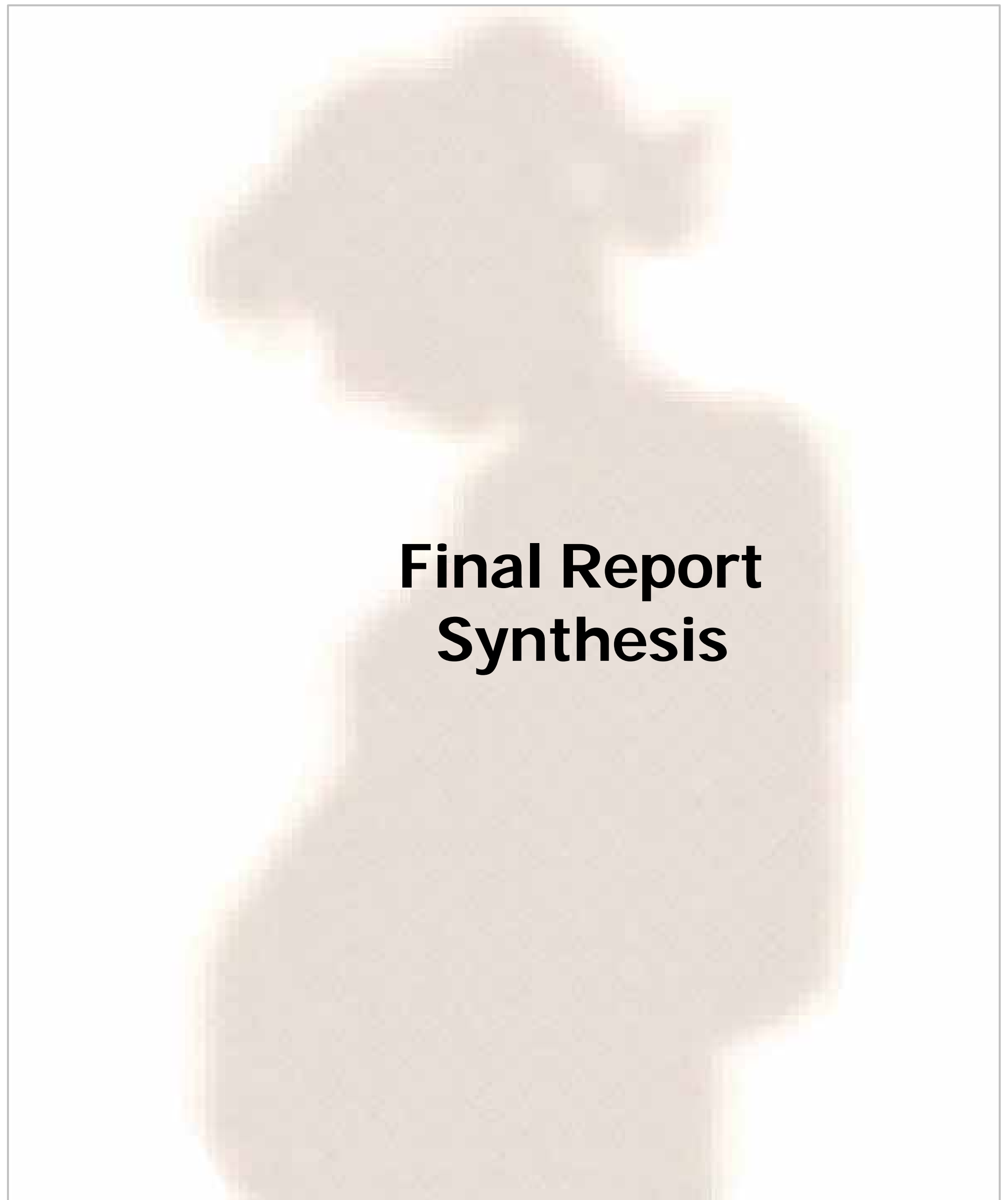
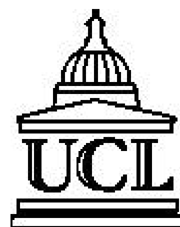
Final Report

2005



Final Report Synthesis

TPSE
Teenage Pregnancy Strategy Evaluation



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Acknowledgements

This report includes data provided with the support of the ESRC and MRC, and uses boundary material which is copyright of the Crown and ED-LINE.

We are grateful to ONS for provision of conception data.

The evaluation research is supported by a grant from the Department of Health.

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This work was undertaken by the **TPSE** research team. The views expressed in this report are those of the authors and not necessarily those of the Department of Health or Department for Education and Skills.

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Executive Summary

THE TEENAGE PREGNANCY STRATEGY

The Teenage Pregnancy Strategy in England, published in June 1999, is a multifaceted strategy that includes action to both halve the under 18 conception rate by 2010 and provide support to teenage parents to reduce the long term risk of social exclusion by increasing the proportion in education, training and employment.

The Strategy has four major components: 1) a national media awareness campaign via independent radio and teenage magazines, 2) joined up action to ensure that action is co-ordinated nationally and locally across all relevant statutory and voluntary agencies, 3) better prevention through improving sex and relationships education and improving access to contraception and sexual health services and 4) support for teenage parents to reduce their long term risk of social exclusion by increasing the proportion returning to education, training or employment. Each of the 148 top tier local authorities developed a ten year strategy for achieving local targets of reducing their under 18 conception rate by between 40-60% by 2010. Local strategies are led by a teenage pregnancy partnership board with representatives from relevant statutory and voluntary stakeholders. Strategic co-ordination is provided by local teenage pregnancy co-ordinators who are performance managed by regional teenage pregnancy co-ordinators and supported by the government's cross-departmental Teenage Pregnancy Unit (TPU).

EVALUATION OF THE STRATEGY

Evaluation of the Teenage Pregnancy Strategy has been conducted by an independent research team from the London School of Hygiene & Tropical Medicine, University College London Medical School and the British Market Research Bureau. Like the Strategy itself, the evaluation is a complex task. Its main objectives have been to assess the extent to which the aims of the Strategy were achieved, and to identify factors that appeared to have enhanced or hindered its implementation. The methods included 1) a national random-location tracking survey, conducted between 2000 and 2004, through 12 cross-sectional waves with over 9000 young people aged 13-21 years, to monitor changes in knowledge, attitudes and behaviour over time at individual level; 2) area analysis of routinely collected data on teenage conception, abortion, deprivation scores and intervention and non-intervention related activity, to explore demographic and Strategy-related variation in key outcomes at area level, 3) analysis of regional and national press coverage of the Strategy and 4) a combination of qualitative and quantitative research to evaluate processes, such as local co-ordination of strategy activities and the experiences of those involved in implementing them.

FINDINGS

Implementation of the Strategy

In the first four years, the Strategy has been implemented with energy and enthusiasm in an atmosphere of cooperation and consensus among those involved. Teenage

pregnancy has been taken seriously enough to secure engagement of senior policy makers and dedicated funding, resulting in rapid and efficient action. Joint working has been achieved even in areas where it has not previously been evident. The local teenage pregnancy co-ordinator has been the lynchpin of implementation; their status in the community, their professional experience and the support they have received have been key to the success of their role.

