as a mild diuretic and therefore, theoretically, would lead to a further increase in blood viscosity.[5]

A search of the literature revealed very little in this field except for the peripheral issue of menstrual function in women athletes.[6] This study which looked at athletes and non-athletes showed that a higher proportion of menstrual disturbance in the athletes was associated with low body-weight, distance events, vegetarian diet and a high altitude environment.

These factors should be brought to the attention of the women who wish to climb, trek and walk at high altitude in the mountainous areas of the world, to their leaders and medical advisers.

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*References*
1 Darwood R, ed. *Traveller's health: how to stay healthy abroad.* Oxford: Oxford University Press, 1986.
2 Illingworth R. *Expedition medicine: a planning guide.* Oxford: Blackwell Scientific Publication Limited, 1984.
3 Juel-Jensen B, ed. *Expedition medicine.* London: Royal Geographical Society, Expedition Advisory Centre, 1986.
4 The effects of oral contraception on a person living at high altitude. Personal communication from Dr Mary Ward, NAFPD Clinical Scientific Advisory Committee.
5 Acetozolamide prophylaxis for acute mountain sickness. In: Herxheimer A, ed. *Drugs and Therapeutics Bulletin,* vol. 25, no. 12, pp. 45–7. London: Consumers' Association, 1987.
6 Carlberg K A, Buckman M T, Peake G T, Riedesel M L. A survey of menstrual function in athletes. *Eur J Physiol Occup Physiol* 1983; **51/2:** 211–22.

# True story: The Liverpool project to reduce teenage pregnancy

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## Introduction

In 1982 the contraception group of the Health Education Council (HEC) decided to invite the department of community health at the University of Liverpool to develop a pilot project aimed at reducing the incidence of teenage pregnancy and sexually transmitted disease within the district. Four years later, after extensive development work and systematic consultation with community and professional leaders, the proposal which had been developed was turned down by the Council. The true story of this affair throws light on the double standards of government and its unwillingness to address a major public health issue with objectivity and commitment.

## Background

In 1986 the Guttmacher Institute published a major international study of teenage pregnancy in 37 developed countries.[1] The study was carried out in two stages: the first was a statistical comparison of teenage sexual behaviour and pregnancy in 37 countries, the second an in-depth examination of the situation in the United States and five approximately comparable countries—Sweden, France, the Netherlands, England and Wales, and Canada. An enormous range in annual teenage pregnancy rates was identified from 14 per 1000 15–19 year olds in the Netherlands to 96 per 1000 in the United States (Sweden 35, France 43, Canada 44, England and Wales 45). The reasons for the differences could not be accounted for by differences in sexual activity between the teenagers of different countries, nor by greater recourse to abortion. Rather it seems that teenagers in different countries vary in the effectiveness with which they use contraception.

The Guttmacher researchers concluded that the antecedents of this effectiveness seem to concern variations in the degree of openness about sexuality in different countries, the nature and extent of sex education being provided to young people and the accessibility of counselling and contraceptive advice. These findings have clear implications for policies designed to reduce teenage pregnancy rates and the associated high incidence of sexually transmitted disease.

The contraception advisory group of the HEC anticipated the Guttmacher findings when in 1982 it identified the reduction of unintended teenage pregnancy and infection by sexually transmitted disease as a priority. The group

considered the task of achieving such a reduction as lying firmly in the area of their programme on 'Health in Human Relationships' where it was felt that the emphasis should be on providing support for the development of good health and responsibility within sexual relationships.[2]

The focus on health in the context of human relationships and in particular on achieving a reduction in rates for unintended teenage pregnancy and sexually transmitted infection should be seen in the context of the World Health Organisation (WHO) strategy of *Health for All by the Year 2000* (HFA 2000). According to this strategy the task is to ensure that by the year 2000 all people should have at least such a level of health that they are capable of working productively and of participating actively in the social life of the community in which they live.[3] The development of primary health care is seen as being the key to the attainment of the goal of HFA 2000 and it is recognised that the strategy also depends on the development of real public participation and working together between different sectors (governmental and non-governmental including voluntary bodies).[4]

**Trends in the sexual health of young people**

Over the past 100–150 years there have been changes in the physical and social aspects of adolescence.[5] The age of onset of sexual maturation has been decreasing, growth and physical development are proceeding at an accelerated pace and until recently there has been a trend towards greater ultimate adult size; however, in most countries there continue to be marked social class differences in the height and weight of school leavers.[6] The age of menarche in Europe has become earlier by two to three months per decade and there is a similar trend in the USA. Better nutrition and improved social and economic conditions are important underlying factors supporting this process.

