British brain drain

To the Editor: As a newcomer to South Africa, who until recently worked as a senior manager in the British National Health Service, I was very interested to read your short editorial on the shortage of doctors and the reasons for this situation.

While I do not dispute the facts that junior doctors do work long hours, and that at times less than the optimum number of medical staff are available, the government has implemented measures which are starting to address these difficulties, and this work will be ongoing.

What I did object to were your sweeping statements regarding the other reasons for resentment against managers. Your comments appear to be gleaned straight from the 'popular press' without examining the situation. I would like to take your points separately and clarify the position which is typified throughout the NHS.

Firstly, as a senior manager I earned less than half the salary of the average consultant; indeed, my salary was virtually the same as I earned as head of an NHS Therapy Service and this is the usual situation. Many managers earn considerably less than this.

Secondly, the point made about 'regular working hours' — normally every manager works 12 - 14 hours each weekday, plus around 10 - 15 hours at the weekend, without overtime or additional payments for duty manager responsibilities, which averages a minimum of 70 hours a week.

Thirdly, with regard to 'noon breaks', managers very rarely stop for lunch, but if you go to any hospital canteen at lunchtime it will be filled with doctors and other staff having their meal at reasonable leisure.

Expense accounts do not exist except for external training forums, which are usually attended by managers and senior clinicians (clinical directors).

And finally, the luxurious offices! Yes, compared with their previous condition, some possibly are luxurious; however, only a very few offices, which are used to meet visitors and purchasers, will be anything like the standard the average private company would provide.

I hope this provides an accurate picture of the actual situation within the NHS in the UK.

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To the Editor: Your mini-editorial on the British brain drain' suggests that the National Health Service in the UK has many lessons for South Africa, and indeed in general this is true.

While there are shortcomings of doctors, your assertions regarding duty hours are not correct, for I do not know of any doctor in the UK who works 56 hours at a stretch; in fact, this practice is 'outlawed'.

Lessons can be learned from Britain, however, and the merits of the NHS far outweigh the disadvantages that you so vividly portray. Two immediately spring to mind: (i) in the NHS, vacation leave is not, as I have been told ad nauseam in the past in South Africa, a privilege, and is easily arranged; and (ii) study leave is permitted to a maximum of 30 days per annum, and I have not found any difficulty in being granted such time off, which is in sharp contradistinction to my previous post in South Africa.

However, perhaps the most important lessons from the UK should include safety of self and family, more time at home due to structured work patterns with hours that are not normally exceeded, and, at the end of the day, having a more generous disposable income.

So, dear colleague, before you rush into print (perhaps it was a 'short news day') you should research the topic and find out why, if things are so bad in the NHS, there are probably more happy South African graduates in the UK than there are in South Africa.

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South African-trained Dr Cornish need not be defensive about the British NHS, which is undoubtedly the most socially equitable high-quality health care system in the world. However (and this was the point of the mini-editorial), a significant number of UK-trained doctors are dissatisfied with the NHS, for whatever reason, and if this doesn't concern Dr Cornish, it certainly worries the BMA. The Association recently conducted a survey of newly qualified doctors in the UK, of whom 1 in 4 indicated that they did not intend to join the NHS, preferring instead to emigrate, mainly to Australia and New Zealand, and causing BMA Secretary Dr Mac Armstrong to tell the Daily Telegraph of 15 December 1995: 'We may be seeing a re-emergence of the brain drain'. There are indeed many good lessons for South Africa to learn from the NHS. One of them is that there is no such thing as a perfect system. — Editor

QT-interval prolongation with Ecstasy

To the Editor: 3,4-methylenedioxymethamphetamine (MDMA, 'Ecstasy') is a synthetic hallucinogenic amphetamine that has enjoyed increasing popularity as a recreational drug since the late 1970s. Cardiovascular side-effects include palpitations, tachycardia and hypertension. Deaths occurring soon after ingestion have been reported and are due to a variety of causes, including cardiac arrhythmias. Although ventricular fibrillation has been described with this drug, its mechanism is poorly understood. We report a case of Ecstasy ingestion in which the QT interval was markedly prolonged on admission and shortened following withdrawal of the drug.

A 25-year-old man was admitted to hospital after ingestion of 1 tablet of Ecstasy. He denied taking any other medication or recreational drugs. On arrival 5 hours later he was agitated, dehydrated, pyrexial (temperature 39°C) and sweating, with a pulse rate of 140/min and a blood pressure of 200/110 mmHg. An ECG on admission showed sinus tachycardia, which made identification of the end of the T-wave impossible. He was rehydrated and made an uneventful recovery, with the temperature, pulse and blood...
pressure all returning to normal within 24 hours. ECGs taken 8 and 24 hours after admission showed a corrected QT interval (QTc) of 640 ms. Four days later the QTc had shortened to 400 ms and 4 weeks after discharge was still within normal limits.