Sex and relationships education (SRE) and contraceptive services

The evaluation affirms the importance of school SRE as a source of learning about sex for young people, including those from deprived areas. There was a modest increase in the proportion of young women who felt that SRE had fully met their needs (from 25% in 2001 to 30% in 2004), but no change for men (31% for all years). The level of awareness of the teenage pregnancy campaign has remained high among 13-17 year olds at around 55% with small differences in campaign awareness by social grade. Messages about condom negotiation and STIs came through most strongly. Although messages about resisting peer pressure came through less well, young people were less likely to overestimate the proportion of young people having sex before 16 as the campaign proceeded.

Young people are increasingly using school-based services, helplines and websites to gain contraceptive advice. Overall, young women were most likely to access advice from general practice (34% of all women), while young men were most likely to get advice from school, including teachers, school nurses and school-based clinics (25%). However, young men's use of general practice and family planning services increased over time (from 9% in year 1 to 12% in year 4 and from 21% to 29% respectively), as did young women's use of school-based services (from 19% to 27%). Young people having sex before age 16 and those living in deprived areas were more likely to use designated young people's services than those having sex later and living in more affluent areas. However, designated services offer a narrower range of contraceptive methods than mainstream services and, in general, young people are less likely than older women to be offered longer acting, more reliable methods of contraception. Some confusion remains among young people about the confidentiality of services for them since a third of under 16s do not realise that they can get contraception without parents' knowledge.

Support[1]

Participation rates of young mothers changed little during the evaluation period. Many pregnant schoolgirls continue to find it difficult to complete their education in school, and young mothers continue to face problems in balancing the demands of childminding and work or studying. More than a third of young mothers left school before the statutory leaving age, and more than half had not returned to education, work or training after the birth of their child. The evaluation supports further efforts to enable pregnant teenagers to remain in education before the birth of their child. It also affirms the need for provision of adequate childcare to allow young mothers the option of returning to work or education, particularly since the motivation to get on in life increases for many women following motherhood.

More than half of young mothers suffered problems of isolation and loneliness, and the same proportion were living as the lone adult in the household, the proportions changing little during the course of the evaluation. These findings justify Strategy-related efforts to

[1] Sure Start Plus, a pilot programme offering co-ordinated support to pregnant teenagers and teenage parents has been evaluated separately (see www.teenagepregnancyunit.gov).

increase opportunities for young mothers to obtain a break from childminding, and to enable them to seek one to one support, through provision of childcare, counselling and opportunities for socialising.

Joined up action

Links between national and local level co -ordination worked well. Relationships between the TPU and local and regional co-ordinators were cordial and co-operative and the engagement of TPU staff at local level helped co-ordinators to wield influence. Good links were forged with related initiatives such as Sure Start, Connexions and Healthy Schools, while links across some statutory bodies, such as housing and education services were less easy. Links with commercial firms and retail outlets were relatively under-exploited.

Factors helpful to joined up action included an explicit emphasis on joint working as part of the strategy, distinct funding streams, good local standing of co-ordinators, the seniority and broad representation of Partnership Boards and working under one roof. Factors unhelpful to joint working included service re-organisation and in some cases duplication of activity and increasing workload from a plethora of related initiatives.

Sexual behaviour

The national tracking survey showed that 29% of young women and 28% of young men aged 16-21 reported sexual intercourse under the age of 16. A high proportion of young people (84% of women and 83% of men) used contraception at first sexual intercourse, but the proportions having protected sex in the last four weeks have decreased over time (from 88% in 2001 to 78% in 2004 for women, and from 86% to 81% for men). The proportion of young people obtaining contraceptive advice before first sexual intercourse has also decreased over time (from 49% in year 1 to 41% in year 4 for women, and from 67% to 52% for men).

Conception, abortion and birth rates

Compared with 1998, the baseline year for the Strategy, the conception rate in under 18 year olds in England had fallen by about 9% by 2002. Compared with the five years before introduction of the Strategy, 1994-98, conception rates fell by 2.5%, abortion rates increased by 7.8% and births fell by 9.7% for the period 1999-02. Change in conception rates between 1994-98 and 1999-02 was linked most strongly to socio-economic deprivation and educational attainment, with areas of greater deprivation and lower educational attainment showing substantially more decline. Changes in conception rates were also strongly related to the level of expenditure on the Strategy.

Has the Strategy worked?

During the first four years of the Strategy, conception rates for women in England aged under 18 have fallen. This is a reversal of the upward trend seen in the period immediately preceding the Strategy, and a change of course from the largely static rates of the previous two decades in this country. It also runs counter to the current trend in the European countries used as comparison areas, which is towards stable or increasing conception rates. At the same time, although teenage pregnancy rates in the UK are still the highest in Europe, the proportion of pregnancies which are terminated has increased so that we are moving closer towards, though still some way from, the abortion ratios seen in other countries.

The rate of decline has been steeper in areas characterised by higher social deprivation and lower educational attainment, and in areas that have received more funding to implement the Strategy. This clearly suggests that the Strategy has been well targeted at areas of greater need that have benefited the most. Linking decreasing conceptions to more specific markers of the extent or quality of Strategy-related activity at local level has proved more elusive. This may reflect inadequacy of measures of Strategy activity, or the short timescale of the evaluation, with only one or two years between Strategy implementation and latest available conception data (2002)[2]. The alternative explanation - that falling conception rates are unrelated to the Strategy - conflicts with the positive link between Strategy funding and results. Furthermore, comparison with other European countries indicates that long term reduction in conception rates occurs when measures to reduce teenage pregnancy are broad based, wide spread and sustained.

HOW IS THE STRATEGY PERCEIVED?

Unlike the previous national strategy to improve sexual health (Health of the Nation 1992-1997) which was generally regarded as unsuccessful (despite a target for reduced gonorrhoea being met), the current Teenage Pregnancy Strategy is widely seen as well researched, carefully thought out and well co-ordinated. Among those working on the Strategy, there is near universal support for its aims and the action taken to achieve them. The general impression is of commitment, enthusiasm and energy. To the wider public, some of the issues are more controversial and prone to sensationalist treatment by the media. The press has shown sustained interest in the issue of teenage pregnancy, particularly in relation to sex and relationships education, school clinics and the role of parents in educating their children. However, there has been a positive shift in the tone of newspaper articles about the Strategy, with 38% of all articles being positive in year 1 and 50% in year 4. Positive articles were more likely to occur in regional than national papers, and when co-ordinators engaged with the media; such engagement increased significantly over time.

IMPLICATION OF FINDINGS FOR FUTURE WORK

The strength of association between teenage pregnancy, social deprivation and low educational attainment clearly shows that **future efforts should continue to be directed at tackling the underlying socio-economic determinants of teenage pregnancy**. The success of the strategy in targeting those who have most to gain should be strengthened with **even greater focus on interventions that selectively advantage young people from poorer backgrounds and areas.**

It is also clear that **further work is needed to ensure that young people are well informed about sexual matters including contraception**. For example, although awareness of some STIs increased over the period of evaluation, many young people are not confident that they can access confidential services for advice and

[2] The 2003 conception data for England, which were not available at the time of analysis, show that the decline in under 18 conception rate has continued (a 9.8% reduction since 1998) and the under 16 rate fell by 9.9% from 1998 to 2003.

contraception, and the proportion having recent unprotected sex increased over the period of evaluation. There has been a substantial increase in the number of contraceptive services for young people, but most services are less likely to provide the more reliable, long-acting contraceptives to younger teenagers than to older women. **Long-acting methods of contraception should be more widely available to young women**. More young people are accessing an increasing number of school-based services. **The school environment offers a key opportunity to evaluate the effectiveness of such services with young people**.

