HIV transmission, travel, and Thailand

EDITOR,—The steep rise in the prevalence of HIV infection in Thai prostitutes since 1989 and the spread of infection into other groups of heterosexuals in that country has been reported.¹ The potential therefore exists for heterosexual transmission of HIV infection to British people who engage in unprotected sexual intercourse with new partners while visiting Thailand. Such transmission is now occurring at an increasing rate.

Before 1989 there had been only two reports to the Communicable Disease Surveillance Centre of HIV infection attributed to heterosexual sexual exposure in Thailand. Since then 22 reports have been received of cases in which sexual intercourse between men and women in Thailand was the likely mode of HIV infection; 17 of these were reported in 1991 and 1992. These reports relate to 21 men and three women aged 24 to 50. They were received from 20 centres located throughout England and Wales. At the time of the report nine people were asymptomatic, five were symptomatic but without an AIDS indicator disease, and four had AIDS; clinical information was unavailable for six.

These data are mainly based on laboratory reports, and it is impossible to be certain that no other risk factors for HIV infection were present. Nevertheless, intercourse with new partners (including prostitutes) in Thailand was mentioned in 18 reports.

Travellers who have unprotected sex risk becoming infected with other sexually transmitted diseases besides HIV infection. Reports of such infections acquired by travellers in the Far East include hepatitis B (2% (10/508) of acute infections in adults in England and Wales in 1991 reported to the Communicable Disease Surveillance Centre were acquired in Thailand); penicillin resistant gonorrhoea; and chancroid.¹

Rates of HIV infection are high or rising in many countries. The need for travellers, especially sex tourists, to receive appropriate information and counselling on safe sexual and other behaviours before travel has been emphasised.^{1,5} Many agencies are in a position to provide advice or information: local health service staff, travel agents, travel clinics, and airlines. Travellers need to be motivated as well as informed to avoid risk behaviours for HIV infection. Our data serve as a reminder that returning travellers who have been at risk of sexually transmitted diseases should be encouraged to have an HIV test.

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1 Weniger BG, Limpakarnjanart K, Ungchusak K, Thanprasertsuk S, Choopanya K, Vanichseni S, et al. The epidemiology of HIV infection and AIDS in Thailand. *AIDS in Thailand. AIDS* 1991;5(suppl):S71-85.
2 Donovan B, Bek MD, Pethebridge AM, Nelson MJ. Heterosexual gonorrhoea in central Sydney: implications for HIV control. *Med J Aust* 1991;154:175-80.
3 Waugh MA. Chancroid and HIV. *BMJ* 1989;298:321.
4 Heptonstall J, Mortimer J. HIV infection and foreign travel. *BMJ* 1991;302:352.
5 Hawkes S, Malin A, Araru T, Mabey D. HIV infection among heterosexual travellers attending the Hospital for Tropical Disease, London. *Gentourin Med* 1992;68:309-11.

Priority will be given to letters that are less than 400 words long and are typed with double spacing. All authors should sign the letter. Please enclose a stamped addressed envelope for acknowledgment.

Recommendations for pacing

EDITOR,—We were interested to read M A de Belder and colleagues' description of permanent pacemaker implantations at St George's Hospital, London, in 1991,¹ and we support their comments concerning the serious cost implications of implementing the British Pacing and Electrophysiology Group guidelines.² In our regional unit in 1991, 402 patients underwent permanent pacemaker implantation (see table). Of the 323 single chamber systems implanted, 35 (10.8%) included a rate responsive unit and nine (2.8%) were atrial single chamber systems. The total cost (including VAT) of all pacemaker hardware implanted was £437 230, of which dual chamber systems accounted for £164 730 (37.7%). The mean costs of a dual chamber system, a rate responsive single chamber system, and a fixed rate single chamber system were £2085, £1425, and £773 respectively.

Permanent pacemaker implants at John Radcliffe Hospital, Oxford, 1990-2. Figures are whole numbers (percentages)

	1990	1991	1992*
Total implants	387 (100.0)	402 (100.0)	452 (100.0)
Single chamber	321 (83.0)	323 (80.3)	285 (63.1)
Dual chamber	66 (17.1)	79 (19.7)	167 (36.9)
Patients ≥ 75 years	220 (56.8)	264 (65.7)	313 (69.3)
Dual chamber systems in patients ≥ 75 years	14 (6.4)	22 (8.3)	41 (13.1)

*1992 Figures projected for whole year from those at 1 October 1992.

