

Preference is given to letters commenting on contributions published recently in the *JRSM*. They should not exceed 300 words and should be typed double spaced

CRASH

The Medical Research Council CRASH Trial (Corticosteroid Randomisation After Significant Head Injury) is a large-scale randomized controlled trial, among adults with head injury and impaired consciousness, of the effects of a short-term infusion of corticosteroids on death and on neurological disability. Following a successful pilot phase that included over 1000 randomized participants, the main phase of the trial is now underway. Over the next five years the trial aims to recruit 20 000 patients. Such large numbers will only be possible if doctors and nurses worldwide join the trial.

There are many reasons for conducting the CRASH Trial now: (1) results from animal studies show that high-dose methylprednisolone can reduce post-traumatic neuronal degeneration^{1,2}; (2) patients with spinal cord injury who are treated with corticosteroids rather than placebo within 8 hours of injury appear to have greater improvement in motor function, and in sensation to pinprick and touch^{3,4}; (3) there are wide variations within and between countries in the use of corticosteroids in head injury⁵; (4) a meta-analysis of randomized trials of corticosteroids in head injury shows that existing trials are too small to demonstrate or to refute the possibility of a moderate but clinically important benefit⁶.

Head-injured adults with impaired consciousness are eligible for inclusion in the trial if the responsible doctor is for any reason substantially uncertain whether or not to use corticosteroids. Patients with head injury and impaired consciousness may be unable to give properly informed consent, and in this emergency situation it may not be appropriate to delay the start of treatment until relatives' consent can be obtained. Hence, the doctor in charge should take responsibility for entering such patients, just as he or she would take responsibility for choosing other treatments. However, the requirements of the relevant research ethics committee must be adhered to. Numbered drug or placebo packs will be available in each participating emergency department. Randomization involves calling a 24-hour free phone service. The outcome measures are death from any cause within two weeks of injury, and death or dependence at six months. In-hospital deaths, complications and short-term recovery are recorded on a single-sided outcome form that can be completed entirely from the hospital notes and no extra tests are needed. Long-term recovery is assessed at six months either by a simple postal questionnaire, sent directly to each trial participant from the national coordinating centre, or by telephone interview,

and will not involve any additional work for collaborating hospitals.

The identification of effective treatments for head injury is of global health importance. Will readers who would like to take part please register their interest via the trial website [www.crash.lshtm.ac.uk] or write to the CRASH trial coordinating centre.

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Secondary tumours of the penis

Mr Harper and colleagues¹ (January 2002 *JRSM*) report an unusual case of colonic adenocarcinoma presenting with a penile metastasis. We have studied the pathology of secondary neoplasms of the genitourinary tract in a series of some 27 000 necropsies at the Royal London Hospital^{2,3}. Secondary malignancies of the penis are much less common than those of other sites in the genitourinary tract: there were 425 secondary tumours of the kidney, 155 of the bladder, 24 of the prostate, 14 of the testis, and only 5 of the penis. These 5 cases were from necropsies of men who died between the ages of 51 and 74 years. 2 were metastatic pancreatic adenocarcinomas, 2 were metastatic transitional-cell carcinomas of the bladder, and 1 a prostatic adenocarcinoma that reached the bulb of the penis by direct spread. The histological appearances were of diffuse infiltration, by tumour cells, of the vascular spaces of the corpora cavernosum and spongiosum. All had metastatic disease elsewhere. Vascular spread seems to be the usual route of metastases to the penis, though their rarity in so

vascular an organ suggests that it is an unpermissive environment for tumour growth⁴.

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Revalidation of the retired

Congratulations to Professor Vickers¹ (January 2002 *JRSM*) on his stand. All 20 000 retired doctors should support him. The proposal that, when they retire, doctors will no longer be able to say that they are registered medical practitioners, and will not be allowed to write a prescription, is demeaning and no way to treat members of an honourable profession. It is fatuous to presume that, by humbling retired colleagues (who cause the General Medical Council no trouble), it will do anything to stop the younger ones (who are properly revalidated) from misbehaving.