Despite a positive association between total number of school SRE lessons received and not becoming pregnant, SRE still fails to meet the needs of many young people and is often received too late. **The status, and thereby the quality, of SRE could be improved by making high quality PSHE mandatory within the National Currculum.** This would bring England in line with other European countries that have had more success in reducing teenage pregnancy rates. While the majority of parents indicated that they would feel comfortable if their child asked them for advice on sex and relationships, a smaller proportion of young people felt they could talk to their parents about such issues. **Innovative approaches to improving communication about sex between parents and children should be developed and evaluated rigorously**.

The teenage pregnancy strategy is seen as a **model of joint working** and inter-agency collaboration. This achievement **needs to be sustained through local efforts backed by political will**. Similarly, **continued funding must be secured for local teenage pregnancy co-ordinators** who are widely regarded as the lynchpin of the strategy. **Involvement of teenage pregnancy co-ordinators in the print media has had a beneficial effect on media portrayal of teenage pregnancy issues and should therefore be encouraged**.

With regard to supporting young parents, **the evidence that not all births conceived before the mother was 18 are unplanned, and that well being varies greatly with whether the young mother continues to receive the support of the father, have major implications for targeting Strategy-related efforts**.

Many pregnant schoolgirls continue to find it difficult to complete their education in school, and young mothers continue to face problems in balancing the demands of childminding and work or studying. The **Care to Learn scheme is likely to make a major difference** in this respect. Young mothers can be helped back into education, work or training at any one, or all, of several points of re-entry.

In conclusion, the Strategy has started well. The evaluation confirms perceptions that strategy implementation is working well and under 18 conception and birth rates have fallen. These early achievements need to be strengthened and sustained if the strategy is to achieve its potential. Changing sexual attitudes and behaviour is a challenging task that takes time. Experience from other European countries, where teenage pregnancy has fallen steadily since the 1970s, reminds us that behaviour change over the long term is an achievable goal.

1.0 The Teenage Pregnancy Strategy and its evaluation

1.1 The Teenage Pregnancy Strategy

The Teenage Pregnancy Strategy is a 10 year programme of preventive work aimed at reducing rates of under 18 pregnancy and supporting teenage parents and their children. The Strategy is managed by the Teenage Pregnancy Unit (TPU), a cross-Government Unit set up in the autumn of 1999 to implement the Social Exclusion Unit's report on Teenage Pregnancy. The TPU was located initially within the Department of Health and, from June 2003, within the newly established Children, Young People and Families Directorate in the Department for Education and Skills. Funding of some £60 million was allocated to the Strategy to support work at local and national level, for the first four years.

The impetus for the Strategy was provided largely by England's unfavourable position with regard to teenage conception vis à vis other European countries, and the transmission of deprivation through successive generations as a result of early childbearing. The close association between deprivation and teenage pregnancy necessitated action on a range of fronts and across a variety of agencies and sectors. This was the first strategy to tackle both prevention of teenage pregnancy and support for teenage parents, and the first to initiate a cross-cutting inter-departmental approach to the problem.

Aims of the Strategy

The dual aims of the Strategy are to:

- reduce the rate of under 18 conceptions (with a target of a decrease of 50% in the under 18 conception rate by 2010 and a firmly established downward trend in under 16 conception rates).[3]

and to:

- help teenage parents into education, training or employment (with a target for participation in education, work and training set at 60% of young mothers aged 16-19 by 2010) to reduce their risk of long term social exclusion.

Action Plan

The action for achieving these goals falls into four categories:

1. A national campaign, involving Government, media, voluntary sector and others to improve understanding and change behaviour, comprising:

- campaign components targeting young people and parents with facts about teenage pregnancy and parenthood, and STIs, with advice on how to deal with the pressures to have sex, and messages underlining the importance of protection if they do have sex;

- local campaigns were developed in collaboration with print and broadcast media and with youth, faith and other organisations, to reinforce the message, backed up by media advocacy.

[3] The conception rate target is now a joint PSA between the DH and the DfES.

2. Joined-up action with new mechanisms to co-ordinate action at both national and local levels and ensure that the Strategy is on track, including:

At national level:

- an implementation unit led initially by the DH, and subsequently by the DfES to ensure a continuing focus on achieving the reduction in teenage conceptions;
- an independent national advisory group on teenage pregnancy set up to advise government and monitor the success of the Strategy.

At local level:

- a teenage pregnancy co-ordinator in every local authority area, to pull together all local services with a role in preventing teenage pregnancy or supporting teenage parents; consultation with the local community; funding for implementation and co-ordination in every area; and additional funding in high rate areas;
- regional co-ordinators at Government Office level to co-ordinate regional efforts.

3. Better prevention of the causes of teenage pregnancy, including better education; access to contraception, and targeting of at -risk groups. Specific measures include:

- provision of a local implementation fund for integrated and innovative programmes in high rate areas and new health service criteria for effective and responsible contraceptive advice and treatment for young people;
- new guidance for schools on sex and relationships education and new school inspection and better training for teachers to bolster the new guidance;
- consultation with parents about what their children should be taught about sex and relationships, and practical help for them to talk to their children about sex;
- guidance for health professionals on contraceptive provision to under 16s;
- to support the national publicity campaign, an extended and enhanced national helpline (Sexwise), and a new website (RUThinking) to give advice to teenagers on sex and relationships and to direct them to local services;
- targeted SRE for young men, and specific information about the consequences of sex and fatherhood;

  and

- priority to preventing teenage pregnancy among certain groups, including children in care; young offenders and children excluded from school.

4. Better support for pregnant teenagers, and teenage parents and their child, with a focus on helping 16-19 year old mothers to return to education and ensuring that no under 18 year old parent is in a lone tenancy. Specific measures include:

- better co-ordination to enable pregnant teenagers to obtain advice and support
- assistance to young mothers, especially those aged under 16, to finish their full time education, and provision of child care to ensure this happens;
- new help for teenage parents claiming benefit to find a job;
- provision of parenting skills, education and child care;

  and

- supervised semi-independent housing with support for 16 and 17 year old mothers who cannot live with parents or partner.

PURPOSE OF THE RESEARCH

The aim of the evaluation has been to provide a research function to assist the Government's Teenage Pregnancy Unit (TPU) and related agencies in the effective implementation and monitoring of the Strategy. Its specific goals are to:

- assess progress towards achieving the goals of the Strategy;
- identify factors which have facilitated or hindered success;
- explore the means by which 'joined-up action' is implemented;
- evaluate the media campaign nationally and locally;
- assess the costs of the Strategy against the achievement of outcomes.

This final report is a digest of findings from all four years' work on the evaluation. Further details on methods are available from the Teenage Pregnancy Strategy Evaluation (TPSE) team[1][4].

