

# REVIEW ARTICLE

## The fifth freedom revisited: II, the way forward

MALCOLM POTTS ALLAN ROSENFELD

In the first part of this review (Nov 17, p 1227) we discussed how the provision of family planning services has changed in the 25 years since the late Sir Dugald Baird introduced his concept of a fifth freedom. To conclude the review we look to the future of global population control.

### Future policies

We suggest that a realistic goal for the 1990s is to ensure universal access to family planning by the year 2000, with the specific target of doubling the number of contraceptive users world wide over the decade. We believe the goal of doubling contraceptive use in the 1990s is achievable, but only if certain key policies are implemented.

#### The next 10 years

- ★ Number of women of fertile age in developing countries will increase by about 30% by the year 2000.
- ★ Total number of contraceptive users in the Third World (excluding China) in 1988 was about 190 million.<sup>1</sup>
- ★ To account for the rising number of fertile couples and achieve contraceptive prevalences consistent with the medium UN population projection (6.25 billion in the year 2000), 130 million more users must be recruited in the decade.
- ★ If services can be provided to 185 million new users, global population will hit the low population projection (6.09 billion in the year 2000).
- ★ There is sufficient unmet demand to reach the low level.
- ★ Difference between medium and low UN population projections is equivalent to the population of another Pakistan.
- ★ If the high abortion rates in eastern Europe and the Soviet Union are to be lowered, there must also be a huge increase in contraceptive use in these countries.

observe the UNICEF/WHO code on the advertising, marketing, and use of infant formulas. If all pregnancies could be spaced 2 years or more apart, an analysis of 29 developing countries suggests that 500 000 more infants would survive each year.<sup>2</sup> Breakthrough ovulation is not uncommon once feeding supplements are added at 6 months or earlier, so contraceptive practice should be introduced at that point.<sup>3</sup>

### Contraceptives

An adequate and continuous supply of contraceptives must be maintained. As programmes succeed, more and more resources will need to go into supplies.<sup>4</sup> Oral contraceptive and condom manufacture are capital intensive industries that employ few people; only where there are exceptionally large markets, as in Indonesia, are costs per unit of output low enough to justify local production. Prices have stayed below inflation or have fallen over the past 10–15 years and we believe the industry will continue to respond to increasing demand. But who is going to pay for the contraceptives, wherever they are made? As societies get richer, more people will be able to afford the full cost of their contraceptives, but tens of millions of users will continue to need subsidies. National governments and international donors should make it a policy to include contraceptives as an integral part of all family planning assistance.

Several new methods of contraception are under development. Those based on long-acting steroids, such as vaginal rings and subdermal implants, will have very low failure rates but up-front costs will be greater than for existing methods.

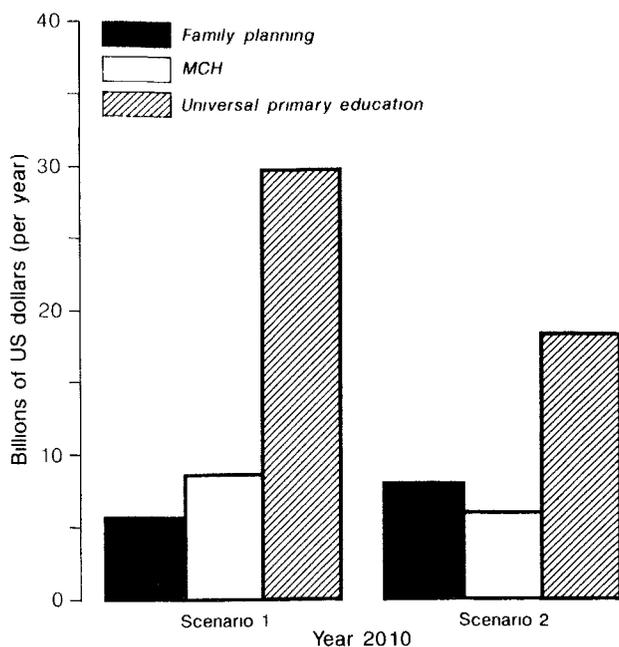
### Abortion

If more funds were available to expand counselling services and increase the use of newer, more effective methods such as subdermal implants, abortion rates could be lowered. Thus, all those who are disturbed by the tens of millions of abortions that take place each year must work together to help bring about a significant reduction in that

### Breastfeeding

Traditional patterns of breastfeeding must be encouraged, to the extent they are compatible with advancing the status of women. Manufacturers must

ADDRESSES. **Family Health International, North Carolina, USA** (M Potts, MB, PhD); and the **Columbia School of Public Health, New York, USA** (Prof A Rosenfield, MD) Correspondence to Dr M. Potts, Family Health International, PO Box 13950, Research Triangle Park, North Carolina 27709, USA.



