coping." Guidelines on referral can help to overcome such difficulties.

Any suggested inquiry into death rates should cover all providers of long stay care. This would allow a comparison of the rates across all providers, thus keeping results for nursing homes in context. Death rates in nursing homes may not be appreciably different from those for other providers of long stay care. We must be careful when discussing the many factors that influence death rates, and particularly in any attempts to link death rates to care previously given.

We agree with Bowman that our survey shows that the population in nursing homes is dynamic and changing. More research is required to address some of the points raised generally by our survey and the response to our paper.

JENNY HENRY
Research assistant
ISOBEL MACPHERSON
Research fellow
SHEENA DONALD
Research fellow

Priority Services Research Team,
Department of General Practice,
University of Aberdeen,
Aberdeen AB9 2AY

Potential risks of health food products containing yohimbe extracts

EDITOR,—We wish to express our concern about the availability of yohimbe preparations on the health food market. We submitted capsules that contained yohimbe extracts (imported from France by Nutramin, Amsterdam) to thin layer chromatography and high performance liquid chromatography and recovered, besides several other alkaloids, at least 1 mg of yohimbine per capsule. The recommended daily dose of 8-10 capsules would therefore provide at least 8-10 mg of yohimbine a day, and the other alkaloids might also contribute to the effect.

The label describes the product as a vitalising agent for men, but off label advertising advocates the product for the treatment of male impotence. While yohimbine has shown favourable results in this condition, it is not universally accepted as an effective aphrodisiac and is not sufficiently safe to be freely available for uncontrolled use. When given to healthy volunteers 15-20 mg of yohimbine orally is usually needed to increase blood pressure and to induce anxiety, but in patients taking tricyclic antidepressants hypertension may occur at 4 mg three times a day, and the toxicity of yohimbine can be enhanced by other drugs, such as phenothiazines.¹ A dose of 5 mg is sufficient to produce adverse effects in patients with autonomic failure,² and 10 mg can elicit manic-like symptoms in patients with bipolar depression.³ Furthermore, daily doses of 15 mg have been associated with bronchospasm⁴ and a lupus-like syndrome.⁵

The label of the capsules that we investigated does not provide any warning about such health risks, and off label advertising presents yohimbine merely as a peripheral vasodilator which can potentiate other agents that lower blood pressure. In reality, however, the α_2 adrenoreceptor antagonistic properties of the alkaloid reverse the effects of clonidine and similar antihypertensive drugs.

In view of these data, we have requested the Dutch department of health to take steps against the uncontrolled availability of health food products containing yohimbe extracts, and we hope that authorities in other countries will also take action. Doctors should also be aware that such preparations may not have the composition that is declared on the label. When we analysed a second product on the Dutch market (imported from the United States by Body Food, Ridderkerk) it yielded only caffeine and no yohimbine, even

though the label claimed that 500 mg of yohimbe bark extract was present in each tablet.

PETER A G M De SMET
Drug information pharmacist
OSCAR S N M SMEETS
Quality control pharmacist

Royal Dutch Association of the Advancement of Pharmacy,
2514 JL The Hague,
Netherlands

- 1 Lacomblez L, Bensimon G, Isnard F, Diquet B, Lecrubier Y, Puech AJ. Effect of yohimbine on blood pressure in patients with depression and orthostatic hypotension induced by clomipramine. *Clin Pharmacol Ther* 1989;45:241-51.
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Contamination of bone marrow transplants from peripheral blood

EDITOR,—We agree with Tessa L Holyoake and Ian M Franklin that transplants of peripheral blood stem cells may transform medical oncology, but their infective risks were not mentioned.¹ Harvested bone marrow may contain bacteria,^{2,5} and grafts of peripheral blood stem cells may do too. In two cases recently, contaminated grafts were infused uneventfully when the patients received prophylaxis with antibiotics.

Peripheral blood stem cells were harvested with full aseptic precautions being taken. Duplicate samples were taken before and after cryopreservation and cultured directly and by broth enrichment for conventional and psychrophilic bacteria. Isolation of the same organism from both duplicate samples was considered to be significant. Since August 1993 we have monitored 59 harvests of peripheral blood stem cells from 31 patients. Contaminants were isolated from 10 harvests from 10 patients (coagulase negative staphylococci (six cases), *Bacillus* spp (two), *Staphylococcus aureus* (one), and *Pseudomonas putida* (one)); none of the patients had clinical infections.

Four harvests from two patients yielded positive results. Four days after the harvesting the first patient became feverish, and *Xanthomonas maltophilia* was isolated from both aerobic bottles of a four-bottle blood culture set. Two samples were cultured in duplicate after freezing, and the same bacterial strain was isolated from three cultures from these. Fourteen days later the graft was infused, the patient being given imipenem and gentamicin. One possible source of the contamination was found: iodine in 70% isopropyl alcohol used for skin antisepsis was kept in undated 500 ml bottles with screw tops. Mixed organisms including *P. stutzeri* were grown from the bottle tops. Alcoholic iodine is now supplied in small volume bottles, which are discarded within one week.