In Oxford, as in other British regional centres,¹ the use of dual chamber systems has been increasing, particularly since the British Pacing and Electrophysiology Group published its recommendations in 1991.² This increase has been reflected in older age groups, but we agree that complete adherence to the pacing and electrophysiology group's "optimal" recommendations would create a large increase in hardware costs, in operating time, and in the work of the regional centre in following up pacemaker patients. It is widely accepted that atrial demand or dual chamber pacing is superior to ventricular demand pacing.

The benefits result from increased cardiac output and rate responsiveness arising from synchronous atrioventricular contraction and P wave tracking, with a consequent reduction in the occurrence of the pacemaker syndrome.^{1,5} We do not know whether elderly patients (who make up over 60% of our patients) require the benefit of a dual chamber or rate responsive system. A tendency to a more sedentary lifestyle may reduce the benefit from physiological pacing. Conversely, the impaired responsiveness of cardiovascular reflexes and concurrence of other cardiac disease may make the symptomatic benefit of such a

system even more important in elderly people than in younger patients.

Pacemaker prescription should be based on a knowledge of which patients stand to benefit the most from a more complex pacing system, rather than on the age of the patient. The increased use of atrial pacing in appropriately selected patients with sinoatrial disease without atrioventricular block would increase the number of patients with a physiological pacing system without adding significantly to overall costs.

We need further research into the effects of dual chamber pacing in elderly patients and into factors which may identify a subgroup in all age groups who will benefit most from dual chamber pacing. Meanwhile, implanting even an "expensive" dual chamber system remains an extremely cost effective treatment in reducing morbidity and extending life expectancy. Furthermore, the morbidity and functional limitation arising from using an inappropriate pacing mode may be being underestimated.⁶ The hidden costs incurred as a result of this morbidity need to be taken into account when calculating the "savings" which could be made by minimising the numbers of complex pacing systems which are implanted.

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1 De Belder MA, Linker NJ, Jones S, Camm AJ, Ward DE. Cost implications of the British Pacing and Electrophysiology Group's recommendations for pacing. *BMJ* 1992;305:861-5. (10 October.)
2 Clarke M, Sutton R, Ward DE, Camm AJ, Rickards A, Ingram A, et al. Recommendations for pacemaker prescription for symptomatic bradycardia. Report of a working party of the British Pacing and Electrophysiology Group. *Br Heart J* 1991;66:185-91.
3 Ray SG, Griffith MJ, Jamieson S, Bexton RS, Gold RG. Impact of the recommendations of the British Pacing and Electrophysiology Group on pacemaker prescription and on the immediate costs of pacing in the Northern region. *Br Heart J* 1992;68:531-4.
4 Rediker DE, Eagle KA, Homma S, Gillam LD, Harthorne JW. Clinical and haemodynamic comparison of VVI versus DDD pacing in patients with DDD pacemakers. *Am J Cardiol* 1988;61:323-9.
5 Mitsuoka T, Kenny RA, Yeung TA, Chan SL, Perrins JE, Sutton R. Benefits of dual chamber pacing in sick sinus syndrome. *Br Heart J* 1988;60:338-47.
6 Sulke N, Dritsas A, Bostock J, Wells A, Morris R, Sowton E. "Subclinical" pacemaker syndrome: a randomised study of symptom free patients with ventricular demand (VVI) pacemaker upgraded to dual chamber devices. *Br Heart J* 1992;67:57-64.

EDITOR,—M A de Belder and colleagues project the costs of implementing the British Pacing and Electrophysiology Group's recommendations for pacemaker implantation.^{1,2} They suggest that full implementation would increase the cost of pacing by 54-75% and also estimate that if full implementation was restricted to patients under 75 the increased cost would be about 18%. Pacing practice at the University Hospital of Wales was audited in January 1991, and because of changes in our practice in patients under 70 we have been able to achieve 77% implementation of the group's recommendations at an increased cost of 23%.

Between 1 January and 31 December 1991, 296 patients received first implants (all changes of pacemaker boxes were excluded). They were aged 29-96 (mean 73); 219 were older than 70 and 157 were older than 75. The distribution of diagnostic

groups was similar to that in a typical pacing population (124 (42%) had atrioventricular block, 94 (32%) sinoatrial node disease, 36 (12%) atrial fibrillation plus atrioventricular block,¹² (4%) sinoatrial node disease plus atrioventricular block, and 30 (10%) other diagnoses).