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REFERENCE

- 1 Vickers MD. Revalidation of the retired: bad faith and a worse decision. *J R Soc Med* 2002; **95**:46

Professor Vickers¹ is to be congratulated on drawing our attention to the GMC's plans to stamp out the growing threat we retired doctors pose to ourselves and our families and friends by the reckless prescription of lethal drugs. It is not only the recipients of these murderous scrips who stand to benefit from this campaign. In a perverse way, so will retired doctors. Well into our second gin and tonic, no longer will we have to respond to the stirrings of conscience as dawns the hideous realization that we are the only doctor on the aeroplane. For we are to be officially absolved from the weighty responsibilities of administering intramuscular adrenaline, intravenous diamorphine, intramuscular glucagon or nebulized salbutamol. The GMC has no

apparent objection to retired doctors carrying out the odd tracheostomy on themselves or their loved ones, but even a tension pneumothorax in mid-air is no longer our concern. Which of us can honestly claim that surgery using a wire coat-hanger and a bottle of brandy is within our competence? Thanks to the GMC, the only necessary action will be to restore equanimity by urgent replenishment of the gin and tonic.

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Professor Vickers¹ proposes that doctors who are no longer in medical practice and have no desire to return to it should be allowed to continue to prescribe indefinitely for themselves, their families and their friends whether or not they are competent to do so. Whilst this ploy undoubtedly strikes a chord with those retired doctors who feel this is a perk they are entitled to retain after a career in medicine it is perhaps not surprising that it has been rejected by the GMC. Although it is true that some of the lay members had the strongest views on the issue there was also little support from the medical members, who remain in the majority. Many feel that the practice of prescribing for friends and family by any doctor should be condemned because of the virtual impossibility of remaining objective. Doctors and their families should always register with a general practitioner.

It is not true, as Vickers suggests, that retired doctors will not be permitted to participate in revalidation. Indeed, human rights legislation would probably make such a prohibition unlawful. What is difficult is deciding what evidence offered by such doctors would allow the GMC's revalidation groups to recommend a licence to practise. For most doctors the evidence will be drawn from their actual practice, supported by annual appraisal. But for retired doctors who have no practice, or such limited practice that it cannot provide robust evidence of satisfactory performance, the doctor will have to provide other objective evidence that he or she is up to date, and fit to practise medicine. It should also be borne in mind that the licence will allow doctors to practise in any branch of medicine they choose, subject to the constraints of 'Good Medical Practice' (for example, the need to practise within the limits of one's competence). What is not acceptable is for

there to be an easier 'back door' route to a licence to medical practice for some doctors than for others.

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Do in-hospital waiting lists show self-regulation?

The management of large complex systems is complicated by self-regulation—the phenomenon whereby changes in one component lead to compensating changes elsewhere. One characteristic of such systems (though by no means inevitable) is the potential for chaos—an unstable dynamic that makes predictions impossible. Papadopoulos *et al.*¹, in the *JRSM*, and Smethurst and Williams², in *Nature*, have argued that National Health Service (NHS) waiting lists show self-regulatory behaviour and may be capable of chaotic behaviour. These workers plotted the frequency distribution of the relative changes in queue size on a double logarithmic scale. When the double logarithmic plots appeared linear, the so-called power law was taken as evidence for self-regulation. We believe this technique to be fundamentally flawed. Unregulated time series can show power laws and we have suggested alternative approaches³.

Here we apply appropriate tests to data on the size of waiting lists in 10 randomly chosen hospitals over the period 1998–2001 (data taken from [www.doh.gov.ac.uk]). To each dataset we applied three tests. First, to check for long-term trends (e.g. increases or decreases in waiting lists), we performed linear regressions of queue size on time. Second, we estimated slope of the relation between change in log queue size and log queue size to see if this was negative. This test looks for evidence that large queues tend to get smaller whilst small queues get larger, as in self-regulated systems. Statistical significance tests cannot be performed on the slopes of such regressions, since for random time series the slope of this relation is biased and is expected to be negative. Instead we were interested in whether slopes were steeper than -1 , the implication of this value being that chaos is only possible if the slope is steeper than -1 . Third, we tested for self-regulation using a test (the Pollard test) explicitly designed to detect self-regulation in time series⁴.