THE RESEARCH TEAM

The evaluation of the Teenage Pregnancy Strategy has been carried out by a consortium of researchers from the Centre for Reproductive and Sexual Health Research, London School of Hygiene and Tropical Medicine; Centre for Sexual Health and HIV Research, University College, London; and the British Market Research Bureau.

PLAN OF INVESTIGATION

Like the Strategy itself, the evaluation is a complex task. Qualitative and quantitative research techniques have been used to inform:

- formative evaluation: to guide further development of the Strategy
- process evaluation: to identify factors which enhance or hinder implementation
- outcome evaluation: to assess the extent to which desired effects are achieved

The evaluation maps progress over time throughout England and in more detail in 16 selected areas. A *common core data set* was created with application to all components of the intervention, and to the Strategy as a whole, while *dedicated research* has supported the evaluation of specific components. In the absence of possibilities for applying a quasi-experimental design to the *evaluation of the*

[4] The key to the numbers in [ ] can be found on page 93.

outcome of the Strategy, a more eclectic and largely observational approach has been taken (Figure 1.2b). *Common core* and *dedicated data sets*, and the *outcome evaluation strategy* are described below.

COMMON CORE DATA SET

The common core data set consists of:

A national random-location tracking survey

This component has been carried out by the British Market Research Bureau (BMRB), with the aim of monitoring the impact of the media campaigns executed as part of the Strategy, and, in the wider context, to monitor progress towards the goals of the Strategy as a whole. A random location sample of young people aged 13-21 years, and parents of 13-17 year olds, was interviewed in 12 Waves, the first in October 2000, the last in June 2004. 8877 young people, and 5612 parents were interviewed in total[2].

Interviews were conducted face to face and in-home, administered by BMRB-trained interviewers using multi-media Computer Assisted Personal Interview (CAPI). The more sensitive questions, relating to sexual experiences and experience of pregnancy, were contained in a self-completion section in the questionnaire, to afford privacy.

The questionnaire included spontaneous and prompted recall of paid for campaign activities; awareness of 'free' media activities and consumption of the principal media. Other key variables included reception and appreciation of the media activities, use of the helpline Sexwise and the Website RUThinking, absorption of the key messages of the campaign and attitudinal positions and levels of knowledge about issues relating to prevention of early parenthood. Data specifically related to the media campaign have been analysed and reported following each Wave of the survey, i.e. in January, May and September, and the information used to assess impact and awareness of the campaign and to guide future media-related policy. The tracking survey also provided data with which to monitor changes in knowledge, attitudes and behaviour over time at individual level. These data were analysed on an annual basis.

An area level analysis

A mapping exercise was undertaken using routinely collected data to explore variations in key variables at area level with the aim of examining variation in outcomes of the Strategy with intervention-related and non intervention-related factors at a local level.

The challenge here has been to find sources of data providing valid indicators of process and outcome. Routinely produced data used in the area analysis included intervention-related variables (e.g. service availability), contextual variables (e.g. educational level, social deprivation) and outcome measures (e.g. conception rates, social support). Those used in the analyses include:

- Sexwise data base of contraceptive services, including number of contraceptive/sexual health services; organisation of service and postcode.
- Educational attainment: Percentage of 15 year olds gaining 5 or more GCSE/GNVQ, grade A* to C.
- ONS data on conceptions, births and termination of pregnancy at national and local level. Birth data are derived from registrations and TOP data from notifications made under the Abortions Act 1967.

- Community services data Family Planning Clinic annual KT31 returns made to the Department of Health by family planning clinics in England by all NHS trusts providing family planning (FP).

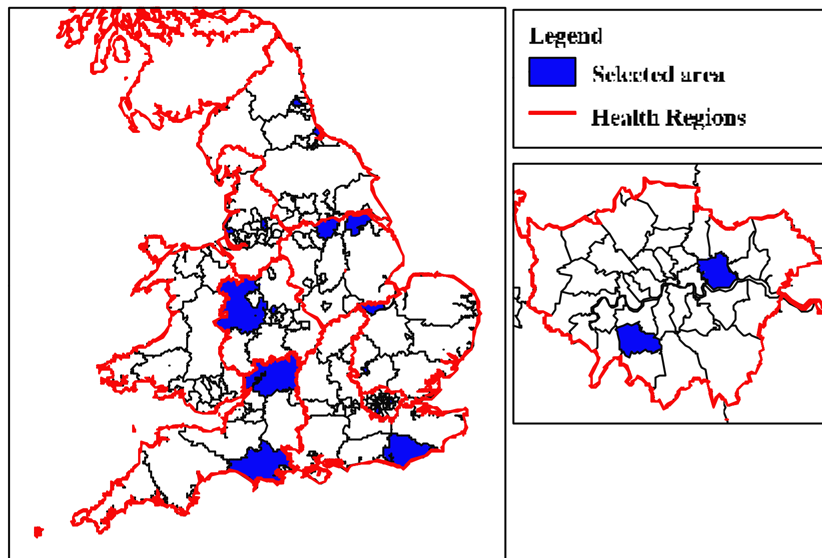
DEDICATED DATA SETS

Process evaluation

Qualitative and quantitative research was carried out to document the experience of implementing the Strategy:

- **Assessment of joint working** Representatives from key agencies, such as public health, health promotion and youth services, were interviewed at national level, and in 16 local areas selected for in-depth study [3].
- **Surveys of local and regional teenage pregnancy co-ordinators** in all 148 areas were conducted by postal questionnaire at three time points. The first was carried out by the TPU and the data were analysed by the evaluation team. The two subsequent surveys were carried out by the research team, for the periods covering 2001/2 and 2003/4 respectively [4].
- **Analysis of national and regional press coverage** was carried out to assess public reception of the Strategy and to identify events which might explain trends in conception rates. Press cuttings were selected according to the keywords: teenage pregnancy, the TPU, the SEU and teenage motherhood. A quantitative analysis of volume and tone was combined with qualitative analysis examining treatment of selected issues [5].
- **An in-depth area study** was carried out in 16 local authority areas, selected for more detailed analysis. Areas were stratified regionally and then selected randomly (Figure 1.2a). Teenage Pregnancy Co-ordinators (TPCs), and some 6-8 of their associates in each area, were interviewed by telephone in 2001, and again in 2003. The focus of work in these areas has been on process, and has been largely descriptive. [3]
- **Special focus areas** Site visits were made to eight areas selected for more detailed observation, to examine operational or contextual factors which might have contributed to changes in conception rates. Areas selected included the three areas from the 16 in depth areas in which there had been least progress in reducing under 18 conceptions; the three in which there had been the most progress; and the two areas from all 148 which had seen the most marked increase and decrease respectively, in conception rates between 1998 and 2002 [6].

Figure 1.2a: Local authorities selected for in-depth study



Sex and Relationship Education

To describe and assess SRE provision, in each of the 16 in depth areas, we carried out:

- A questionnaire survey of SRE using a sample of Head Teachers and PHSE Heads in all secondary schools (approximately 20) in each in-depth area[7].
- In-depth telephone interviews conducted with key education professionals working within LEAs as part of the joined-up action component of the evaluation, for example PSHE co-ordinators [3].

