above are confirmed, then interventions should be directed against the most important actual risks of blood transfusions. In the meantime a restrictive use of blood would seem to be the only option.

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2 Hébert PC, Wells G, Blajchman MA, Marshall J, Martin C, Pagliarello G, et al. A multicenter, randomized, controlled trial of transfusion requirements in critical care. *N Engl J Med* 1999;340:409-17.
3 Kopko PM, Popovsky MA, MacKenzie MR, Paglieroni TG, Muto KN, Holland PV. HLA class II antibodies in transfusion-related acute lung injury. *Transfusion* 2001;41:1244-8.
4 Linden JV, Wagner K, Voytovich AE, Sheehan J. Transfusion errors in New York State: an analysis of 10 years' experience. *Transfusion* 2000;40: 207-13.
5 Baele PL, de Bruyere M, Deneys V, Dupont E, Flament J, Lambermont M, et al. Bedside transfusion errors. A prospective study by the Belgium SAnGUIS Group. *Vox Sang* 1994;66:117-21.

Misperceptions exist about sleep attacks when driving

EDITOR—Around half of all sleep related road crashes are caused by healthy adults aged under 30[1]. We investigate many such crashes and find that most drivers deny having fallen asleep, and the evidence has to come from elsewhere. Other research shows that momentary sleep can go unnoticed.[2] Moreover, these drivers usually deny knowledge of prior sleepiness, even those admitting to having fallen asleep. Ostensibly, it was an "unforewarned" sleep attack. Claims that drivers with Parkinson's disease are prone to unforewarned sleep attacks should therefore be treated cautiously.[3]

Few of us can remember clearly how sleepy we were last night or when this sleepiness began. Recollection is worse if one thinks back further. Hence it is usually pointless asking drivers to recall whether they were sleepy before their crash.

No excuse can be made for falling asleep at the wheel. Monitoring healthy, sleepy drivers under safe driving conditions we have found that they have excellent insight into their sleepiness.[4] Nevertheless, even when sleepiness is self evident (for example, in opening the window), some drivers maintain they are competent to drive, when this is not so.

Fortunately, few of the sleep attacks in drivers with Parkinson's disease result in injury. Had these occurred spontaneously when driving, then more injuries would be expected. Better comparisons should be made with healthy ageing effects and with other drivers with Parkinson's disease who are not having such attacks. Attribution of these attacks to dopamine agonists, because drug withdrawal alleviates them, overlooks the point that drivers who fall asleep at the wheel are careful not to allow this to happen again, anyway.

Unknowingly, many patients with Parkinson's disease have sleep disturbances.[5] These cause excessive daytime sleepiness that is often overlooked by doctors. Patients' own opinions about their sleep quality are unreliable—for example, people with debilitating sleep apnoea often claim to sleep well. Although patients with sleep disorders may experience more rapid onset of sleepiness when driving, healthy individuals falling asleep at the wheel usually do so because they are deprived of sleep. To the extent that sleep loss is similar for both, then manifestation of the sleepiness may well be similar. These patients may be at no greater a driving risk than the foolish young man who drives without sleep in the small hours of the morning. One treatment for both is better education about the dangers of driving when sleepy.

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2 Horne JA, Reyner LA.. Vehicle accidents related to sleep: a review. *Occ Environ Med* 1999;56:289-94.
3 Homann CN, Wenzel K, Suppan K, Ivanic G, Kriechbaum N, Crevenna R, Ott E. Sleep attacks in patients taking dopamine agonists: a review. *BMJ* 2002;324:1483-6.
4 Reyner LA, Horne JA. Falling asleep whilst driving: are drivers aware of prior sleepiness? *Int J Legal Med* 1998;111:120-3.
5 Partinen M. Sleep disorders related to Parkinson's disease. *J Neurol* 1997;244(suppl 1):S3-6.

Locomotor milestones and babywalkers

See editorial by Taylor

Potential confounding factors were not measured

EDITOR—Garrett et al in their study of babywalkers provide some striking evidence of an association between use of walkers and delay in reaching motor milestones.[1] The interpretation they give, that baby walkers cause motor delay, is very plausible. But it is also plausible that use of babywalkers is associated with factors such as lower educational level and social class of the parents, which are associated with rate of development.

These variables could easily have been measured in a survey such as this and taken into account in the analysis. There may be a tendency for babywalkers to be used more often to "mind" toddlers under more stress-

ful or understimulating circumstances, and this could serve as a possible mechanism explaining the apparent relation between dose and response found between use of babywalkers and motor delay.

Perhaps the authors' interpretation is more plausible still, but public good would be better served by checking out alternative explanations before making policy.

