obtain health authority funding in the current financial year, charging the authority between £530 and £900 per cycle. One of the private units was negotiating to obtain health authority contracts for £1500 per cycle (excluding drugs).

Our NHS trust has elected to exclude in vitro fertilisation from block contracts, which are held with 50 or so districts, and it is encouraging that about half of those have so far agreed to pay for this treatment on an extracontractual referral basis, but with a wide variety of "rationing" conditions. The charge for a cycle of in vitro fertilisation, including drugs, is roughly £1200, and for tubal surgery as an extracontractual referral the charge is £2639 (but most districts have not excluded tubal surgery from their block contracts).

To help purchasing authorities make rational choices they need to be reminded of expected rates of successful pregnancy from these treatments and to be aware that tubal surgery produces extremely variable success rates (5%² to 36%³), depending on the severity of the tubal disease, age of the patient, and skill in the surgical technique. The table gives the comparative costs of the two treatments depending on the pregnancy rate.

Comparative costs per baby of in vitro fertilisation (IVF) and tubal surgery with different pregnancy rates

Procedure	Cost (£)	Live birth rate (%)	Cost per baby (£)
Tubal surgery	2639	30	8 790
Tubal surgery	2639	5	52 780
IVF, 4 cycles (including drugs)	4800	60 (cumulative)	8 000

Gynaecologists must be highly selective in their approach to tubal surgery if they are to ensure that resources which could be directed to assisted conception more effectively are not wasted on tubal surgery with a poor prognosis.

MARCUS SETCHELL
RICHARD HOWELL

IVF Unit,
St Bartholomew's Hospital,
London EC1A 7BE

- 1 Baird DT. Assisted conception on the NHS? *BMJ* 1992;305:204-5. (25 July.)
- 2 Watson AJS, Gupta JK, O'Donovan P, Dalton ME, Lilford RJ. The results of tubal surgery in the treatment of infertility in two non-specialist hospitals. *Br J Obstet Gynaecol* 1990;97:561-8.
- 3 Larsson B. Late results of salpingostomy combined with salpingolysis and ovariolysis by electromicrosurgery in 54 women. *Fertil Steril* 1982;37:156-60.

EDITOR,—David T Baird's editorial on assisted conception raises the issue of funding for comprehensive infertility services in the NHS.¹ As the director of one of the few NHS units in the United Kingdom, I agree that appropriate resources are urgently needed to support such activities. My experience since the changes in the NHS has been that the decisions relating to funding of assisted conception have now been placed in the hands of the district purchasers, who, unlike the suffering infertile couples, do not see infertility as a priority.

Purchasers are adopting various strategies: many are ignoring extracontractual requests; a few are acknowledging extracontractual requests but making no firm decisions; a minority are refusing outright; and an extreme minority are agreeing to a limited number each year (that is, rationing in their own district). Because purchasers are funding so few extracontractual requests despite the demand from patients (>250 on our waiting list) Guy's Hospital can no longer support a programme of assisted conception on the NHS. Other units associated with the NHS have survived and prospered by becoming private. Reluctantly, we may have to do this too.

The broader issue that needs to be addressed

publicly is that of rationing health services. Rationing has always occurred, but the purchaser-private split highlights the problem. Currently, a small group or perhaps only one public health doctor or manager is making decisions on behalf of infertile couples. Interestingly, we have noticed that the more supportive purchasers have been those with women participating in the decision. Such rationing behind closed doors is against the principle of patients having the power to choose and money following patients. Public debate on this is urgently required.

M G CHAPMAN

Division of Obstetrics and Gynaecology,
United Medical and Dental Schools of Guy's
and St Thomas's Hospitals,
London SE1 9RT

- 1 Baird DT. Assisted conception on the NHS? *BMJ* 1992;305:204-5. (25 July.)

EDITOR,—Trevor Sheldon and colleagues present surprisingly negative comments on the effectiveness of infertility treatment,¹ particularly in view of the encouraging messages fronting their review in the most recent issue of *Effective Health Care*.² They comment sweepingly about all infertility medicine, though it covers a wide range of distinct disorders, which need specific consideration. Proper balance is required.

A critical review of infertility treatment has been published elsewhere.³ Controlled studies have shown a lack of therapeutic effectiveness of, for example, hormones or surgical ablation in minor endometriosis and of hormones, artificial insemination, and (generally) microinjection techniques in sperm disorders. Randomised controlled studies are lacking in other conditions, but prospective time specific studies without treatment have shown severe subfertility associated with, for example, infective tubal damage, severe endometriosis, amenorrhoea, and prolonged unexplained infertility. In all those conditions natural conception rates are around 1% each cycle and amount to 10-30% over two years.