The results are shown in Table 1. 6 out of 10 time series showed evidence for long-term trends, all negative, indicating significant declines in queue length. The slopes estimated from the regressions of change in log queue size on queue size were steeper than -1 only in one case, and

Table 1 Analysis of data on waiting lists from 10 randomly chosen hospitals for evidence of changes consistent with chaos or density dependence

Hospital	Trend slope	Change slope	Pollard test
RWS	-0.0112†	-0.378	0.13NS
SGL	-0.0044NS	-0.385	0.39NS
AC	-0.0005NS	-1.089	0.12NS
ROB	0.0004NS	-1.11	0.03*
UOB	0.0015NS	-0.42	0.59NS
NUT	-0.0033†	-0.577	0.16NS
GLAWS	-0.0109†	-0.266	0.21NS
EXE	-0.0116*	-0.846	0.12NS
YOR	-0.0081†	-0.04	0.10NS
NOT	-0.0044*	-0.052	0.51NS

NS=not significant; * $P < 0.05$; † $P < 0.0001$. RWS=Royal West Sussex; SGL=St George's London; AC=Addenbrooke's Cambridge; ROB=Royal Orthopaedic Birmingham; UOB=University of Birmingham; NUT=Newcastle-upon-Tyne; GLAWS=Gloucester Health Trust; EXE=Exeter & Devon Health Trust; YOR=York Health Trust; NOT=Nottingham City Health Trust.

this was only slightly steeper (-1.11). As noted, statistical tests on these slopes are biased. The Pollard test, which corrects for this bias, indicated that only one time series exhibited statistically significant evidence for self-regulation; moreover, in view of the number of tests (10), the marginal significance of this relation ($P=0.03$) should be viewed with caution.

We do not regard the analysis we have presented as definitive; for instance, longer time series may show different behaviour. However, claims that the NHS is 'at the edge of chaos' are not supported by our analyses. We have shown that, for the data in question, there is no evidence of self-regulatory behaviour. Moreover, waiting lists do show evidence of clear declines, probably resulting from management strategies to reduce queue sizes.

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Edge of chaos

Mr Papadopoulos and his colleagues¹ (December 2001 *JRSM*), using the mathematics of power relationships, conclude that the NHS is a complex adaptive system operating on the edge of chaos. That the NHS is a complex adaptive system has also been proposed from a conceptual point of view^{2,3}.

Having discussed convincingly how the NHS, in common with other complex adaptive systems, is resistant to change, they then speculate that the way to shorten waiting lists is to double or quadruple funding. Whilst clearly the NHS is under-resourced, such a policy is unlikely to be embraced by the government or taken seriously by health service planners.

Cilliers⁴ has suggested that complex adaptive systems can be highly creative, their inherent self-organizing capacity allowing them to adjust well to new opportunities. Even multinational corporations can increase their competitiveness through allowing employees to work creatively in small groups, within strategic guidelines but with little interference from management⁵. This principle has been suggested as relevant to the NHS⁶.

If the NHS were reorganized into smaller units, based on populations of 100 000 (as originally envisaged by the introduction of primary care groups and trusts), and these were freed from overburdening central control, the inherent creativity of these smaller units would probably lead to enhanced efficiency⁷.

Whilst there are hopeful reports that the government is considering such proposals⁸, there must be doubt whether it will take the political risk of relinquishing central control.

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- Ministers will order NHS to shift power to local hospitals. *Sunday Times* December 2001:1–2

With regard to the article on chaos in the National Health Service¹, I was particularly interested in the conclusion

about increasing resources. This, if I read correctly, is a very good corollary of Parkinson's Law; that is, the amount of work to be done increases in order to fill the time (resources?; personnel?) available to do it.