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Infants using babywalkers are not developmentally delayed

Editor—Garrett et al in their article show that infants using babywalkers crawl, stand alone, and walk alone up to three weeks later than infants who do not use babywalkers.[1] But they do not make a case that this has an impact in any other areas of a child's development, and I believe that use of the term "developmental delay" is unwarranted. These infants are doing other things that are interesting and stimulating to them and just get around to walking a little bit later.

They cite just one abstract that suggests that babywalkers are associated with an increased risk of injury: this may be true, but a quick look at the citation suggests that the control group was one tenth the size of the babywalker group, and the authors did not look at the level of injuries in children who did not use babywalkers. Garrett et al suggest that the use of babywalkers should now be discouraged. The standard of proof to justify interfering with parents' choices for their children should be much higher than this.

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Statistics may have been chosen to produce the required conclusions

Editor—Had the study by Garrett et al focused on the average elapsed time between a milestone they concede would not be influenced by the use of babywalkers (rolling over) and a milestone that would occur after a period of babywalker use (walking alone), they would have shown a difference of just 0.12 weeks (less than one day).[1] This is hardly a significant variation (0.32%) when the average elapsed time between these milestones, according to the authors' figures, is in excess of 37 weeks.

In addition, the contention that a greater amount of babywalker use causes later walking is also invalid, as Garrett et al seem to be confusing a correlation with a causal link. A child using a babywalker is likely to carry on doing so until he or she can walk unaided—hence a child who walks alone late will be expected to accumulate more hours of use. Whether this is cause or effect is not addressed by the study—it would be equally valid to state that late walking causes increased use of babywalkers. Garrett et al would have needed to look at the amount of use per day of use, rather than a total, for their conclusions to have any validity.

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Perceived benefits of babywalkers need to be balanced against health risks

Editor—Garrett et al in their report raise further concerns about the effect of babywalkers on normal locomotor development and add to a growing literature on the desirability and safety of this nursery equipment.[1] In addition to the safety study referred to in the article, other epidemiological and prospective studies have highlighted the risk of injuries through use of babywalkers.[2–4] In these studies, observed injuries range from contusions and abrasions through to skull fractures, most being the result of falls downstairs. These injuries persisted even when supervision by an adult was exercised and despite the presence of warning notices on the equipment. Most recently, a study in the United States concluded that, after a multifaceted community wide intervention aimed at educating the general public and healthcare workers, educational interventions may significantly reduce, but not eliminate, walker related injuries.[5] One might speculate that the addition of the relevant research paper abstracts to the safety advice might more directly focus prospective purchasers' minds on the potential risks.

Garrett et al in their paper focus on the effect of using babywalkers on several locomotor milestones and identify a negative impact on the achievement of walking alone and standing alone. These data are persuasive in themselves, but it would be of considerable interest to follow up the study in terms of persisting effects on gait and musculoskeletal development. For example, according to personal observation, effects such as tiptoe walking can persist in infants well beyond two years of age, long after they have stopped using walkers and have started to walk without help. It might now be the time to revisit the balance between the perceived benefits of babywalkers in terms of early enrichment versus the emerging range of safety and developmental risks.

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1 Garrett M, McElroy AM, Staines A. Locomotor milestones and babywalkers: cross sectional study. *BMJ* 2002;324: 1494. (22 June.)
2 Thein M, Lee J, Tay V, Ling S. Infant walker use, injuries and motor development. *Inj Prev* 1997;3:63-6.
3 Chiaviello CT, Christoph RA, Bond GR. Infant-walker related injuries—a prospective study of severity and incidence. *Pediatrics* 1994;93:974-6.
4 Smith GA, Bowman, MJ, Luria JW, Shields BJ. Babywalker-related injuries continue despite warning labels and public education. *Pediatrics* 1997;100:E1.
5 Conners GP, Veenema TG, Kavanagh CA, Ricci J, Callahan CM. *Patient Educ Couns* 2002;46:169-73.

Way forward is combining good from both worlds

Editor—Biswas has an interesting viewpoint, echoed by many travellers who remark how happy the poor in such and such a country are.[1] But I believe it is the kind of thing that can only be said by someone who is not hungry or lacking shelter or warmth.

If the people themselves were asked, the story might be different. My father grew up in an impoverished rural community—he would agree that they didn't see themselves as poor because everyone was the same. He would strongly deny they lived in harmony with nature—he never wants to return where "all I knew was hard work and starvation." His brother died of scarlet fever, many other villagers succumbed to asthma and diabetes.

