differing natural courses,³ and their inclusion could require intolerable variations in management.

The hospice environment may seem more distressing for patients with diseases other than cancer; moreover, if such patients were treated in hospices, patients with cancer might have greater difficulties with body image and in accepting the inconsistency of more active management being given for non-malignant diseases.³ Hospices are deliberately not generally equipped to deliver such management so that overmedicalisation of terminal care is avoided.

Presently hospices see only about half of patients with cancer, which leaves little scope for the needs of a wider population (estimated at 150% extra bed days required for patients with diseases other than cancer⁴).

Hospice-style input for non-malignant diseases remains equally important but requires appropriate provision in addition to traditional hospices. Adequate community services could also meet much of this need. Hospices offer quality rather than quantity and should not be seen as an easy and cheaper option for providing care for patients with terminal disease as if they were a homogeneous group.

CRAIG GANNON

Staff grade doctor in palliative medicine

Myton Hamlet Hospice,
Warwick

- 1 Jones S. Palliative care in terminal cardiac failure. *BMJ* 1995; 310:805. (25 March.)
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Small numbers of patients with terminal cardiac failure may make considerable demands on services

EDITOR,—We agree with Sarah Jones that palliative care seems rarely to be offered to patients with congestive heart failure and that referral of such patients for community based hospice care is exceptional.¹ It is uncertain, however, whether the small uptake of such services that Jones reports reflects clinical need,² the referral practice of local doctors, or the conceptual approach of the small group of hospices surveyed. Similarly, alternative, hospital based symptomatic support may be available for these patients.

Such a palliative care programme was established in this hospital in July 1989, closely linked to a busy regional adult cardiology service. From the inception of this department, staffed by clinical nurse specialists, we have actively collaborated in the care of inpatients with a primary diagnosis of congestive heart failure whose symptoms have proved refractory to aggressive medical treatment (New York Heart Association grade III or IV). The number of such patients referred for palliative care was four in July to December 1989, seven in 1990, 10 in 1991, six in 1992, five in 1993, and five in 1994. The number requiring palliative care thus seemed to be relatively small, with a mean annual referral rate of 7 (SD 2) patients. This constituted only 1% of all referrals to the service over the above period. The patients, however, made a considerable demand on services, with a range of 1 to 25 contacts between individual patients and staff (mean 6(4)).

Most of this population had progressive heart failure due to coronary heart disease. The 37 patients were aged 28-81 (mean 68(9)), and 29 were male. As expected, they had a poor prognosis, with an average period between referral and death of 16

weeks. Only seven of this group remain alive, three have been treated in the latter half of 1994; they include our youngest patient, who made a full recovery after presenting in cardiogenic shock due to viral myocarditis.

Palliative care in the community remains largely devoted to oncology patients, which perhaps reflects the historical development and funding base of such activity. The needs of other diagnostic groups, however, seem to be increasingly recognised, albeit with some reluctance. Six of our early patients were followed up at home because a lack of provision for patients with heart failure was perceived at that time. This activity was deemed impractical 18 months after the initiation of our hospital based continuing care service because of the high inpatient workload. In contrast, over the past year three of our patients with heart failure have been supported by local hospice care or the Macmillan nurse service.

J M BEATTIE

Consultant cardiologist

R G MURRAY

Consultant cardiologist

JAN BRITTL

Continuing care sister

TRISH CATANHEIRA

Continuing care sister

Department of Cardiology,
Birmingham Heartlands Hospital,
Birmingham B9 5SS

- 1 Jones S. Palliative care in terminal cardiac failure. *BMJ* 1995; 310:805. (25 March.)
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Reperfusion injury after myocardial infarction

EDITOR,—Ever D Grech and colleagues omit to mention the role of the complement system in their discussion of the mechanism of reperfusion injury after myocardial infarction.¹ It has long been recognised that complement activation, which occurs on reperfusion of ischaemic myocardium (and, indeed, on reperfusion of other ischaemic tissues) is an important effector in the tissue damage that often occurs.^{2,3} This has been graphically illustrated in studies in animal models of myocardial reperfusion injury, in which administration of the powerful systemic inhibitor of complement activation, soluble complement receptor type 1, dramatically reduces myocardial damage.^{4,5}

It is important to emphasise the role of complement in reperfusion injury of myocardium and other tissues because the new generation of complement inhibitors now being developed for treatment offers the prospect of reducing tissue injury if given at the appropriate time. Indeed, soluble complement receptor type 1, the first of this new generation of inhibitors to reach the clinical stage, is already being assessed for its therapeutic role in myocardial infarction.

B PAUL MORGAN

Wellcome senior clinical fellow

Department of Medical Biochemistry,
University of Wales College of Medicine

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Sleep related vehicle accidents

EDITOR,—J A Horne and L A Reyner provide useful data on sleep related vehicle accidents, which were defined according to criteria that they rightly consider more likely to have resulted in underreporting than overreporting of such accidents.¹ The criteria that they used, however, although including "breathalyser/blood alcohol levels below the legal driving limit," do not eliminate the possibility that alcohol was a considerable contributory factor in the accidents studied.

