Editorial

Report of the MRC Working Party on Children Conceived by In Vitro Fertilisation

The recent passage through the British Parliament (with a large majority) of the Embryo Research Bill, allowing strictly controlled research up to 14 days and including the reduction to 24 weeks (not 18 weeks as was feared) of the age of assumed fetal viability, mirrors general interest and support for embryo research, prenatal diagnosis, and assisted reproduction. As a result there is now much greater likelihood of rapid advances in preimplantation diagnosis and, more fundamentally, insights into early embryogenesis and the origins and prevention of malformations.

The recent report by a Medical Research Council working party on a register of assisted conceptions¹ is therefore particularly valuable because it addresses the important issue of the health of the resulting children. Up to the end of 1987, there were 1267 deliveries in 13 centres, representing the majority of such births to residents of England, Wales, and Scotland. There were 1180 deliveries resulting from in vitro fertilisation (IVF) conceptions and 87 from gamete intrafallopian transfer (GIFT) conceptions. There were 1581 live or stillborn children with a normal sex ratio of male to females of 1.07:1.

Of the 1267 women reported to have delivered before 1987, 1092 (86%) agreed to participate in the register. The remaining 14% could not be contacted because they had emigrated, had refused to participate, or had specifically requested that their identity remain confidential. Among the 14% deliveries not included there was a disproportionate number of perinatal deaths or malformations, a fact determined by anonymous statistical summaries provided by the clinics.

The most striking finding was the great excess of multiple births, which made up 23% of deliveries

compared with national data showing only 1% among pregnancies conceived naturally. One quarter of the deliveries were preterm (compared with 6% in all births in England and Wales), and 32% of the children were of low birth weight (7% in England and Wales). The increased risk of both conditions was largely, but not entirely, the result of the high frequency of multiple births, as were the higher than normal rates for prematurity and the twice normal infant mortality rates among assisted conceptions.

However, the congenital malformations rate at 2.2% did not appear to be raised, although the report notes the need for continuing monitoring of children resulting from assisted conception before firm conclusions can be drawn about their risk of congenital malformations or about their long term health. At least 10 000 births would be required to provide the necessary statistical power to detect deviations from the norm for many conditions of interest. Details were also given of complications during pregnancy and delivery and of the characteristics of the parents (who are not typical, being infertile, older, and presumably wealthier than the average).

The report did not discuss the economic or ethical implications of assisted conception although there is no doubt that the opportunity costs of in vitro fertilisation are high, while preterm and low birth weight children increase perinatal and infant mortality rates and throw an added burden on neonatal intensive care units. However, assisted conception has undoubtedly brought enormous benefit to some infertile couples and, of great potential importance, has provided the opportunity for human embryo research and perhaps the prevention of many currently

common genetic disorders and birth defects. The continuing careful scrutiny of all relevant ethical issues has, in the UK, done much to gain acceptance for this research and for the clinical use of assisted conception, in spite of the high clinical and monetary costs. Clearly this work must go on and we are grateful to the working party, and to Dr Valerie Beral in particular, for the continuing registration and reporting of the health of the resulting children.

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1 MRC Working Party on Children Conceived by In Vitro Fertilisation. Births in Great Britain resulting from assisted conception, 1978–87. *Br Med J* 1990;**300**:1229–33.