one when she can legally terminate the entire pregnancy.¹ There are, however, grounds for caution if there is a lasting effect on the surviving twin.

Through the Lone Twin Network, the Multiple Births Foundation meets a large number of adults whose twin died at or before birth and who feel the loss profoundly. How far this self selected group is representative is not known. Research on the long term psychological sequelae, including their prevalence and relative seriousness, is therefore badly needed.

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Fifth of babies born after assisted conception have retinopathy of prematurity

EDITOR,—In vitro fertilisation and similar reproductive techniques are now capable of producing dangerously large numbers of fertilised human eggs, as shown by the woman who was expecting octuplets recently.¹ But are such women, and the doctors who look after them, fully aware of the dangers should these fetuses survive?

Recently, McKibbin and Dabbs published an important paper entitled "Assisted conception and retinopathy of prematurity."² Their conclusion was that "of the babies born after assisted conception treatment 20% fulfil the ROP [retinopathy of prematurity] screening criteria. ROP of any stage was present in 23% and this group also accounted for a large proportion of those reaching stage 3 disease and of those requiring treatment." What this means in simple language is that there is a high probability that such babies will be blind. I would ask such potential mothers: do they really want to bring eight blind babies into the world?

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Use of fertility treatments needs more careful oversight

EDITOR,—The occurrence of drug induced multiple ovulation followed by multiple pregnancy represents a failure of procedures designed to protect both individuals and society from the adverse effects of medicines.¹ The manufacture and quality control of the medicines themselves, in this case gonadotrophin products, have been statutorily regulated in the United Kingdom since the Medicines Act of 1968 and, more recently, under European Union legislation. The strength of each medicine is standardised against international standards prepared and distributed under the auspices of the World Health Organisation, which keeps up to date with changing technology.²

The pharmacodynamic effects of gonadotrophin treatment in individual cases need to be carefully monitored to ensure an appropriate response. One method of doing this, by use of plasma oestradiol assays, is also regulated in the United Kingdom through laboratory accreditation and the external quality assessment schemes for hormone assays.

The effects of ovarian stimulation have long been known.³ In 1927 "superovulation" was first described (in mice), and by the 1960s the requirement for careful monitoring of human gonadotrophin treatment had been established. Has not the time come when the use of these technologies needs more careful oversight, as is already the case for the pharmaceutical manufacturers and assay laboratories on which they depend?

Fertility treatment has profound personal, ethical, and social implications, as has been recognised in the work of the Human Fertilisation and Embryology Authority in the complex area of in vitro fertilisation and related techniques. It should not be difficult to extend this philosophy, principle, and practice to the use of fertility drugs in less complex, but still hazardous, treatments.

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Terminations of pregnancy, not unplanned deliveries, increased as result of pill scare

EDITOR,—In October 1995 the Committee on Safety of Medicines gave a warning about the risk of thromboembolism in women taking oral contraceptives containing gestodene or desogestrel.¹ James Owen Drife questions whether there was an increase in the number of terminations of pregnancy resulting from women abandoning the pill as a result of this warning.² He suggests, instead, that labour wards were stretched by an increased number of deliveries of subsequent unplanned pregnancies.

Last May we reported a 9.9% increase in terminations of pregnancy carried out in Oxford from November 1995 to March 1996, inclusive, compared with the same period in each of the previous two years. In response to direct questioning 8% of women requesting a termination of pregnancy reported that their failure of contraception was a consequence of their having stopped oral contraceptives containing gestodene and desogestrel.³

Table 1—Number of deliveries at John Radcliffe Hospital each month from April to August, 1994-6

	1994	1995	1996
April	571	570	502
May	558	583	542
June	581	612	559
July	536	562	576
August	576	537	505
Total	2822	2864	2684

Analysis of the activity of our delivery unit indicates that there were 5.6% fewer deliveries in Oxford between April 1996 and August 1996, inclusive, than in the same period in the previous two years (table 1). Most women who became pregnant as a result of stopping oral contraception because of the pill scare would have delivered during this period.

These figures do not support Drife's views or expectations; they suggest that the adverse effect of the pill scare was an increase in terminations of pregnancy but not in unplanned deliveries.

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Correcting outcome data for case mix in stroke medicine

Structure and process should be audited, rather than outcomes

EDITOR,—The method used by Richard J Davenport and colleagues to correct for differences in case mix before and after a stroke unit was set up could obscure genuine differences in outcomes due to changes in medical care.¹ A logistic regression model containing 19 prognostic variables, whose coefficients are derived from the study itself, is almost certain to overfit the data, so that some differences that are due to treatment may be spuriously "explained" by adjustment for case mix. The method may therefore be unfair to the "before and after" comparisons used in clinical audit studies.

Nevertheless, the paper contains a salutary warning about the dangers of non-randomised comparisons, particularly those that might be used to generate league tables of outcomes in different hospitals or units. The corrections for case mix used by the authors apply only to cases of stroke identified prospectively, which may differ considerably from those identified by the routine hospital coding system. We compared 340 cases of acute stroke (*International Classification of Diseases*, ninth revision, codes 431, 433-4, 436) identified from the hospital information system with those included on a prospective stroke register over 15 months in a teaching hospital in Liverpool. Of the 420 confirmed cases, 278 (66%) were on the hospital information system, but many patients with minor or non-paretic strokes (often misdiagnosed as transient ischaemic attacks) and some of those with rapidly fatal strokes were missed. Sixty two patients identified from the hospital information system had a false positive diagnosis of stroke; many of these patients had been admitted for other reasons, having had strokes previously. Thus the overall case mix was quite different from that reported by the authors.

Even when cases are identified prospectively, comparisons between different units can be hazardous. Not only would few hospitals be able to collect the detailed information on case mix used in Davenport and colleagues' study, but much of it is subject to wide interobserver variability.^{2 3} For instance, in multicentre comparative studies for the European stroke database project we have found large differences in the proportion of total anterior circulation strokes, which have mostly been due to differences in doctors' willingness to assess key signs (such as visual fields) in drowsy or dysphasic patients.⁴

Because of these difficulties it is unlikely that valid purchasing decisions can be based on such comparisons among units in the foreseeable future. Randomised controlled trials are needed