Contraceptive and sexual health services

With the aim of describing and assessing contraceptive and sexual health services available to young people, we carried out two pieces of research:

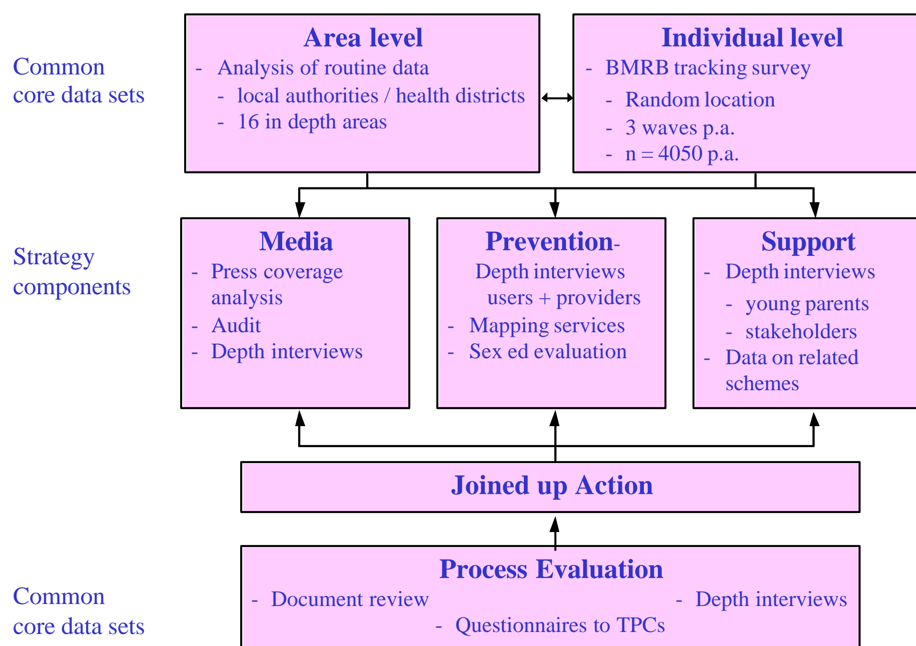
- An audit of all contraceptive and advice services for young people was carried out at national level. A questionnaire, designed jointly by the TPU and TPSE team, was distributed to all teenage pregnancy co-ordinators, who were then responsible for collecting data on their local contraceptive services. Data were entered into EXCEL spreadsheets at a local authority level and sent to the TPSE team. The data collection and entry at a local level was conducted between March 2001 – August 2002. The analysis of the merged national data set was conducted in SPSS (Version 10.05) [8, 9].
- In depth interviews were carried out with 10 users of services and 10 non-users, identified as such and drawn from the tracking survey, with the aim of amplifying data on young people's experience of sex and relationship education; use of contraceptive and sexual health services; and issues related to contraception[10].

Support for teenage parents

The tracking survey contained an extended battery of questions for young people with experience of pregnancy before age 18. Bi-variate analysis was carried out on their responses with the aim of exploring the extent to which they appeared to be disadvantaged in terms of key outcomes such as jobs, education and training, housing and relationships, awareness of, and participation in, schemes related to the TPS. Using multiple regression models, we examined the effect of early parenthood on housing, receipt of benefits, education and training. Odds ratios calculated for these outcomes were adjusted for explanatory variables such as deprivation.

A sub-sample of young parents were re-interviewed in-depth in each of the four years, 2001-2004, using a topic guide. In terms of the sampling strategy, in the first year, 12 mothers and six fathers were interviewed. In subsequent years, a fresh cohort of mothers and fathers, of the same size, was interviewed. In addition, those interviewed in previous years were re-interviewed, a sample of 11 young parents in total[7, 11, 12].

Figure 1.2b Overall plan of the evaluation



OUTCOME EVALUATION

Ideally, an assessment of the success of the Teenage Pregnancy Strategy in achieving its goals would use a quasi-experimental approach, comparing areas in which the Strategy had been implemented with others in which it had not, or comparing groups of individuals exposed to the Strategy with others not so exposed. Since the Strategy has been enacted simultaneously in all areas in England, however, and since all young people in the country theoretically have therefore had an equal chance of being exposed to its interventions, an experimental approach to evaluation has not been possible. Instead, we have taken a more eclectic approach to evaluating outcomes, using, wherever possible, opportunities for natural experiments. In this report, we report from several components of research carried out in this context:

i) analysis of time-series data at individual level, relating to knowledge, attitudinal and behavioural variables which are known to be key determinants of teenage pregnancy;

ii) local area analysis: comparing resources, effort and Strategy-related activity in local authority areas and its apparent relationship with conception rates;

iii) analysis of national trends in conception data, according to possible explanatory Strategy-related, and non-Strategy-related, events;

and

iv) to help address the issue of counter factuality, (that is, to assess what might have happened had there been no Teenage Pregnancy Strategy in England), comparisons of teenage conception rates, and observation of the contextual and intervention-related factors influencing them, have been carried out in selected Western European countries (Table 1.2a).

Table 1.2a Summary of fieldwork for international comparisons

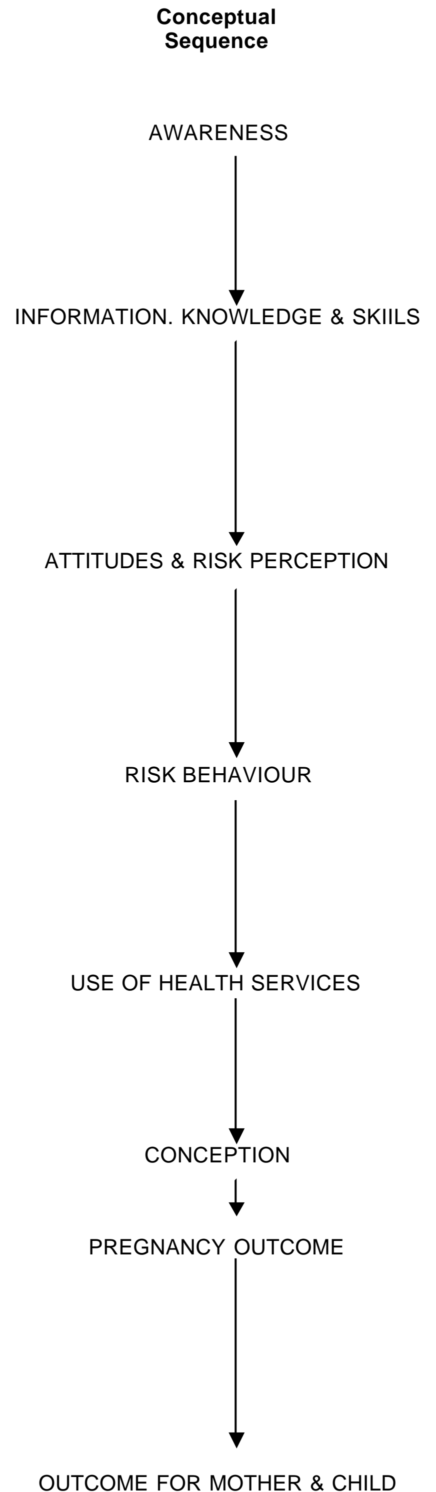
COUNTRY	RESEARCHER	INTERVIEWEES	FIELDWORK PERIOD
Denmark	Mille Schutten	Danish Family Planning Association; National Institute of Public Health; Danish National Institute of Social Research; National Board of Health; Gynaecologist, (expert on teenage pregnancy): Danish Mother's Aid Association; Danish organisation for GPs; Institute for Social Relations and Organisation	August – September 2004
France	Edwige Faydi	Institute National de la Santé et de la Recherche Médicale; Institut National des Etudes Démographiques, Paris; Direction Générale de la Santé, MoH, Paris; Mouvement Français pour le Planning Familial, Paris; Caisse Nationale des Allocations Familiales	September-October 2004
Germany	Isabelle Lange	Sexual Education of the Federal Centre for Health Education (BZgA); International Coordinator of the Federal Centre for Health Education (BZgA); Social Medical Service, Berlin; Profamilia, Munich & Berlin; Academic Researcher; Münster	August – September 2004
Netherlands	Alison Krentel	Professor of Sexology, Amsterdam University; The Rutgers Nisso Group; Health Promotion Institute; Woerden; Primary Care Centre for Sexuality, Abortion & STDs, Amsterdam; Reproductive & Sexual Health Specialist, Zeist	November 2004
Switzerland	Alison Krentel	Multi-Disciplinary Adolescent Health Unit; Multi-Disciplinary Adolescent Health Unit; Profa Family Planning & Pregnancy Centre, Lausanne; Swiss Institute for the Prevention of Alcohol & Drug Problems; Institute of Social & Preventative Medicine, Lausanne; Adolescent & Young Adult Health Programme, Geneva	September 2004