I now work in rural Kenya. Again, people live in harmony with nature—a nature that means whole families have no food for weeks, where malnutrition is rife, where a mother walks 12 hours overnight in the dark with a child on her back who is having fits, only to discover our drugs cannot help him—the coma is irreversible. There is some wisdom, but much superstition and downright stupid "remedies." Ignorance may be bliss, but it is unhealthy.

The challenge is to facilitate self help at a local level and change unfair trading practices at an international one, so that people here are able to sell their maize locally instead of being prevented because of a glut on the global market because of the developed nations' policies of subsidies for their farmers and import tariffs on developing nations' export products. People should not be dying of conditions brought on by malnutrition in a world that has an overcapacity of food production. Neither should they die of easily treatable diseases. The "developed" world has a duty to serve the poor and not worsen their conditions. Living with nature is harmonious only some of the time—it can be harsh too.

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1 Biswas R. The birth of poverty. *BMJ* 2002;325:51. (6 July.)

Randomised trials in surgery

Integrated approach is needed

Editor—As Cochrane reviewers appraising randomised controlled trials on surgical interventions for orthopaedic trauma and through our involvement with the promotion of evidence based orthopaedic surgery

in Teesside, we would like to endorse and extend the observations of McCulloch et al on randomised controlled trials in surgery.[1]

Although issues specific to surgical trials mentioned by McCulloch et al also apply, most of the trials we have reviewed have methodological defects that could have been avoided. For example, concealment of study allocation is always possible, yet this was confirmed in just two of the 44 trials included in a review of surgical treatment of wrist fractures in adults.[2]

Tackling any "lack of education in clinical epidemiology," and various other measures proposed by McCulloch et al will go some way towards addressing the current state of affairs in research in surgery, but more is needed. Surgeons should realise that using the right tools for clinical research is comparable to selecting and using the right instruments for an operation. Proper attention to study design, conduct, analysis, and reporting is equally crucial. Overall we need an integrated programme incorporating research, audit, and training.[3] This model proposes that, given the aim of medical practice is to improve patient care by "doing things that matter," we have the responsibility to do three things: (*a*) find out what matters (through primary or secondary research); (*b*) apply the findings (and audit practice); and (*c*) train clinicians if the right things are not being done the right way, every time. Keeping research, audit, and training separate does little to improve patient care ultimately; it is better to develop integrated programmes starting with the most common conditions in the specialty.

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1 McCulloch P, Taylor I, Sasako M, Lovett B, Griffin D. Randomised trials in surgery: problems and possible solutions. *BMJ* 2002;324:1448-51. (15 June.)
2 Handoll HHG, Madhok R. Surgical interventions for treating distal radial fractures in adults (Cochrane Review). In: *Cochrane library*. Issue 2. Oxford: Update Software, 2002.
3 Madhok R, Stothard J. Promoting evidence based orthopaedic surgery: an English experience. *Acta Orthop Scand Suppl* (in press).

Employment of academic and evidence based surgeons and epidemiologists may be the answer

Editor—We support McCulloch et al in their article on randomised controlled trials.[1] A major issue is funding.[2 3] Surgeons are partly to blame for this, a reflection of their general lack of epidemiological expertise. For example, although the epidemiological and trial design reviews of research proposals may be excellent, surgical reviewers might comment, inappropriately, that they do not see the need for a particular trial as the option(s) trialled may not be part of their normal practice.

Randomised controlled trials often need large numbers of patients to provide a scientifically satisfactory answer. Surgeons tend to be competitive individualists. The current competitive university system of the research assessment exercise does not provide an environment that facilitates collaboration between units and does not provide adequate recognition for collaborating units in randomised controlled trials.

Some surgeons can be influenced by financial gain, and in this respect they may be no different from commercial companies. A challenge for the surgical colleges and their members is to move forward to a truly scientific and health focused culture. They need to collaborate on priorities for research, lobby for the funds to sponsor trials, include participation in trials as part of their accreditation of units and individuals, and ensure that academic surgeons are adequately trained in epidemiological methods. Academic surgeons put themselves out on a limb, earn much less than jobbing surgeons, and meet barriers in the NHS to pursue excellence in surgery through trials and adequate research.

Surgical trials entail an element of "skill" that pharmaceutical trials don't, and probably require more funding than pharmaceutical trials. We support the need to video operations. Such videos should be considered part of the archive of evaluations of surgical interventions so that later scientists can satisfy themselves first hand.

There is still a culture of commissioning by "bean" counting, irrespective of the scientific evidence behind policies or interventions. We spend millions on initiatives tackling waiting lists. Perhaps the NHS is missing a trick by not employing academic and evidence based trained surgeons and epidemiologists to work on evidence based demand management, with the reward of research funds for trials for those identifying key questions that will affect demand.