More recently, in parallel with the continuing changes in growth and development, there have been changes in the social culture and lifestyle of young people especially in developed countries. In the 1950s and 60s the 'teenager' was discovered as part of the post-war 'bulge' generation. Labour was in short supply, teenagers enjoyed full employment and became a ready focus for commercial exploitation.[7] Their economic independence led to social and sexual independence, a development which was assisted by the introduction of effective contraception in the form of the contraceptive pill. Bury has categorised six specific reasons related to the trends in teenage sexual behaviour:[8]

1 Changes in attitudes
2 Changes in parental behaviour
3 Rising incidence of marital dissolution
4 Lessening influence of religion
5 Influence of the media and of advertising
6 Peer group pressure.

It also seems that the source of young people's information about sex is important and that the more open and informative parents are about sex, the less likely teenagers are to experience early intercourse.[9]

Although the increased availability of health education, contraception and abortion services during the 1970s and changes in the attitudes of the public at large and of health professionals have generally led to decreases in the numbers of live births and unintended pregnancies, the position of unmarried teenagers remains a cause for concern.[10] When teenagers become sexually active they are initially slow to use contraception and therefore continue to have an increased risk (compared with older women) of unplanned and unwanted pregnancy.[11] Teenagers, however, are less likely to become pregnant and less likely to become mothers than they were in the early 1970s.[1,12,13] During the 1970s the teenage pregnancy rate in England and Wales fell from 63.1 pregnancies per 1000 15–19 year olds in 1971 to 44.1 pregnancies per 1000 in 1981.[1,8] An increasing proportion of these residual pregnancies now result in induced abortion and this is worrying for a number of reasons. Quite apart from the absolute moral opposition to abortion which some people feel, there is reason for public health concern about the increased risks faced by some teenagers undergoing abortion as a result of the delays which they experience prior to obtaining their operations.[14–16] These delays result in teenagers having later operations than older women; such later operations carry an increased risk of emotional and physical consequences including impairment of the future fertility.[12]

The decrease in teenage pregnancy rates seems to have occurred during a period when, if anything, teenagers have become more, not less, sexually active. Farrell's 1970s' study in England found that by the age of 19, approximately half

of single women and two-thirds of single men had had sexual intercourse, a pattern which with minor differences seems to apply to similar developed countries.[1,18]

In parallel with the recurrent concern about the incidence and consequences of teenage pregnancy there is a concern about the effects of teenage sexual behaviour on (a) the incidence and effects of sexually transmitted diseases which are most common in the late teens and early twenties, (b) emotional and psychological development and (c) for young teenagers, the risk of developing cervical cancer in later life.[2] The appearance of AIDS has added to these concerns.

**A community approach to positive sexual health, the prevention of unwanted teenage pregnancy and infection by sexually transmitted disease—the Swedish experience.**

There has undoubtedly been a large extension of health education in recent years. It is, however, likely that such education is only able to make its full contribution to the reduction of teenage pregnancy and sexually transmitted disease when it is part of an integrated, community based programme and supported by public policies which set out to influence the entire health field in relation to sexual attitudes and the expression of human sexuality.[19]

Such a programme, which has addressed itself to the prevailing spiritual, public, parental and professional dimensions and to the provision of services as well as education, has been developed and implemented by more than half the Swedish counties.[20,21] In Sweden there is now 15 years of experience of systematic effort to respond to the needs of young people not only for sex education and contraception but also for caring support and positive acceptance during their first adult relationship.

As expressed by Professor Carl Gustav Boethius 'when teenagers are blamed for going steady, they become desperate; when they have the experience of being accepted—when they feel that parents and teachers look with sympathy and joy at them and their boyfriend or girlfriend then they have the spontaneous feeling, "we must take care of this. We must live up to the confidence they have in us. We would even like to discuss the situation with them and maybe even take advice from them." '[22] Underlying such a view is an acceptance both of sexuality as a positive force in relationships and of the fact that our children are indeed only lent to us for a short time.