**Fig 1—Cost of family planning, maternal and child health (MCH), and education (lesser developed countries, including China, 1990–2010).**

An increased investment in family planning from less than \$4 billion today to \$8.1 billion in the year 2010 (scenario 2) will release more resources for MCH and education than a lower investment (\$7 billion extrapolated from recent experience) in family planning in the same year (scenario 1). Family planning costs include the money individuals as well as governments pay. Data from Research Triangle Institute, N Carolina, USA

number by advocating a considerable increase in investment in family planning services and in support for contraceptive research. Without such a change, it is possible that more legal and illegal abortions will be induced in the 1990s than in any previous decade. Whatever happens with funding, universal access to safe abortion could undoubtedly save the lives of a million or more women in the 1990s.

#### *Voluntary surgical contraception*

VSC becomes more common as family planning programmes mature. If, as Sir Dugald Baird saw, VSC is essential to controlling family size in the West, then it is cruel in the extreme to expect a poor country with a low age of marriage and much illiteracy to limit fertility without easy access to such services. European and Japanese donors should explicitly support VSC in the same way as USAID has done for some time.

#### *Management*

Scarce resources must be allocated to effective programmes; the leverage of funding support should be used to help improve or eliminate inefficient ones. Centralised health systems have often failed to meet the needs of people for pills, condoms, and surgical contraception in developing countries. Family planning programmes need to be reviewed and, if appropriate, resources transferred from the public sector to non-profit and private sectors. An intergovernmental meeting on Population in the Twenty-First Century concluded "A partnership involving NGOs, governmental and international organisations [is] strongly recommended".<sup>5</sup> The Indonesian government is beginning to rely more on private sector resources and India has engaged an established Indian non-governmental organisation (NGO) to manage the social marketing programme in four states. The highly successful Colombian programme has been implemented by Profamilia, the IPPF affiliate. Similar large scale cost-effective social marketing

programmes, along with expanded VSC services, will have to be established in a great many countries in the 1990s.

#### *Resources*

If contraceptive use is to double in developing countries in the 1990s resources also will have to double. However, if an additional aim is to improve the quality of services and to lower abortion rates significantly, it might be realistic to quadruple resources by the year 2000. Surely population growth warrants far more than 1% of the international and budget development? Many of the extra funds could come from a redistribution of assistance within existing development budgets, and cost-sharing will become increasingly important as the economic status of some countries improves. Nevertheless, unthinking pressures for self-sufficiency must be resisted.

In the USA, it is estimated that \$1 spent on publicly funded family planning services will save an average of \$4.40 on short-term expenditure on medical services.<sup>6</sup> Immediate investment in international family planning will lead to short-term reductions in the strains placed on maternal and child health services and, after about 5 years, in lower demand on education budgets (fig 1). All aspects of development will eventually benefit from reduced fertility.

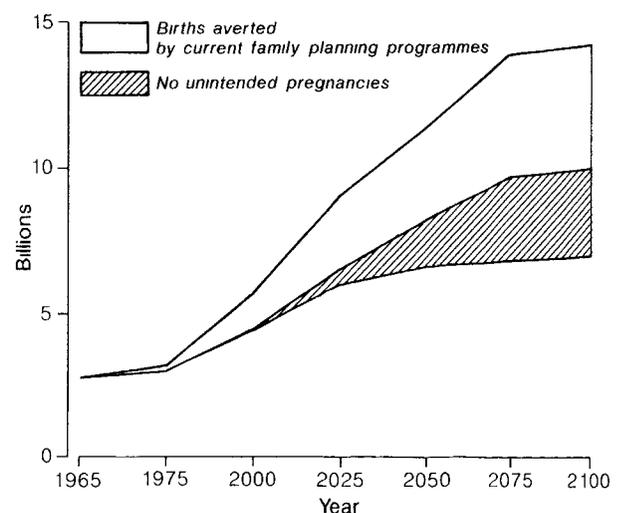
#### *AIDS and family planning*

Social marketing of condoms may be one of the few ways of slowing the spread of human immunodeficiency virus (HIV) once it moves outside high-risk groups into the general population. If no vaccine is developed and sexual behaviour does not change substantially, and if the spread of HIV continues at its present rate, then at least one prediction is that AIDS deaths would reverse the rapid rate of population growth in sub-Saharan Africa by the year 2020.<sup>7</sup> This devastating epidemic, however, is still at the early stage of its spread and, as yet, has had little demographic impact.