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1 McCulloch P, Taylor I, Sasako M, Lovett B, Griffin D. Randomised trials in surgery: problems and possible solutions. *BMJ* 2002;324:1448-51. (15 June.)
2 Johnson AG, Dixon JM. Removing bias in surgical trials. *BMJ* 1997;314:916-7.
3 Bridgman SA, Elder J, Gray R, Lilford R. Funding is important for randomised trials of surgery. *BMJ* 1997;315:310.

Detaining dangerous people with mental disorders

Editor—Birmingham summarises the latest version of the proposed new Mental Health Act.[1] I was surprised, however, that the proposals have attracted as much libertarian opposition as the several earlier announcements. The consultation document promises that now, a primary aim is to bring the law more closely into line with modern law on human rights. The government had already adopted the phrase "medical treatment" in preference to the current "treatment in hospital" to achieve one of its key aims—compulsory care in the community. It has now embraced even further the wording of the leading European human rights case,[2] and as Birmingham notes, dropped completely the "detention to manage behaviour" approach.

In the new draft bill, compulsory treatment requires that a patient must have a mental disorder of such a nature or degree as to warrant the provision of medical treatment. In my view this is a much better treatability clause than the one in the current Mental Health Act. For surely a mental disorder can warrant the provision of treatment only if the patient is likely to benefit from it. If it be argued, as under the current Mental Health Act's treatability clause, that treatment in a secure hospital will "prevent a deterioration" into serious offending, then the definition of medical treatment, which has become so central to the new bill, is most helpful. Medical treatment covers care, nursing, and (re)habilitation—the latter including education, and training in work, social, and independent living skills. As absurdly wide a definition of medicine as this is, it explicitly does not include preventive detention.

Birmingham alludes to the exclusion clause in the current law for substance dependence and sexual deviancy, which is missing in the new bill. Instead we find a condition that appropriate medical treatment is available in the patient's case. This "availability test" will, I anticipate, protect most psychiatric services from having to impose such specialist treatments. The media announcement of the bill of course made no mention of a U turn, but we must allow the government a graceful retreat. A few wisely chosen words in Strasbourg almost a quarter of a century ago have saved British psychiatry from the most serious threat in living memory.

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1 Birmingham, L. Detaining dangerous people with mental disorders *BMJ* 2002;325:2-3. (6 July.)
2 Winterwerp *v* Netherlands (1979) 2 EHRR 387.

Asian patients may receive inferior care

Editor—Patel et al report an ecological study which shows that at the practice level the proportion of patients who are South Asian is a significant determinant of the level of prescriptions for lipid lowering drugs.[1] Presumably this means that South Asian patients, even though they are more likely either to have heart disease or to be at higher risk of heart disease, are less likely to receive appropriate treatment with lipid lowering drugs.

We reported results from a detailed study of 358 patients with angina from 15 general practices that we carried out in the metropolitan borough of Sandwell in the West Midlands, England, providing direct evidence that non-white patients receive a less good quality of care.[2] We found that non-white patients were significantly less likely to receive short acting nitrates ($P<0.001$). They were also less likely to be given advice on smoking cessation, weight, exercise, and alcohol consumption, and were less likely to have their blood pressure checked (all $P<0.0001$). Women were less likely to receive β blockers ($P<0.01$), and patients aged 65 or over were less likely to receive a cholesterol check ($P<0.0001$).

Furthermore, stratified analysis by practice showed significant associations between practice and ethnicity as explanatory factors and, as outcome variables, β blocker prescribing, smoking cessation advice, blood pressure checks, and cholesterol checks. Since the practice variable accounted for some of the variation in these outcome measures, we concluded that there may have been a systematic tendency for some practices not to carry out these interventions for certain groups. It is well known that many inner city areas have both a high proportion of ethnic minority patients, as well as a high proportion of single handed and less well resourced general practices. These practices find it hard to recruit clinical staff, are more often overburdened, and probably have less time and resource to carry out audits of the equity of their services than practices in more affluent areas. There is also evidence that socioeconomically deprived patients and South Asian patients wait longer for treatment than affluent white patients.[3 4] The result of this structural inequity is of course a perpetuation of Hart's well known inverse care law[5]—those with the greatest need (and with the greatest propensity to benefit) are likely to get the least.