The model which has been developed in Sweden is based on a commitment to 'breaking down the conspiracy of silence between the generations' and is aimed at creating community-wide initiatives, which move and spread 'like rings on the water'. The general approach is through intensive residential workshops for key opinion-formers, decision-makers, role models, teachers, other professionals and counsellors of young people. The agenda for these workshops includes factual information about human biology, personal relationships and the family, pornography, prostitution and venereal (sexually transmitted) disease. The methods used include lectures, role-play, discussions, group work, theatre and film. The intention is to provide a non-threatening learning and working environment where attitudes may be explained, ignorance and common ground sought. Of particular value as a resource material has been a short, written history of four generations in a farming community on the Baltic island of Gotland recorded by the district nurse and midwife from her personal experience.[21] This simple account of how family life has changed within recent memory strikes a chord with workshop participants who can recognise that not all in the good old days was necessarily good and not all in modern times is bad; it seems to facilitate the creative process in a remarkable way.

Workshops like these are held throughout a county and involve people at the town and school level. As a consequence, several hundred people become in effect resource persons for programme initiatives such as group discussions in school; or the visits of teenagers to community clinics to familiarise themselves with the services which are available and provide the opportunity for seminars aimed at raising sensitivity to the need for contraception to be considered as a joint responsibility within a relationship.

This mainstream work is reinforced by events such as festivals and mobile services; the work is carried out with the active collaboration of the media from the beginning. In the Gotenborg programme, after two years of work, a one week film festival was held in which a constantly changing programme of films about love and sex, romance and pornography provided the stimulus for a city-wide debate about the nature of sexuality and the appropriate community

response to it.

With the focus very much on relationships and 'living together' rather than on the mechanics of sex and contraception, the Swedish initiatives can be judged to have met with considerable success. Not only has there been a 40 per cent reduction in Swedish teenage conception rates but this has been accompanied by falls in sexually transmitted disease, and in claims that there have also been falls in drug abuse and delinquency.[23]

The experience of trying to reproduce the Swedish model in the United Kingdom has not been so fortunate.

**The Liverpool project—a true story**

The total population of Liverpool Health District was 519,000 in 1981. This population has a very heterogenous complexion with strong historical links to Ireland and the influence of the Roman Catholic church is still strong within the city. As a whole, the Merseyside conurbation has, however, one of the highest teenage pregnancy and abortion rates in the country and the highest illegitimacy rate along with Greater London.[24,25]

The setting for this unsatisfactory situation in the early 1980s was one in which, although there was an extensive network of health authority family planning clinics, there was no special provision of youth advisory services other than a limited service provided by the Brook Advisory Centre, a voluntary organisation.[2] Provision for specialised clinics for young people was strongly recommended in a Department of Health memorandum on Family Planning Services which proposed 'separate, less formal arrangements for young people. The staff should be experienced in dealing with young people and their problems'.[26,27]

Following the invitation from the HEC to Liverpool University's Department of Community Health at the beginning of 1983, a process was set in train to develop a community based model of good practice which took account of Swedish experience.[21,28]

The attempts to develop a demonstration project which would be acceptable both to the HEC and to the relevant departments of central government have to be seen against the background of continuing controversy generated by legislation on abortion and the focus on prescribing of oral contraceptives to girls under the age of 16. This focus developed in particular as a result of the test case brought by Mrs Victoria Gillick to the House of Lords in 1984–5 in which she sought to prevent the offering of contraceptive advice to any of her own daughters.[29] On the one hand genuine concern over teenage pregnancy and sexually transmitted disease has led to a desire for some initiative aimed at reducing their incidence, while on the other there is anxiety by some that any efforts in this area will be construed as an encouragement to the undermining of supposed traditional moral values and will lead to irresponsible sexual behaviour.

In initiating a process of consultation in Liverpool to establish a model of good practice, an understanding of the potential pitfalls was central to the consultation strategy adopted. It was felt to be essential from the outset to establish a relationship based on trust between key community representatives, decision-makers and professionals which would provide a basis for people with widely varying beliefs to cooperate for the common good.

The most important initial work included the development of a structured process of consultation to establish prevailing attitudes among these key community representatives, to establish whether there was support for a project and if so what the contraints and facilitating factors would be. A wide network of contacts and people committed to some kind of intervention was identified including:

1 Young people, self-help and women's groups, and groups with special concerns such as homosexuals.
2 Representatives of ethnic minorities.
3 Religious bodies (Church of England, Roman Catholic church and the Jewish synagogue).
4 Specific services for young people (counselling and guidance clinics, both statutory and voluntary).
5 Youth and community workers.
6 Social services for young people including specialist services, child care, fostering and intermediate treatment.
7 Education (teachers, advisers, school inspectors, parent support and teacher-trainers).
8 Medical and nursing personnel including those from obstetrics, genitourinary medicine, paediatrics, community medicine, general practice and family planning.