The second patient had no signs of infection when two harvests of peripheral blood stem cells were obtained on consecutive days. *Enterococcus faecalis* was isolated from both duplicate cultures of the first sample after freezing and from one culture of the second. Thirty one days later the graft was infused, the patient being given benzylpenicillin and gentamicin for 72 hours.

In both cases blood cultures were sterile during and after the uneventful infusions and engraftment was rapid.

Bacteria may enter cellular grafts at the time of collection (from bacteraemia in the patient (unpublished observations) or during collection

or processing²) or during storage or thawing.³ Significant growth may be difficult to distinguish from the background contamination inevitable with enrichment culture, so duplicate processing of direct and enrichment cultures may aid interpretation. As a result of our use of this protocol only two of 10 patients with cultures that yielded positive results received prophylaxis with antibiotics. The addition of antibiotics to grafts in vitro is ineffective.⁴ We therefore recommend that significantly contaminated grafts of peripheral blood stem cells can be infused safely if two prophylactic antibiotics active against the pathogen are given for 72 hours. We would use vancomycin alone for appreciable growths of coagulase negative staphylococci. Blood samples are cultured at the time of infusion, and prophylaxis would be prolonged to a course of treatment if these yielded positive results.

M FARRINGTON
Consultant microbiologist

I MATTHEWS
Chief medical laboratory scientific officer

R MARCUS
Consultant haematologist

M A SCOTT
Chief medical laboratory scientific officer

Addenbrooke's Hospital,
Cambridge CB2 2QQ

E CAFFREY
Medical director

C J HUNT
Clinical scientist

East Anglian Tissue Bank,
Blood Transfusion Service,
Cambridge CB2 2PT

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Ethnicity in epidemiological research

Similar methodological problems exist in health services

EDITOR,—Peter A Senior and Raj Bhopal's article and the accompanying editorial by Kwame J McKenzie and Natasha S Crowcroft draw together important methodological problems that arise in research into the interaction of ethnicity and health.¹² The same process is also needed in relation to the issue of fair access to health services and to services that determine health, such as education and housing.

Over the years many efforts have been made to build on action by, and with, ethnic minority community groups to develop better services. For example, Save the Children recently completed two needs assessment exercises, in partnership with local people and statutory authorities, with Vietnamese refugees in south London³ and with south Asian people in Newcastle.⁴ Further work is being developed with traveller communities and with other refugee and ethnic minority communities in Britain.

Progress has been made in extending services for some ethnic minority groups and in improving the policies of some purchasers and providers, but two things constantly hamper this kind of work: financial support to groups has been small and inconsistent and is characterised by short term grants that are not renewed.

Efforts to coordinate what has been learnt about

these issues nationally have, likewise, been weakly supported. Networks are established and then closed down. Training in Health and Race (which was supported by the Health Education Council (now the Health Education Authority) and others) and the black health unit (which was at the National Community Health Resource (now Community Health UK)) are both now defunct. At present national initiatives include the King's Fund Centre's "share project" and the Health Education Authority's black and ethnic minority groups database, which provide information resources. These are welcome developments but suffer from insecure funding. Even the Department of Health's new ethnic health unit, which offers more general support, has been established for only three years.

Knowledge of good practice needs to be consolidated over time. To make this possible there must be consistent infrastructural support to help the health service, local authorities, and the voluntary sector to avoid reinventing the wheel.

SOPHIE LAWS

Research officer, policy division

CHRISTOPHER CUNINGHAME

Community health adviser, London division

Save the Children,
London SE5 8RD

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Ethnicity revolves around culture

EDITOR,—Both the editorial and the article on the place of race, ethnicity, and culture in medical research incline to the view that race, even as a biological notion, does not exist.^{1,2} This is self evidently an overstatement. In so far, however, as there are no specific qualities that anyone possesses simply by virtue of his or her race alone, race itself falls short of meeting the criteria for a sound epidemiological variable.

As both articles agree that ethnicity is simply a matter of group identification, I am surprised that Peter A Senior and Raj Bhopal go on to propose its elevation to the status of an epidemiological variable.² Taken in relation to their criteria for such a variable, ethnicity is not measurable and does not itself distinguish between populations in any characteristics relevant to health. Besides, ethnicity, being a matter of self definition, cannot be assigned by others. Ethnicity is not in its own right a valid epidemiological variable.

Culture, which is "the totality of socially transmitted behaviour patterns, arts, beliefs, institutions, and all other products of human work and thought characteristic of a community or population,"³ does differentiate human populations in characteristics relevant to health. McKeown makes a sound case for the centrality of culture in the origins of human diseases by showing the different patterns of disease in hunter-gatherer, agrarian, and industrialised societies.⁴

But culture is expressed in geographical locations, and the environment in which people live contains the greatest threats to their health. Given this consideration, race and ethnicity are still relevant, for ethnic subgroups of racial groups tend to live together and evolve a culture in relatively defined geographical regions. In accepting, and being accepted by, a community an individual shares in the benefits and risks of that community's culture and environment.