Drugs that prolong the QT interval and therefore predispose to torsades de pointes ventricular tachycardia include tricyclic antidepressants, phenothiazines, various anti-arrhythmic drugs and some histamine antagonists such as astemizole, but to date this effect has not been reported with Ecstasy. It is interesting that the patient’s QTc was still prolonged more than 24 hours after the drug had been taken, despite a reported duration of action of 4 - 6 hours.\(^2\) The mechanism of QTc prolongation is not clear. It is known that Ecstasy has sympathomimetic actions and that these effects are mediated indirectly via release of noradrenaline from sympathetic nerve endings.\(^3\) However, this would normally shorten QTc via sympathetically mediated tachycardia. It is possible that Ecstasy has a direct effect on ventricular muscle, causing delayed repolarisation and QTc prolongation. Furthermore, this effect may last longer than its reported duration of action.

Precisely how Ecstasy causes ventricular arrhythmias is not known, but this case suggests that QTc prolongation and therefore predisposition to torsades de pointes ventricular tachycardia may be one possible mechanism. Doctors should be alert to this possibility and perform a resting ECG and measure the QT after the pyrexia, tachycardia and hypertension induced by Ecstasy ingestion have all resolved.

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### Airborne micro-organisms in a health care environment

To the Editor: A surgeon who was not using a protective device (mask) during a post-operation examination was exposed to droplets rich in micro-organisms when his patient coughed into his face. Within 48 hours the doctor became sick and was admitted to hospital; he was in an intensive care unit for 10 days undergoing treatment for Klebsiella pneumoniae septicaemia. Blood tests confirmed that the organism was identical to blood culture and pus swab results from the patient.

Several such outbreaks in health care settings have been reported.\(^4\) Previous studies in South Africa have indicated that the hospital is a high-risk environment.\(^5\) It is believed that just one viable micro-organism can cause an infection,\(^6\) and the risk of pneumococcal infection is reported to be increased in infected patients.\(^6\) While micro-organisms in the occupational environment are recognised as a health hazard, their impact on workers’ health is often overlooked by hospital authorities.

As part of a preliminary research project, looking at the problem of occupational hygiene in the health care environment, the author undertook a test at a teaching hospital. The Bioteck Refractory Centrifugal Air Sampler was used for air sampling. Table I gives the numbers of colony-forming units (CFUs) and genera identified by the South African Institute for Medical Research. On the basis of this ad hoc study the hospital authorities were requested to assist and allow the author to continue the study in order to establish a firm baseline and plan a sound policy for management of contamination. Unfortunately they were reluctant to do this and the study was discontinued.

### Table I. Micro-organisms detected in various locations in a teaching hospital

<table>
<thead>
<tr>
<th></th>
<th>Inside ward</th>
<th>Outside ward</th>
<th>Chief matron’s office</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coliform bacteria (CFU/m(^2))</td>
<td>0</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>Yeasts and moulds (CFU/m(^2))</td>
<td>125</td>
<td>25</td>
<td>75</td>
</tr>
<tr>
<td>Staphylococci (CFU/m(^2))</td>
<td>0</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>Total colony count</td>
<td>&gt; 25 000</td>
<td>&gt; 25 000</td>
<td>&gt; 25 000</td>
</tr>
</tbody>
</table>

* At the time of survey 4 patients were hospitalised in this ward.\(^7\) Only up to 1 000 colonies on the agar strip were reported by the laboratory. Most frequently observed micro-organisms were: Micrococcus spp., Staphylococcus spp., the most frequent cause of bacterial pneumonia, Bacillus cereus (aspha), Staphylococcus spp. (bacteria pharyngis), coagulase-negative organisms, Penicillium spp., Alternaria spp. (allergic and pathogenic), and Ulocaclium spp.

In 1992 the International Scientific Conference on Occupational Hygiene in Brussels agreed that exposure assessment in future research should focus on immunochemical determination of inhalable particles containing viable and non-viable fungi and bacteria.\(^8\) The health care setting is a clear example of such an environment, and the many work-related problems that must exist there represent occupational hygiene’s newest challenge and need immediate attention. While safe work practice is essential and health care personnel must be vigilant at all times, without a national strategy the risk of exposure will never be controlled. The health care authorities should encourage and assist the necessary research as a matter of priority.

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