In all about 50 people became involved and provided the basis for a three-day residential workshop conducted along lines developed by the Swedish Board of Health. The workshop was led by the British Family Planning Association Training Unit with additional input from Swedish and Chinese resource people.

The workshop consisted of small and large group sessions with the following objectives:

1 To make explicit the values of participants.
2 To match up these values against participants' perceptions of the needs of young people.
3 To identify whether or not there would be general support for a demonstration project and to clarify the possible nature of such a project.
4 To identify those factors which might facilitate or hinder the success of such a project.

Detailed analysis of the feedback from workshop participants identified three essential sub-programmes of a demonstration project.

1 Education and training for interpersonal relationships probably on the Swedish model.
2 Socio-health services for young people.
3 Information and media resources.

In addition the research which would be needed in support of a project was explored. Subsequently, specific recommendations for the sub-programmes were developed taking account of the special position taken in relation to the proposed project by the Roman Catholic archdiocese.

An important outcome of the workshop had been a statement by the representatives of the Catholic church which identified areas of common concern and agreement. This included the willingness of the archdiocese to cooperate in working to enhance and deepen personal relationships among teenagers and a statement supporting a programme of sex education in Liverpool schools. There was agreement about the desire to work against the exploitation of sexuality in the media and in advertising; to reduce the number of induced abortions among teenagers; and to eradicate sexually transmitted disease. Differences between people on these issues concerned means rather than ends and the archdiocese delegates stressed the importance of considering the Roman Catholic response in the context of the beliefs and teachings of the Catholic community.

In addition to the residential workshop, the process of consultation included a subsequent feedback meeting with workshop delegates; a dialogue with concerned lay members of the Catholic church held at the Upholland Training College in Lancashire; and a meeting between the HEC members and many of those who had become involved in the project proposal in Liverpool. Despite all of this work and the production of many drafts of the proposal incorporating suggestions from the DHSS, the DES and the HEC, the proposal was finally rejected by the HEC in January 1986 after three years' work, the expenditure of a considerable amount of money and the goodwill of a community of half a million people.

**Retrospective**

From the very beginning of the process of producing a project proposal it was apparent that there would be difficulties in having it accepted—this despite it having been actually commissioned by the HEC itself! No clear reasons were given for rejection of the project proposal which had been developed throughout in close consultation with the HEC in keeping with stated HEC policy.

The climate which included the Gillick affair was also one in which attempts were being made to restrict sex education in schools; Family Planning Information Service literature which included a diagram of an erect penis had to be destroyed; and there was generally a concerted effort to impose a particular view of morality on the nation's teenagers.

In the discussions with the sexual responsibility and health steering group of the HEC, representatives from the DHSS and DES repeatedly advised on the necessity to spell out strict moral messages which would be incorporated in any programme. This was despite the clear view from religious leaders in Liverpool that they regarded that task as being their responsibility. Perhaps most offensive of all to the local community and those representing it was the clear and repeated assertion that Liverpool was not the right place for an intervention of this kind because of the high proportion of Roman Catholics in the population. Underlying this was an apparent

adherence to a racist view of Liverpool people or at least a 'Bermuda triangle' belief that Liverpool people are in some way irrational and incapable of cooperating in a community project of this kind involving cooperation between people of different persuasions and that the complexities of Liverpool life would mean that a project would disappear without trace.

The reality was there for all to see. For many years the city's religious leaders had pioneered real ecumenism and during the three years of developing the proposal there had been a joining of minds and a creative dialogue between people of very different points of view.[30,31] The truth underlying the rejection of the proposal was a political desire to attempt to control people's personal behaviour on the one hand and an unwillingness to respect the autonomy of a community on the other; both factors working against the genuine public health interest.

## Postscript

Later in 1986 the AIDS scare led to a dramatic about turn by the Government in its attitude to public information and education about sex and sexuality. Within a short time, programmes and advertisements were allowed on television encouraging condom use based on an acceptance of a harm-reduction, rather than a prohibition, strategy. However, the ambivalence remains—in 1988 the new Health Education Authority was compelled by the DES to shred a carefully developed education pack 'Guide to a Healthy Sex Life' (Teaching about AIDS) because it did not have a strong enough moral message. Also in 1988, Section 28 of the Local Government Act greatly restricted teaching about homosexuality in schools.