Outcome indicators have been determined by the Strategy objectives, but selection has also reflected the need for indicators of both shorter and longer-term progress, i.e. outcomes relating to more proximate points along the causal pathway (awareness of campaign messages; knowledge of services) and distal endpoints (conceptions). These are shown in figure 1.2c which summarises the conceptual model that guided the analytic approach to the evaluation. Further detail of methodology can be found in the Implementation Plan.

Figure 1.2c Key indicators conceptual model

RD	BM	NS	PP	SP	Indicator
					Campaign related
	✓		✓	✓	• Awareness of media campaigns
	✓		✓	✓	• Prompted + spontaneous recall of campaign components
	✓		✓	✓	• Information seen/heard read recently, where, by whom
	✓			✓	• Perceived seriousness of TP: relative to other problems / countries
	✓		✓	✓	• Attitudes towards appropriate ages for sexual activity/parenthood
	✓			✓	• Views on benefits + support for teenage parents
	✓			✓	• Education, childcare
	✓		✓		• Views on sex education
					Sexual lifestyle
	✓	✓	✓		• Age at first intercourse
	✓	✓	✓		• Feelings about timing of first intercourse
	✓	✓	✓		• Use of contraception at first intercourse
					Education-related
	✓	✓	✓		• Knowledge of contraception
✓	✓		✓		• Advice seeking (Sexwise helpline)
	✓		✓		• Discussion of sexual matters parents/children
✓				✓	• Proportion on training programmes
✓			✓	✓	• Education access courses
	✓		✓		• Receipt of sex education
✓	✓	✓		✓	• Age at school leaving
					Lifestyle indicators
		✓		✓	• Partnership history and status
		✓		✓	• Contact with father of child(ren)
	✓		✓		• Access to and use of contraception
					Health/social service related
	✓		✓		• Knowledge of and access to services
	✓		✓		• Awareness of confidentiality rule
✓	✓		✓		• Use of services, type of service used and satisfaction
✓	✓		✓		• Proportion of men attending family planning clinics
✓	✓		✓		• Attendances at GUM with contraceptive supplies
✓	✓		✓		• Sexwise Helpline data
		✓		✓	• Childcare support and provision
					Health status related/distal outcomes
✓			✓		• Numbers and rates of conceptions, births and TOP
	✓		✓		• Self-assessed health of teenager
					Social exclusion/secondary prevention
	✓			✓	• Awareness of benefits, etc.
✓				✓	• Measures of socio-economic deprivation
✓				✓	• Employment status/aspirations
		✓		✓	• Numbers in household/number of rooms (overcrowding)
✓		✓		✓	• Access to a car, housing, income and source
✓		✓		✓	• Benefit dependence
✓		✓		✓	• Childcare availability and use

Source: RD, BM, NS. Level: PP, SP.



RD = Routine data
BM = BMRB tracking survey
NS = Other national surveys
PP = Primary prevention (i.e. of teenage pregnancy)
SP = Secondary prevention (i.e. support for teenage parents)

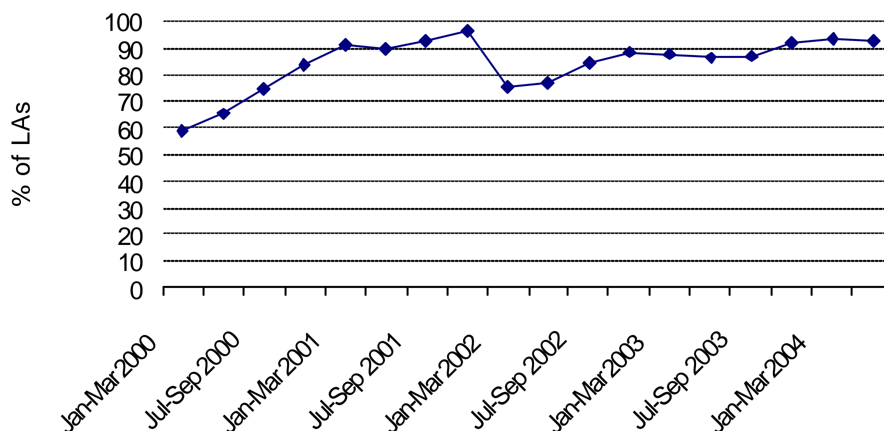
2.0 The implementation of the Strategy

A key task for the evaluation has been to document the process of implementing the Teenage Pregnancy Strategy. Here the focus has been on progress in setting up the Strategy components; on factors which have facilitated and hindered performance; and on the experience of joint working.

GETTING THE STRATEGY STARTED

The order of events in terms of the inception of the Strategy was, firstly, the publication of the SEU report in 1999, followed by preliminary plans by health authorities in March 2000, the start of the national media campaign in October 2000 and the submission of joint local and health authority plans for local enactment in March 2001. The earliest date then that Strategy activity could begin in earnest was early in 2000, and how soon local areas had a teenage pregnancy co-ordinator in post was crucial to this process. Our survey of local areas showed that 75% of areas had employed co-ordinators by the third quarter of 2000.

Figure 2.1a Percentage of LAs with a co-ordinator in post, Jan 2000-Jul 2004



By late 2001, virtually all local areas had a teenage pregnancy co-ordinator in post at some level of FTE (Figure 2.1a), and the proportion has fallen little since. In terms of continuity of employment, though, there has been wide disparity in time allocation (only a small proportion of posts were dedicated full time posts).