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1 Patel MG, Wright DJ, Jerwood D, Silcock J, Chrystyn H. Prescribing of lipid lowering drugs to South Asian patients: ecological study. *BMJ* 2002;325:25-6. (6 July.)
2 Stewart A, Rao J, Osho-Williams G, Fairfield M, Ahmad R. Audit of primary care angina management in Sandwell. *J Roy Soc Prom Health* 2002;122:112-7.
3 Pell JP, Pell ACH, Norrie J, Ford I, Cobbe SM. Effect of socio-economic deprivation on waiting time for cardiac surgery: retrospective cohort study. *BMJ* 2000;320:15-9.
4 Feder G, Crook AM, Magee P, Banerjee S, Timmis AD, Hemingway H. Ethnic differences in invasive management of coronary disease: prospective cohort study of patients undergoing angiography. *BMJ* 2002;324:511-6.
5 Hart JT. The inverse care law. *Lancet* 1971;i:405-12.

Medicine needs to be an inclusive profession

Editor—The finding of indirect racial discrimination against the BMA highlights the need to do more to make medicine an inclusive profession.[1] I attended a conference on institutional racism in higher education at the University of Leeds' centre for ethnicity and racism studies in July, during which many issues about the accessibility and inclusiveness of higher education were raised. Some of these were highlighted the following day, when I attended my school's graduation ceremony.

The ceremony was held at Southwark Cathedral and continued a tradition and association between church, hospital, and university that goes back hundreds of years. On one hand, the magnificent building, evocative organ music, and procession of staff and students in their gowns gave the ceremony a certain meaning and significance. On the other hand, when I looked at the multicultural group of graduating doctors and their families, some of whom had come in national or religious dress, I wondered how comfortable and relevant it felt for them.

Such formal events send out messages about the values and culture of an organisation. It made me wonder how many taken for granted aspects of medical school life could seem alienating to those from different ethnic, religious, or class backgrounds. If medical schools are serious about widening access, such events need to be reviewed, as do many more subtle ways in which organisations send messages about what and who is acceptable. A good starting point, suggested by Beverley Bernard at the conference, is to tackle the issues that people in the organisation tell you are important—and give them the opportunity to tell you.

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1 Dyer C. BMA has to pay £81 5000 in damages for indirect racial discrimination. *BMJ* 2002;324:1541. (29 June.)

Long term care for older people

Dementia is main issue

Editor—Heath makes a convincing case for abandoning the distinction between personal care and nursing care in England, and therefore for following the Scottish example of providing free personal care for older people in need of it.[1] Frank as this editorial is, it does not go to the root of the issue.

There is not a single mention of the importance of dementia in determining the levels of care needed by older people. Moreover, there is a curious general reluctance to acknowledge just how fundamental dementia is to the whole question of long term care. Instead, euphemisms such as "frail" or "vulnerable" are used, which do not reflect the real picture. Yet we know from several studies that most residents of all types of care homes, even those that do not purport to care for people with dementia, do in fact have this condition.[2 3] Because of the invalid and unreliable division of care homes into residential and nursing, "elderly mentally infirm" and "non-elderly mentally infirm," perverse incentives exist not even to recognise that older people may have dementia when they are being assessed.[4]

So the real reason why there is no sense in separating "personal" from "nursing" care for older people is that most older people in long term care have dementia. They require care that is sensitive to the needs of people with dementia and in that sense is specialist dementia care. They do not particularly require nurses to provide their care, but nor should we pretend that their needs do not exist or do not require to be met. Until this issue is made overt and firmly grasped, we will make little progress.

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1 Heath I. Long term care for older people. *BMJ* 2002;324:1534-5. (29 June.)
2 Macdonald AJD, Carpenter GI, Box O, Roberts A, Sahu S. Dementia and use of psychotropic medication in non-"elderly mentally infirm" nursing homes in south east England. *Age Ageing* 2002;31:58-64.
3 Matthews FE, Dening TR. The prevalence of dementia in institutional care. *Lancet* (in press).
4 Macdonald A, Dening T. Dementia is being avoided in NHS and social care. *BMJ* 2002;314:548.

Euphemism illustrates ageism in healthcare system

Editor—With reference to the editorial by Heath,[1] I was taught at school that in the absence of a comparative object—"I am older than you"—the adjective older means older than old, mid-point on a scale that runs old, older, oldest. I may well be frailer than I think but I resent the implication that I'm even more ancient than old.

The patronising euphemism "older people" as used in this editorial, and by the jargonists who create entities such as the national framework for older people, is a neat—and, in this case, ironic—illustration of what the author calls "the solid core of ageism within the English healthcare system."

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1 Heath I. Long term care for older people. *BMJ* 2002;324:1534-5. (29 June.)