(a) Each year in the 1990s more women are likely to die from unhygienic abortions than died as a result of AIDS throughout the decade of the 1980s.

(b) The upwardly revised projection of AIDS deaths for men, women, and children in the 1990s is equivalent to only 1 month's global population growth spread over the decade.

(c) At least until the end of the century, developing countries will probably be best placed to deal with this



**Fig 2—Population projections 1965–2100 (lesser developed countries only).**

Taken from Merrick TW. US population assistance: a continued priority for the 1990s? Washington, DC: Population Reference Bureau, April, 1990

epidemic if they experience some increase in per caput income which, in turn, will be greatly influenced by slowing of the rate of population growth.<sup>7</sup>

### Conclusions

Rapid population growth is no longer a problem looking for a solution; it is a solution looking for resources. Nearly all the work to be done in the 1990s will depend on contraceptive methods and channels of distribution that are already in use and well understood.

Sir Dugald Baird's achievement was apparent in the Scottish city of Aberdeen, where he showed that when family planning services were improved and access to surgical contraception and abortion were added, people of all social and economic groups both wanted and could achieve similar family size. Baird's genius was to extrapolate this model to a world level; the past two decades have shown that access to realistic family planning services can also help close the gap in fertility between rich and poor countries. 50–80% of women in developing countries now want to space or limit future childbearing.<sup>8</sup>

The world has a choice. People want to restrict family size and, by making realistic and accessible family planning services universally available, we can probably achieve a stable global population of about twice our present numbers. If we achieve Baird's vision and try to eliminate unintended pregnancies, global population could stabilise at under 8 billion (fig 2). To do this we would have to include

virtually universal access to safe, cheap abortion as well as to contraception and VSC. If we continue to give family planning low priority, global population could drift upwards towards 15 billion before it stabilises. The health and progress of hundreds of millions of people will be influenced by how we respond to this choice. How we answer the challenge of global family planning will also help decide whether we achieve an ecologically sustainable global economy. That, in turn, may well determine the future of our species on this planet.

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## CLINICAL PRACTICE

### Acute hypervolaemic haemodilution to avoid blood transfusion during major surgery

A. TROUWBORST E. C. S. M. VAN WOERKENS M. VAN DAELE  
R. TENBRINCK

**16 patients underwent acute hypervolaemic haemodilution with dextran 40 and Ringers lactate, to see whether this procedure could avoid preoperative blood transfusion. Packed cell volume (PCV) and oxygen extraction decreased, and cardiac index and pulmonary wedge pressure increased, although end-systolic area was unchanged. PCV was not significantly different between patients who lost less than or greater than 20% of their initial blood volume. This preoperative manoeuvre, which reduces loss of red blood cells, allowed major surgery to be completed safely without blood transfusion.**

*Lancet* 1990; **336**: 1295–97.

#### Introduction

The risk of alloimmunisation and transmission of viral infection from homologous blood transfusion is well known. In addition, it is suggested that transfusion may promote tumour growth.<sup>1</sup> Some patients may refuse blood transfusions on religious grounds.<sup>2</sup> Transfusion with donor

blood may be diminished by predeposited autologous blood,<sup>3</sup> intraoperative autotransfusion with a cell-saver,<sup>4</sup> and haemodilution techniques. With haemodilution, fewer red cells are lost because of the non-linear decrease in packed cell volume after the procedure.<sup>5</sup> Preoperative acute haemodilution can be achieved in two ways. First, by withdrawal of blood and simultaneous infusion of plasma substitutes (normovolaemic haemodilution).<sup>6</sup> Second, by rapid infusion of fluid without blood withdrawal (hypervolaemic haemodilution). We have evaluated the effects of hypervolaemic haemodilution on haemodynamics, left ventricular size, systemic oxygenation, and packed cell volume to establish whether this technique avoids blood transfusion preoperatively.

ADDRESSES: Departments of Anaesthesiology (A Trouwborst, MD, E. C. S. M. van Woerkens, MD, R. Tenbrinck, MD), and Cardiology (M. van Daele, MD), University Hospital Dijkzigt, Erasmus University, Rotterdam, the Netherlands. Correspondence to Dr A Trouwborst, Department of Anaesthesiology, Erasmus University, Dr Molewaterplein 40, 3015 GD Rotterdam, the Netherlands.