Blood alcohol concentrations increase the risk of road traffic accidents at values well below the legal limit.² Inexperienced drivers who drink infrequently seem to be particularly vulnerable.³ Furthermore, alcohol increases drowsiness by acting as a cerebral depressant. The times at which sleep related accidents occurred most frequently in this study, in addition to being times at which drivers may be most sleepy, are those when drivers might be predicted to be affected by consumption of alcohol. In the early hours of the morning (0100-0300) some drivers may have been returning from social functions at which alcohol was served. During 0500-0700 drivers may be travelling to work unaware that their previous night's intake of alcohol has still not been completely metabolised. In the mid-afternoon, when drivers are presumably suffering postprandial somnolence, they may also still be under the influence of alcohol consumed at lunchtime.

Horne and Reyner have made a useful contribution to the literature on road traffic accidents. But an accident should not be assumed not to be related to alcohol simply because the driver was below the legal driving limit. While sleepiness may be an important contributor to road traffic accidents, it may in turn be due to consumption of alcohol.

C C H COOK

Senior lecturer in the addictions

I P ALBERY

Research psychologist

National Addiction Centre,
Institute of Psychiatry,
London SE5 8AF

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Screening overseas students for tuberculosis

EDITOR,—As part of our programme to control a recurrence of tuberculosis we examined the implementation of the national policy of screening, at port of entry to the United Kingdom, of students and their dependants from countries where tuberculosis is prevalent. We did this by interviewing students who complied with the local requirement to attend the chest clinic for screening, sending postal questionnaires to non-attenders, and comparing our experience with that of 22 other universities and associated health authorities.

Questionnaires were completed by the interviewer for 170 students who attended the clinic. In addition, 103/213 (48%) questionnaires sent by post were returned. Of 383 students arriving in Bristol with families, 376 (98%) came from regions where tuberculosis was prevalent. Only 23 (8%) had been medically examined and 10 had had chest radiography at the airport of entry (Heathrow 83%, Gatwick 12%). A total of 170 (44%) attended our chest clinic as requested. In 149 (88%), chest radiographs were normal. In 36 (21%) Heaf tests were negative. In 20 (12%) Heaf tests were strongly

Heaf test		Chest radiography		Outcome	
Grade	No (%)	Result	No (%)	Intervention	No (%)
0	8 (5)	Abnormal	2 (1)	Chemoprophylaxis	7 (4)
1	28 (17)	Child (no radiography)	8 (5)	Offered BCG	1 (1)
2	105 (62)	Old tuberculosis	1 (1)	Followed up	11 (7)
3	12 (7)	Refused	10 (6)	Discharged	151 :89)
4	8 (5)	Normal	149 (88)		
Refused test	9 (5)				

positive. Seven required chemoprophylaxis. There were 19 refusals of one or both tests (table).

In replies from 20 of 22 other universities we contacted, only 13 (65%) were able to enumerate overseas students registered for the 1992-3 academic year. Ten had no tuberculosis screening programmes; two had no student health service. Eight of the remaining 10 had arranged screening with the local consultant in communicable disease control. Twelve universities had medical schools, 10 of which screened students for tuberculosis. Only a few universities had any data on abnormalities detected currently or in previous years. This, together with the absence of denominators, made estimates of the prevalence of tuberculosis impossible and served only to reveal the extent of failure to comply with the national guidelines and purpose of screening. Since admissions of overseas students from high prevalence areas are increasing, there is clearly a need for a multicentric rationalisation of screening procedures and preventive policy.

Students from these regions qualifying for study in Britain are usually advantageously placed in comparison with their home populations in terms of education, health, and standard of living. The occurrence of seven cases (4%) requiring chemoprophylaxis in the 44% minority who attended for screening in Bristol, the fact that 92% are not screened at the port of entry, and the lack of compliance with minimal preventive measures all point to a situation which, in the generality of immigrants, must already be creating foci for further spread of tuberculosis in the United Kingdom.

S SEBUGWAWO
Consultant in public health medicine
G H STEWART
Consultant in communicable disease control
J R CATTERALL
Consultant physician
M KIRKUP
Clinical assistant, TB prevention clinic
A V J BUTLER
Medical officer in charge, students health service

Avon Health,
Bristol BS2 8EE

GPs accept patients' vote on fundholding

EDITOR,—We were interested to read of the ballot of patients in Leicestershire over fundholding.¹ We carried out a similar consultation process, which ended with a different result.

We are a small inner city practice, with 70% of our patients attracting a medium deprivation payment. Fundholding seemed to be the natural progression of the services we were already providing, and we believed that it would provide more choice for patients and a wider range of services in the community. In 1991-2, however, fundholding was a politically contentious issue, and we therefore decided to discuss the matter with our patients.