Retrospective analysis of the last 50 consecutive implants before the audit showed that 23 (70%) of the 33 patients over 70 had received inappropriate pacing systems according to the British Pacing and Electrophysiology Group's recommendations and that only two (6%) had received an optimal system. Among the 15 patients under 70, 12 (80%) had received inappropriate units (predominantly single electrode ventricular (VVI) systems) while three (20%) had received either optimal or acceptable alternative units. Two of the patients could not be classified according to the British group's criteria and were therefore excluded. We concluded that increased compliance with the British Pacing and Electrophysiology Group's recommendations should be implemented but that the patient's age, lifestyle, and general fitness together with evidence of left ventricular dysfunction should also guide selection.

Audit of the new implants in the next six months showed a similar distribution of age and indications for pacing. Sixty four (68%) of the 94 patients over 70 received inappropriate units (all VVI systems), whereas only 12 (23%) of the 53 patients under 70 received inappropriate systems.

These changes in our pacing practice have increased our expenditure on hardware from £297 430 to £366 000, a rise of 23% a year. The costing figures used are similar to those given by Clarke *et al.* Thus our actual costings are similar to the projected figures put forward by the authors for increased implementation of the British Pacing and Electrophysiology Group's recommendations in the younger population. We agree that selection of a suitable pacing system entails assessing the patient's lifestyle and fitness as well as the indication for pacing. In many elderly patients we believe that VVI pacing is appropriate, beneficial, and cost effective and that more complex systems are unnecessary.

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- 2 Clarke M, Sutton R, Ward D, Camm AJ, Richards A, Ingram A, *et al.* Recommendation for pacemaker prescription for symptomatic bradycardia. Report of a working party of the British Pacing and Electrophysiology Group. *Br Heart J* 1991;66:185-91.

EDITOR,—We regret the paper by M A de Belder and colleagues on the cost implications of the British Pacing and Electrophysiology Group's recommendations for pacing in the United Kingdom,¹ especially as three of the authors were also authors of the pacing and electrophysiology group's prescription paper.² The pacing and electrophysiology group offered guidelines with a view to providing an impetus to improving pacemaker practice in Britain. These were not intended as rules. The principles were taken from published data over more than 10 years. The group felt compelled to make the offering because United Kingdom pacing practice was lagging so far behind many European and North American centres.³ The group was further encouraged in its efforts by requests from a large number of pacemaker centres to make professional recommendations in order to help them cope with some of the financial consequences of progressive change to more appropriate clinical practice.

It is clear from the report by de Belder *et al* that

their practice of pacing at St George's Hospital, London, in 1991 was a substantial departure from the recommendations of the British Pacing and Electrophysiology Group and unexpectedly different from that in other United Kingdom centres with an interest in cardiac arrhythmias and pacing. As a result it is not surprising that the financial consequences of following the guidelines seemed so great. De Belder *et al* used that financial deficit as a justification to reinterpret the clinical studies which were the sound basis for the pacing and electrophysiology group's recommendations. In particular, they raised the issue of clinical policy towards older patients and set an arbitrary age limit of 75 years. Many interventions in cardiology have not been exhaustively tested in elderly people. However, this is exceptionally not the case in cardiac pacing.^{4,5} Their approach is nothing less than agism, a philosophy which is least appropriate in cardiac pacing.

Since the pacing and electrophysiology group's prescription paper there has been a notable increase in the application of more advanced pacing systems as reported both in the British Pacing and Electrophysiology Group/Department of Health database and by manufacturers' sales data. Plainly, the clinical posture presented by de Belder *et al* is out of step with both the practice and aspiration of a growing number of committed centres in the United Kingdom. Budgetary control is essential and will inevitably entail compromise, but compromise must be made in the light of clinical evidence and not used to reject that evidence, an attitude suggested by de Belder *et al.* We concluded that their report could be damaging to the clinical practice of pacing in Britain, a consequence that apparently they have not acknowledged.