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Control of foot and mouth disease

Dr Beale's editorial¹ (January 2002 *JRSM*) may offer what appears to be a simple and effective solution to the future prevention and control of foot and mouth disease (FMD), but does not consider the objectives and the economics of livestock disease control.

To suggest that we can sustain a mass prophylactic vaccination programme in such a dynamic animal population as exists in European livestock agriculture is unreasonable. With current vaccines it would use about 100 million doses a year in the UK alone, with no guarantee of success. The risk can be managed more effectively and at less cost by other means.

The epidemiologists at the RSM conference on mathematical modelling of infectious diseases made it clear that vaccination programmes would not have been a great help in the control of the recent epidemic. Prophylactic vaccination as suggested by Beale also has its problems, and is not the simple panacea that he suggests. We, the FMD group of the British Cattle Veterinary Association, have made it clear to our agriculture ministers that once you start mass vaccination programmes it is very difficult to stop. The very existence of farm livestock is dependent on their value, and that is dependent on trade. The prevention of clinical disease is not the only consideration when setting objectives for the control of livestock diseases.

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- Beale AJ. Foot and mouth disease control: the next steps [Editorial]. *J R Soc Med* 2002;**95**:1–2

Counselling and consent in vasectomy

In the article by Mr Harris and Mr Holmes¹ (October 2001 *JRSM*), I was particularly interested in the fairly rigid timing of post-vasectomy semen analyses. A valid point not mentioned by the authors nor by the subsequent correspondence is the fact that clearance of spermatozoa

is not related to time following the vasectomy but rather the frequency of ejaculation—i.e. it is related to the frequency of intercourse. On numerous occasions in the vasectomy clinic where I work, patients with persistent spermatozoa very sheepishly admit to infrequent intercourse; the most recent case being three times per year.

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The art of the mentally ill

I was much interested by Allan Beveridge’s article¹ (November 2001 *JRSM*) and consider his conclusions to be wise. Figure 1 reproduces a painting done by one of my patients in the course of a mental illness. When a student at a local university he developed a psychological illness which colleagues and I diagnosed as schizophrenia, albeit not severe; there was no aggression or ill-feeling towards friends or neighbours. Unfortunately he later died of a perforated gastric ulcer, and the picture was given to me by the family. It depicts a rough scene in some seaside bay, but the patient’s father could not recall any visit to such a scene. Colleagues have agreed with me that it illustrates turmoil of mind.



Figure 1. Patient’s illustration of a stormy bay

Dr Beveridge’s remarks on the disquieting feeling of strangeness perhaps apply also to other arts such as music. As an organist I feel that music can offer similar glimpses into the mind of the composer.

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McDonald’s quotations

Mr Peter McDonald, the RSM’s Honorary Editor, is compiling a collection of quotations related to medicine. Suggestions will be gratefully received at [pmcdo69277@aol.com]. Here follow some items on hair and teeth.

Hair

Oliver Herford 1863–1935

A hair in the head is worth two in the brush—*A Hair*

Samuel Hoffenstein 1890–1947

Babies haven’t any hair:
Old men’s heads are just as bare;
From the cradle to the grave
Lies a haircut and a shave—*Poems in Praise of Practically Nothing*

Billy Bennett 1887–?

You can’t part the skin of a sausage,
Or a dad from his fond son and heir.
And you can’t part the hair on a bald-headed man,
For there’ll be no parting there—*Daddy*

Teeth

William Shakespeare 1564–1616

For there was never philosopher
That could endure the toothache patiently—*Much Ado about Nothing*

Ambrose Bierce 1842–c 1914

DENTIST, n. A prestidigitator who, putting metal into your mouth, pulls coins out of your pocket—*The Devil’s Dictionary*

Mark Twain (Samuel L Clemens) 1835–1910

Adam and Eve had many advantages, but the principal one was that they escaped teething—*The Tragedy of Pudd’nhead Wilson*