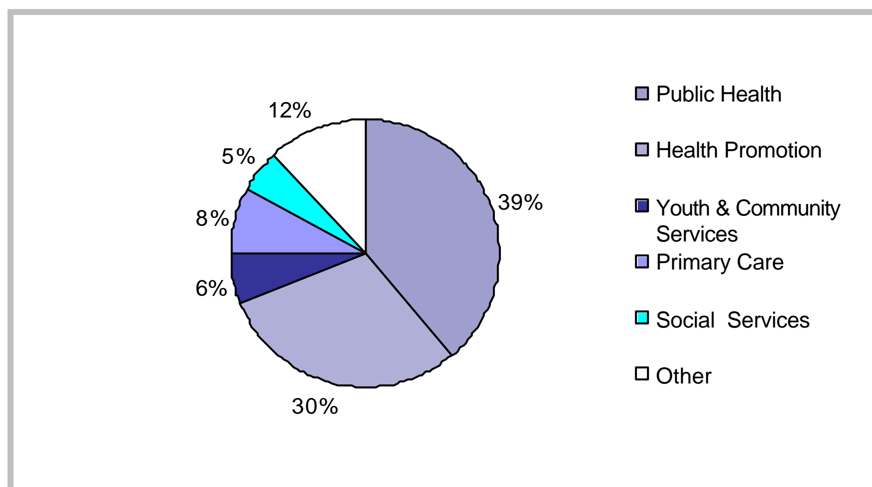
Partnership Boards, local multi-agency panels whose role was to advise on local strategic direction, were also central to implementation, and we were interested in the frequency with which they met. In 2002, almost half the co-ordinators reported that their Partnership Boards met at least once every two months, nearly a third met every six weeks or more often, half met three or four times a year, and fewer than one in 10 met less frequently.

CO-ORDINATION

Key factors determining the effectiveness of co-ordination were likely to include the seniority of the person in post and the type of experience they brought to the job. Local teenage pregnancy co-ordinators were initially jointly nominated by Health Authorities and Local Authorities, and though their professional backgrounds are diverse, they were more likely to have a health than a social services/education background. One in five were employed in either teaching or nursing. There was initially also a bias towards health authority in terms of location, local co-ordinators having been most commonly situated in Health Promotion Units and Community Health Trusts, and less commonly in Social Service Departments and LEAs (Figure 2.1b).

The proportion of co-ordinators with health promotion experience has increased over time, but fewer have reported health services management experience: less than 20% in the 2002-2003 survey compared with more than a third in 2000-2001.

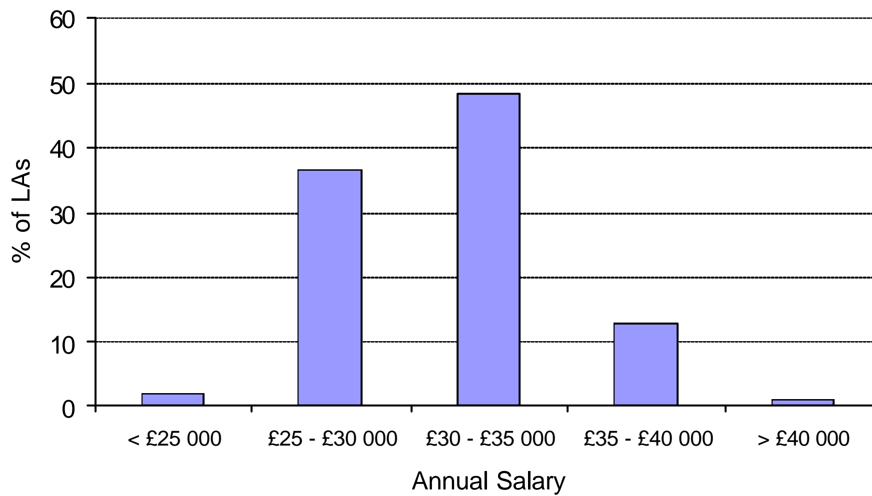
Figure 2.1b Departmental base of Teenage Pregnancy Co-ordinators 2000



The level at which the local co-ordinators have been appointed has varied considerably. Some had previously occupied senior positions, including a Director of Public Health, a Chief Executive of a PCG and a Consultant in Public Health; others were considerably more junior. In-depth interviews with staff at local level have shown that the seniority of staff working on the Strategy has made a very real difference to the degree of 'clout' they have had, and the ease with which they have been able to bring people together and push things through.

Salary level is a useful measure of seniority and status, and in 2004 we asked local co-ordinators to provide details of their annual pay. The majority earned between £25,000–£35,000 per annum, and so could be considered to rank with middle managers (Figure 2.1c). Fewer than one in eight earned more than £35,000.

Figure 2.1c Annual salary of lead Teenage Pregnancy Co-ordinator in 2004



n = 118, missing = 30

Our interviews with staff at local level showed the taskforce of local and regional co-ordinators to be, with isolated exceptions, a highly motivated workforce amongst whom job satisfaction is high. In some cases there has been some confusion about line management, but this has been compensated by support from regional co-ordinators.

STRATEGY-RELATED ACTIVITY

Information about progress in setting up key strategy-related activities is again derived from questionnaires completed by local co-ordinators in 2002 and 2004. These include local campaigns, local enhancement of SRE and of contraception and sexual health services, and support for young parents.

Teenage pregnancy co-ordinators reported that local energy was more or less evenly divided between the different activities within Prevention.

Media

The plan for the communications strategy was for local campaigns to be developed in collaboration with print and broadcast media to reinforce the messages conveyed in the national campaign. The percentage of local areas that mounted a local media campaign was initially relatively low, but increased steadily, from 2% at the beginning of 2000 to 40% at the end of 2001.

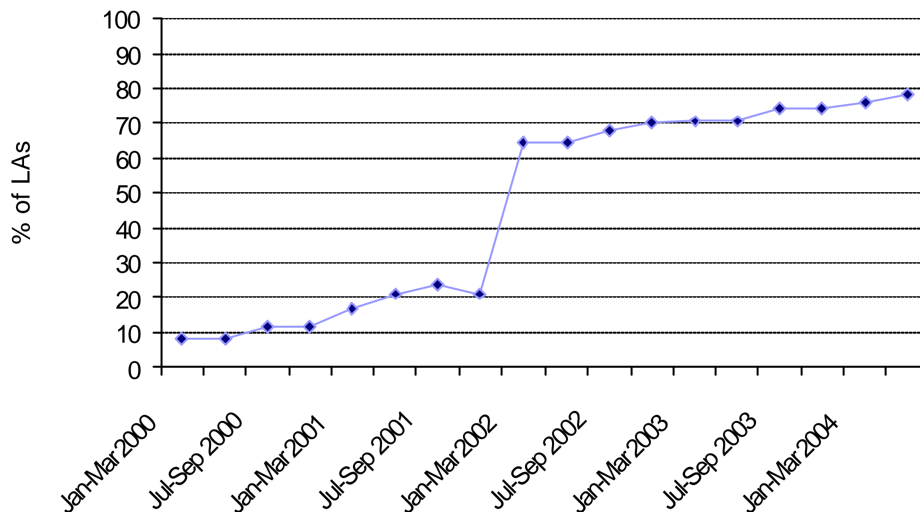
Services

The number of areas in which there was at least one sexual health service dedicated to young people increased steadily, from 68% at the beginning of 2000 to 84% by the end of 2001, as did the number in which an NHS pharmacy scheme was in place for provision of emergency contraception according to patient group directive. By 2004, sexual health services for young people appeared in the PCT local delivery plan in over 80% of local areas. Neighbourhood renewal and SRB resources were being used to support the Teenage Pregnancy Strategy in 42% of local areas.