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- 1 De Belder MA, Linker NJ, Jones S, Camm AJ, Ward DE. Cost implications of the British Pacing and Electrophysiology Group's recommendations for pacing. *BMJ* 1992;305:861-5. (10 October.)
- 2 Clarke M, Sutton R, Ward D, Camm AJ, Rickards A, Ingram A, *et al.* Recommendations for pacemaker prescription for symptomatic bradycardia. Report of a working group of the British Pacing and Electrophysiology Group. *Br Heart J* 1991;66:185-91.
- 3 Parsonnet V, Bernstein D. The 1989 world survey of cardiac pacing. *PACE* 1991;14:2073-6.
- 4 Kruse I, Arman K, Conradsson TB, Ryden L. A comparison of the acute and long-term haemodynamic effects of ventricular inhibited and atrial synchronous ventricular inhibited pacing. *Circulation* 1982;65:846-55.
- 5 Perrins EJ, Morley CA, Chan SL, Sutton R. Randomised controlled trial of physiological and ventricular pacing. *Br Heart J* 1983;50:112-7.

AUTHORS' REPLY,—We think that your correspondents have misunderstood our paper. Our support of the recommendations of the British Pacing and Electrophysiology Group should not preclude a financial analysis of implementing them. As your correspondents point out, three of us helped draft the original recommendations, which are largely based on widely accepted principles rather than rigorous trial data, of which there are very few. We do not believe that our pacing practice is greatly different from that of other pacing and arrhythmia centres in the United Kingdom. Another leading national centre (Free-

man Hospital, Newcastle) has just published its cost analysis of the pacing and electrophysiology group's recommendations.¹ The demographic data and pattern of pacemaker usage were very similar to ours and the conclusions virtually identical with our own.

As part of our argument for cost containment we suggested that the pacing and electrophysiology group's recommendations should be applied to patients aged 75 or under. We deny your correspondents' accusation of "agism." We selected an arbitrary age limit, but in defence we assert that there are no data supporting the use of "complex" systems on prognostic or therapeutic grounds in people aged over 75. We think that older patients, as others, should be considered on merit—for example, presence of associated diseases, locomotor ability, etc. Interestingly, in the two references claimed by your correspondents to support the use of such systems in this age group^{2,3} only four of the total of only 29 patients were aged 75 or over. It is absurd to suggest that this small and unrepresentative sample constitutes evidence of "exhaustive testing."

Age limits are widely applied to other expensive cardiac interventions—for example, coronary interventions and implantable defibrillators. With regard to coronary artery surgery and angioplasty several recent publications have forced a change of attitude.^{4,5} No doubt when similar data are published in respect of cardiac pacing we will be able to change our approach. It behoves us to have regard for the financial restraints of our health care system. The potential savings made by implementing our proposed policy may help us offer a wide range of other proved treatments which should be part of a leading arrhythmia and pacing centre's therapeutic armamentarium—for example, coronary angioplasty, coronary artery and arrhythmia surgery, transplantation, implantable defibrillators, and radiofrequency ablation of arrhythmias. Furthermore, appropriate prescription of cheaper pacing systems to elderly or less deserving patients will allow the expanded use of more complex systems in other groups.

Two recent editorials discussing health care in elderly people emphasised the need for more research and recommended that future trials should include a higher proportion of elderly patients.^{6,7} We therefore stand by our assertion that more reliable information is needed to guide us in the optimal use of complex pacing systems, especially in the over 75 age group. This will enable us to further refine the basic proposals of the British Pacing and Electrophysiology Group. Passive acceptance of the status quo obstructs progress.

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- 2 Kruse I, Arman K, Conradsson TB, Ryden L. A comparison of the acute and long-term hemodynamic effects of ventricular inhibited and atrial synchronous ventricular inhibited pacing. *Circulation* 1982;65:846-55.
- 3 Perrins EJ, Morley CA, Chan SL, Sutton R. Randomised controlled trial of physiological and ventricular pacing. *Br Heart J* 1983;50:112-7.
- 4 Glower DD, Christopher TD, Milano CA, White WD, Smith RH, Sabiston DC. Performance and outcome after coronary artery bypass grafting in persons aged 83 to 90 years. *Am J Cardiol* 1992;70:567-71.
- 5 Thompson RC, Holmes DR, Gersh B, Mock MB, Bailey KR. Percutaneous transluminal coronary angioplasty in the elderly: early and long-term results. *J Am Coll Cardiol* 1991;17:1245-50.
- 6 Yusuf S, Furberg CD. Are we biased in our approach to treating elderly patients with heart disease? *Am J Cardiol* 1991;68:954-6.
- 7 Evans JG. Aging and rationing. *BMJ* 1991;303:869-70.