efficiency the NHS achieves its main aims. I would read this type of report with considerable interest.

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SIR,—Dr Draper's comments will be welcomed by many NHS workers, not least by doctors and administrators. There is little evidence that the results of previous inquiries have been heeded, and it is difficult to see why a further study is deemed necessary. As the results, which will be produced in a mere three months, are to be kept secret we shall never know the answer, but no doubt the simple existence of an inquiry will be used to justify further "rationalisation". I hope that we will be spared further Ministerial references to high administrative costs in the NHS: as Dr Draper points out these are the lowest of any health care system in an industrialised country and compare favourably with those of private industry. Our productivity might increase spontaneously if administrators were allowed to carry out their proper functions instead of being diverted into producing alibis for Government policy.

Mr Griffiths is an expert in the retail industry, and no doubt one of his major concerns will be to look into the possible uses of the money to be made available by implementing recommendations in the Greenfield report on the generic substitution of unbranded drugs for those with brand names. Although only about £200 million a year might be saved by this measure, it might be possible to channel this money into one of the areas of inefficiency highlighted by the Black report (one of the more recent investigations to be ignored by the Government). Will priority be given to improving the accessibility of antenatal clinics for lower income groups; to a programme for the prevention of child accidents; to improving services for the elderly and disabled; or to a programme discouraging smoking?

Possibly the inquiry will help us to define how the services which are currently held to be more efficiently provided by private firms can be done equally efficiently within the NHS, so that the profit accruing to the entrepreneur can be utilised for patient care.

A free and open discussion of the objectives of the NHS and the ways in which these can be reached most effectively and economically would not only be welcome but should also form a permanent feature of management at all levels and involve both providers and consumers. Secret inquiries contribute nothing to this discussion, not even window dressing.

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MEDROXYPROGESTERONE IN IN-VITRO FERTILISATION

SIR,—Dr Barlow (Dec 18, p. 1408) has sounded a note of caution on the use of medroxyprogesterone acetate (MPA) in the luteal phase and first trimester of in vitro fertilisation (IVF) pregnancies. References were cited suggesting that genital tract abnormalities were likely and that long term behavioural effects might ensue. While aware of the possibility of such results from MPA treatment during embryo organogenesis, we also want to improve the pregnancy rate from IVF and diminish the high rate of fetal wastage in subfertile women who conceive after various therapies, IVF included.

Reports of high rates of spontaneous abortion in subfertile women who conceive after clomiphene[1] and gonadotropin drugs,[2] or on IVF,[3] and in those who conceive with antisperm antibodies and unexplained infertility[4] match our own experience. We have been evaluating the role of MPA in diminishing fetal wastage in selected subfertile patients and have now assessed 50 babies delivered after MPA exposure. These were 2 major abnormalities (4%) but there was an additional 4% incidence of glandular hypospadias. These were minor defects with the external urethral meatus close to the tip of the penis and 1 required surgical correction. In no case was female androgenisation noted.

We have continued with our plan to apply MPA randomly in the IVF programme in a controlled study with three separate groups to assess luteal phase support therapy. To date we have achieved 14 pregnancies by IVF and embryo transfer and over the past few months, since starting this study, pregnancy has been achieved for 20% of laparoscopies.

It is too soon to draw conclusions about the efficacy of MPA or other luteal support therapy for IVF, but our preliminary results on the use of MPA during early pregnancy suggest an improved outcome when this drug is used in selected high risk cases. Fetal wastage was reduced from 76% to 33% following treatment. We are currently examining the hypothesis that luteal dysfunction underlies both the subfertility and abortion problems.[5]

We remain convinced that the first in-vitro fertilisation pregnancy delivered in Western Australia[6] would have ended in abortion around 8 weeks' gestation had it not been for the use of MPA. However, we are reluctant to advise the general use of this agent for threatened abortions since it is likely that only that small group of patients who have luteal dysfunction will benefit from therapy. Furthermore, patients will need to consider the possibility of glandular hypospadias as a consequence of treatment. This needs to be weighed against the risk of losing the pregnancy (probably around 35%[7]). Whilst accepting that around 50% of spontaneous abortions in the general community have chromosomal defects,[8] we feel that at least 70% of our selected high risk subfertile women who abort will have a non-chromosomal cause for abortion. We do not recommend any therapy for patients whose fertility is normal. Further studies to define luteal dysfunction, to select patients who will benefit, and to explore alternative therapies will be done before MPA is added to the list of agents generally suitable for subfertile patients.

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EPOPROSTENOL AND SEVERE ARTERIAL DISEASE

SIR,—The report by Dr Belch and colleagues (Feb 12, p 315) on epoprostenol (prostacyclin) and severe arterial disease is the first study of epoprostenol to have clinical end-points and a controlled design. The major end-point was the subjective statement of pain and its consequence, analgesic consumption. Blindness is thus crucially important, but is difficult to achieve for prostaglandins because of their side-effects. "... facial flushing was noted in nearly all patients during epoprostenol infusion with mild headache in over half". The corresponding symptoms among the controls are not reported. There probably were none since these symptoms are thought to be induced by prostacyclin and not the buffer or infusion fluid. The assessing clinician who recognises such side-effects is no longer blind; nor is the patient who realises he is on an active treatment because he experiences side-effects. The problem could have been avoided by giving the vasodilator inositol niacinate to the controls;[1] it causes side-effects in controls similar to those experi-

1 Murray M, Osmond-Clarke F. Pregnancy results following treatment with Clomiphene citrate. *J Obstet Gynaecol Brit C'wealth* 1971; **78:** 1108–14.
2 Lunenfeld B, Insler V. Diagnosis and treatment of functional infertility. Berlin: Gross Verlag 1977; **1:** 82.
3 Trounsen A. Current perspectives of in-vitro fertilisation and embryo transfer. *Clin Reprod Fertil* 1982, **1:** 55–65.
4 Jones WR. Immunological aspects of infertility. In: Scott JS, Jones WR, eds. Immunology of human reproduction. London: Academic Press, 1976: 375.
5. Horta JLH, Fernandez JG, De Soto LB, Cortes-Galligos V. Direct evidence of luteal insufficiency in women with habitual abortion. *Obst Gynecol* 1977; **49:** 705–08.
6. Yovich J, Puzey A, De'Atta R, Roberts R, Reid S, Grauaug A. In-vitro fertilisation pregnancy with early progestagen support. *Lancet* 1982; ii: 378–79.
7. Jones GS. The luteal phase defect. *Fertil Steril* 1976; **27:** 351–56.
8. Boué J, Boué A, Lazar P. Retrospective and prospective epidemiological studies of 1500 karyotyped spontaneous abortions. *Teratology* 1975; **12:** 11–26.
1 Sakaguchi S, Kusaba A, Mishia Y, et al. A multi-clinic double blind study with PGE_1 (-cyclodextrin clathrate) in patients with ischemic ulcer of the extremities. *Vasa* 1978; **7:** 263–66.