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*References*

1 Jones E F *et al. Teenage pregnancy in developed countries.* London: Yale University Press, 1986.
2 Ashton J R. *The Liverpool project—report of a feasibility study.* (Proposal to the Health Education Council for funding of a demonstration project in the Liverpool Health District.) Unpublished paper—Department of Community Health, University of Liverpool.
3 World Health Organisation. *Global strategy for health for all by the year 2000. Geneva:* WHO, 1981.
4 World Health Organisation. *Primary health care.* UNICEF. Geneva: WHO, 1978.
5 World Health Organisation. *Young people's health—a challenge for society.* WHO technical report series 731. Geneva: WHO, 1981.
6 Townsend P and Davidson N. *Inequalities in health—the Black report.* Harmondsworth: Penguin Books, 1980.
7 Ashton J. Children of the welfare state. *New Society* 1983; 109–110.
8 Bury J. *Teenage pregnancy in Britain.* Birth Control Trust, 1984.
9 Christopher E. Sex education. *Br J Family Planning* 1978; **4:** 15–17.
10 Haskey J. Marital status before marriage and age at marriage: their influence on the chances of divorce. *Population Trends* 1983; 4–14.
11 Ashton J. Sex education and contraceptive practice among abortion patients. *J Biosoc Sci* 1980; **12:** 211–17.
12 Ashton J, Machin D, Osmond C, *et al.* Trends in induced abortion in England and Wales. *J Epidemiol Community Health* 1983; **37:** 105–10.
13 Ashton J R. Trends in induced abortion in England and Wales. *Br Med J* 1983; **287:** 1001–1002.
14 Ashton J R. Patterns of discussion and decision making among abortion patients. *J Biosoc Sci* 1980; **2:** 247–59.
15 Ashton J R. Components of delay among women obtaining terminations of pregnancy. *J Biosoc Sci* 1980; **2:** 261–73.
16 Ashton J R. The experience of women refused National Health Service abortion. *J Biosoc Sci* 1980; **12:** 201–210.
17 Ashton J R. The psychological outcome of induced abortion. *Br J Obstet Gynaecol* 1980; **87:** 1115–1122.
18 Farrell C. *My mother said.* London: Routledge and Kegan Paul, 1978.
19 Ashton J and Seymour H. *The new public health—the Liverpool experience.* Milton Keynes: Open University Press, 1988.
20 *Instruction concerning interpersonal relations.* Stockholm. National Swedish Board of Education, 1977.
21 Larsson B. *A Gotland Family.* Stockholm: National Swedish Board of Health and Welfare, 1975.
22 Boethius C G. Personal communication: 1986.
23 Hollander G. Personal communication. Stockholm: Department of Health Education, Swedish National Board of Health, 1985.
24 Grey P *et al. Trends in teenage fertility in Liverpool 1974–83.* (Unpublished background paper for the Liverpool project.) Department of Community Health, University of Liverpool, 1986.
25 Office of Population Censuses and Surveys. *Population Trends* 1987; 49.
26 Department of Health and Social Services. *Memorandum of guidance on family planning services: Section 'g' 'the young'.* London: HMSO, 1974.
27 Department of Health and Social Services. *Family planning service memorandum of guidance.* London: HMSO, 1980. (HM(80)46).
28 Ashton J R. *The Liverpool project—the consultation documents.* (Submission to the Health Education Council.) Department of Community Health, University of Liverpool, 1984.
29 Ashton J R. Teenage pregnancy—a warning from Britain. In *Uituliegen . . . Maar er niet inuliegen. Tieners en seksualiteit.* Netherlands: Van Loghum slaterus, 1986.
30 Board of Social Responsibility. *Faith in the city.* London: Church House Publications, 1985. (Report of the Archbishop of Canterbury's commission on urban priority areas.)
31 Sheppard D S, Warlock D. *Better together—Christian partnership in a hurt city.* London: Hodder and Stoughton, 1988.

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**Errata**

The proceedings of the XVth and XVIth Current Fertility Control Symposia published in January 1988 and April 1989 have omitted to state that the meetings and publications were sponsored by Wyeth Laboratories.

*Sex education in China*

A Chinese university has just held its first ever sex education course for doctors, teachers and officials.

Source: *Healthright* 1988; **7**:5