The practice as a team produced a document indicating some of the advantages and disadvantages of fundholding, which was circulated to patients. We then held a public meeting to discuss it with them and gained approval for six months of negotiation. In the winter of 1992 we held another public meeting; on this occasion we had television

and newspaper coverage. After discussing our plans we split into smaller groups to answer questions.

The attendance at both meetings was over 100, which for a practice of our size—2500 at the time—was remarkable. We sent out a questionnaire to determine whether those who attended our public meetings were representative of the population we serve. This proved to be the case. Patients voted four to one for the practice to become a fundholding practice. In the three years since then we have made fundholding work in our patients' interests and have benefited this community without disadvantage anyone else. We regularly report on fundholding in our quarterly newsletter for patients.

One of the biggest fears expressed by patients in inner city Nottingham and other general practitioners was that we would turn our backs on the NHS and seek private care. Over the past years of fundholding, less than 5% of our budget has been spent outside the NHS.

We continue to believe as a team and a practice that fundholding gives patients more choice, enables services to be provided closer to patients' homes and with their active participation, and improves the range of services available in the community.

MICHAEL A VARNAM
General practitioner
MALCOLM BARKER
Finance manager

Windmill Practice,
Sneinton Health Centre,
Sneinton,
Nottingham NG2 4PJ

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A global health disaster network is needed

EDITOR,—Kobe, Chechnya, Bosnia, Rwanda... all these disasters have been characterised by difficulties in communication. How many people are injured? Homeless? Buried? Need food? Most of these pressing questions are answered by word of mouth. The lack of accurate and timely information is compounded by our inability to establish immediate, real time communications among international health agencies, non-government disaster and relief organisations, affected governments and local authorities, and the people themselves, which leads to needless morbidity, mortality, and waste in both manmade and natural disasters. It is only now that we are beginning to apply new technologies to improve communication during disasters.

We are in the middle of a telecommunications revolution. Telecommunications systems such as the internet are reaching millions of people world wide and are growing rapidly, even in developing countries. The growing global health network should begin to establish a global health disaster network directed at preventing disasters and planning responses to disasters.^{1,2} The global health network could also provide an improved means of transferring information into and out of a disaster area and among the "shareholders" in a

disaster. Such a system has already been established to a limited extent in Central America, South America, and the Caribbean by the Pan American Health Organisation, regional office of the World Health Organisation (C DeVill, personal communication).

In a pilot project the Pan American Health Organisation, with the support of the National Aeronautics and Space Administration, is linking through the internet the major coordinators of disaster management in Central America (health disaster coordinators, civil defence, health commissions, etc). This project—part of the global health network initiative—establishes the foundation of the regional "information highway." Much more needs to be done to ensure that sufficient portable units could in some cases be backpacked to the affected area to allow more rapid assessment and transfer of information about the disaster.

Training of health care professionals in monitoring international disasters and in telecommunications is important. These "cyberdocs" would be essential for establishing and coordinating information during disasters. Experts in epidemiology and preventive medicine and those in disaster planning and response and in telecommunications must continue to work closely to coordinate responses for the disasters in the 21st century and beyond.

EARL W FERGUSON
Director

Aerospace Medicine and Occupational Health,
Life and Microgravity Sciences and Applications,
NASA Headquarters,
Code UO,
Washington, DC 20546, USA
(eferguson@hq.nasa.gov)

ANTHONY VILLASENOR
Programme manager

NASA Science Networking,
Office of Space Science and Applications,
OSSA Information Systems,
NASA Headquarters,
Washington, DC 20546, USA
(villasen@nspio.arc.nasa.gov)

STEPHEN CUNNION
Assistant professor

Department of Preventive Medicine and Biometrics,
Uniformed Services University of the Health Sciences,
Bethesda, MD 20814-4799, USA
(cunnion@usuhs.mil)

CLAUDE DE VILLE DE GOYET
Chief

Emergency Preparedness and Disaster Relief
Coordination Program,
Pan American Health Organisation,
Washington, DC 20037, USA
(devillec@paho.org)

FRANK E YOUNG
Director

Office of Emergency Preparedness/NDMS,
Department of Health and Human Services,
Rockville, MD 20857, USA
(fyoun@oash.ssw.dhhs.gov)

RONALD E LAPORTE
Professor

Department of Epidemiology,
Graduate School of Public Health,
University of Pittsburgh,
Pittsburgh, PA 15261, USA
(rlaporte@vms.cis.pitt.edu)

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Rationing intensive care

Intensive care provision varies widely in Britain

EDITOR,—D W Ryan believes that high dependency units will solve some of the problem of insufficient beds in intensive care units in Britain and suggests that some elective admissions to intensive care units could be diverted to such a