Prospective studies of treatments can therefore be reasonably judged by comparison with such well defined, severely reduced rates of natural conception. Furthermore, they can be assessed by comparison with expectations of normal fertile couples—that is, pregnancy rates averaging 20-25% each cycle and amounting to 90-95% after one to two years (or equivalent number of cycles of treatment).

It is now clear that hormonal treatment of amenorrhoea is fully effective; surgery of even the highest quality offers only moderate success in a select minority of cases of tubal damage; and in vitro fertilisation to bypass tubal damage offers success rates approaching normal, and the same is true of other assisted conception methods like gamete intrafallopian transfer, which can also be used in endometriosis and prolonged unexplained infertility.

Important differences between natural and assisted conception methods are that assisted conception risks multiple pregnancy—but that is now strictly limited in Britain—and do not involve the same time span. In general, assisted conception is undertaken at most every two cycles and often at longer intervals depending on resources (both NHS and personal).

The fact that such clinical treatments may be undertaken only infrequently, seemingly reducing their effectiveness in terms of time specific pregnancy rates, is not a real criticism of their effectiveness. It is reasonable personal and clinical philosophy for a couple to have in vitro fertilisation say two to four times in a year, which each time offers about a 25% chance of success compared with 3-4% by natural means during the intervals.

What is needed is a general raising of standards

of infertility practice to what is now undoubtedly achievable in all competent centres.

MICHAEL HULL

Bristol University,
Department of Obstetrics and Gynaecology,
St Michael's Hospital,
Bristol BS2 8EG

- 1 Sheldon TA, Song F, Freemantle N. Assisted conception on the NHS. *BMJ* 1992;305:521. (29 August.)
- 2 The management of subfertility. Leeds. School of Public Health, Leeds University, 1992. (*Effective Health Care* bulletin No 3.)
- 3 Hull MGR. Infertility treatment: relative effectiveness of conventional and assisted conception methods. *Hum Reprod* 1992;7:785-96.

Heterosexual AIDS epidemic

EDITOR,—Although the AIDS epidemic continues to grow and people are being infected worldwide, the medical literature trails behind. Almost half of the one million adults infected so far this year have been women. The gap in transmission rates in Britain and the rest of Europe between heterosexual and homosexual has narrowed. But information about the disease is still male dominated. At risk groups are still being highlighted, rather than high risk behaviour.

One general practitioner journal recently carried a whole symposium on HIV infection and AIDS and did not mention women once.¹ Another journal reviewed presentation and treatment of fungal infections in HIV without mentioning the vagina.² A recent atlas of AIDS showed out of 153 case presentations, only two presentations of women.³ The list is endless.

Unless we challenge this women will continue to be diagnosed later, be given second class treatment, and forgotten when it comes to work on prevention.

CHRIS FORD

London NW6 6RY

- 1 Symposium on HIV and AIDS. *Practitioner* 1991;235(May):409.
- 2 Mansfield S. How should fungal infections be treated in HIV patients. *MIMS Magazine* 1992 June 30:48.
- 3 Parkin JM, Peters BS. *Differential diagnosis in AIDS*. London: Wolfe, 1991.

Low serum cholesterol and violent death

EDITOR,—Gunnar Lindberg and colleagues found that in men low cholesterol concentrations were associated with a higher rate of suicide in the subsequent six years.¹ Similarly, when Muldoon *et al* reviewed six trials of lowering serum cholesterol concentration by drug or diet they found a significant increase in deaths due to suicides and violence.² It seems possible that if a low cholesterol concentration predisposes a few to the extreme act of suicide then others are likely to experience less severe depression. The questions posed by these data may well be best investigated by using a more subtle measure than the rate of suicide. We reanalysed data on serum cholesterol concentration and mental health in a group of subjects.

Serum cholesterol concentrations in 130 men and 155 women (mean age 20.5 years) who had fasted overnight were related to scores on the general health questionnaire, which is designed to screen for psychiatric problems. The average cholesterol concentration was 4.03 (SD 0.73) mmol/l in the men and 4.47 (0.99) mmol/l in the women. The sample was grouped in terms of cholesterol values, and the scores on the general health questionnaire were analysed with analysis of variance; the interaction of sex and cholesterol concentration was significant ($F_{2,268}=3.50$, $p<0.03$). The table shows that there was no general relation between cholesterol concentrations