In summary, culture and geographical location, defined as one factor, provide the most valid and most important epidemiological variable available

today. The current development of language permits us, however, to name cultures only by using racial, ethnic, or national labels. Thus ethnicity is relevant as part of an epidemiological variable if, and only if, we equate it with culture: after all, the group identification that constitutes ethnicity revolves around culture.

IKECHUKWU O AZUONYE
Consultant psychiatrist

Claybury Hospital,
Woodford Bridge,
Essex IG8 8BY

- 1 McKenzie KJ, Crowcroft NS. Race, ethnicity, culture, and science. *BMJ* 1994;309:286-7. (30 July.)
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No secular decline in fecundity has occurred in Sweden

EDITOR,—Stephen Farrow's editorial highlights the important epidemiological issue of whether human fertility is threatened by environmental pollution or occupational exposure.¹ The methodological problems in studies of this are well recognised and include the study design, measures of exposure, reproductive and developmental outcomes, interaction, participation, and recall bias.² How then could we address the hypothesis of a possible secular decline in fertility?

A decline in the twinning rate has been suggested to be related to increased rates of miscarriage and environmental pollution.³ The changed distributions of age and parity of mothers, however, explain the secular decline in the twinning rate from the 19th century until 1960 in Sweden, while the continued decline during the 1960s remains unexplained.⁴

Time to pregnancy, with live birth as the outcome variable, could be a more valid and consistent measurement for analysis of secular trends in fecundity. We have studied fecundity among Swedish peasant women in the 19th century,⁵ and a sample of Swedish women born in 1936-60,⁶ and have also studied the fecundity of women in Umeå who gave birth to a liveborn child in 1992 within the collaboration project of the European study of infertility and subfecundity. When we compared the different birth cohorts there was no secular decline in the cumulative incidence of pregnancy within one year among Swedish women born during the 19th century, 1936-45, 1946-60, or 1963-72 and having their first child at the age of 20-29. In addition, there was no negative time trend when the fecundity of women in the three last cohorts was compared (table). Thus we did not observe any secular decline in fecundity in Sweden.

ULF HÖGBERG
Senior lecturer

Department of Obstetrics and Gynaecology,
Umeå University,
S-901 87 Umeå,
Sweden

MARIANNE WULFF
Senior registrar

Department of Epidemiology and Public Health,
Umeå University

Life table analysis of fecundity per month in women aged 20-29 by density method (rates adjusted by Mantel-Haenszel method)

	1936-45	1946-60	1963-72
No of live births	1202	1694	385
Person time (months)	5645	8148	1770
Crude rate per month	0.21	0.21	0.22
Adjusted rate	0.21	0.20	0.26
Relative risk (95% confidence interval) (%)	100	94 (87 to 102)	120 (107 to 135)

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Value of data provided for health promotion programmes

EDITOR,—Family health services authorities have recently received an unprecedented amount of clinical data from general practitioners as part of the new health promotion and chronic disease management programmes. Yet the value of these data remains undetermined. For monitoring purposes general practitioners are required to provide data about risk factors, interventions offered, the prevalence of some major chronic diseases, and, for chronic disease management, the numbers of sufferers and treatments provided.

In theory the provision of such data should, in the long term, not only enable monitoring of the practices' level of preventive activity but also give information on the prevalence of major chronic diseases and of "risky" behaviours. As nearly 80% of patients visit their general practitioner in a given year,¹ these programmes could provide data on behaviour that are greatly superior in terms of coverage to those gained by local surveys.

This benefit, however, remains theoretical. Lack of clear definitions for the data has meant that practices enter and extract information in different ways, and consequently comparisons among practices are largely meaningless. Some far sighted family health services authorities may have specified their requirements in detail; most will not have done.

A cogent example is provided by the asthma chronic disease management programme. The standard fees and allowances specify that numbers of "current asthma sufferers" should be provided. Many software companies have developed specific programs to search for the data, but a personal survey of seven major software companies established that the two biggest companies differed substantially in their criteria for identifying patients: one used patients who had ever had a diagnosis of asthma recorded, while the other used patients treated within the previous year. Such different criteria could produce figures varying by up to 30% for populations with the same actual prevalence. Similarly, the criteria for raised blood pressure and coronary heart disease are unclear.

Use of the data in aggregated form for planning, epidemiology, or other purposes could be seriously misleading. Yet a considerable amount of time, energy, and money is being spent in primary care on recording and extracting this information. There is a tremendous opportunity to encourage general practitioners to record information on computer that will be of use clinically and to gain access to extensive data on the prevalence of disease and risk factors that have not previously been available. Much of this opportunity, how-