Sex and Relationships Education

In 2004, more than half of all areas reported having in place training for teachers and the proportion of areas reporting an LEA PSHE Co-ordinator in post increased steadily from the start of the Strategy, reaching nearly 80% by mid-2004 (Figure 2.1d).

Figure 2.1d Percentage of LAs with a PSHE Co-ordinator in place[5]



Support for young parents

In relation to support for young parents, the emphasis in activity terms has been very much on re-integration into education, work and training. The proportion of areas with a re-integration officer in post has increased from one in ten in 2000 to almost half in 2004 (Figure 2.1e). Nearly 70% of local areas reported a specialist midwife for young mothers being in post by 2004 and 15% a specialist Health Visitor for young mothers.

[5] The reason for the disjuncture in values between 2001 and 2002 is unclear, but may relate to an increasing awareness of the education sector as local co-ordinators moved base from health to local authority.

Figure 2.1e Percentage of LAs with a re-integration officer in post

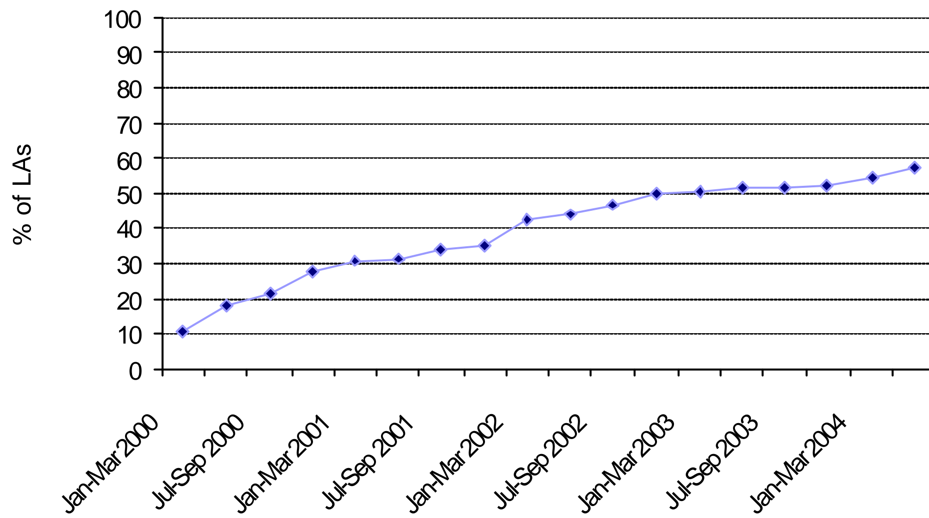
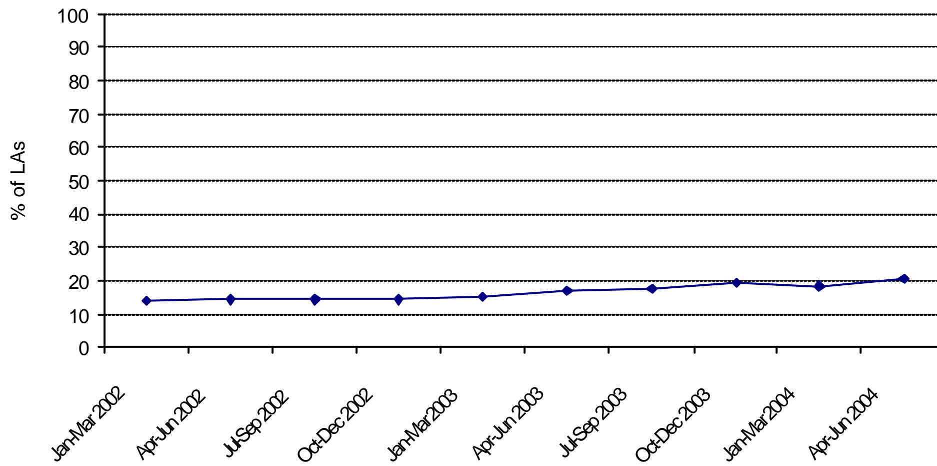
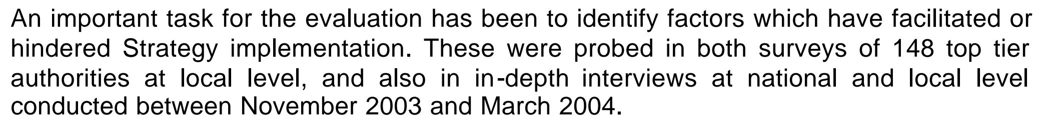


Figure 2.1f Proportion of LAs with a Sure Start Plus co-ordinator in post



The low proportion of local authority areas with a Sure Start Plus co-ordinator in post reflects the fact that the programme was running only in selected areas.



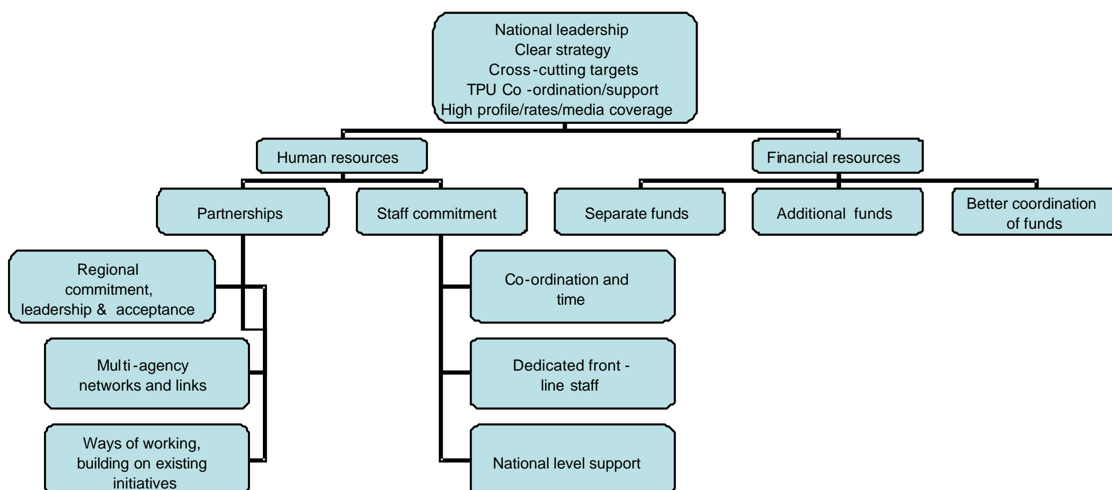
An important task for the evaluation has been to identify factors which have facilitated or hindered Strategy implementation. These were probed in both surveys of 148 top tier authorities at local level, and also in in-depth interviews at national and local level conducted between November 2003 and March 2004.

FACILITATING FACTORS

Figure 2.2a summarises, in diagrammatic form, the responses provided by teenage pregnancy co-ordinators to the open-ended question of which factors had been most crucial in enhancing implementation of the Strategy. The main factors identified as driving teenage pregnancy implementation forward were national leadership, commitment and support from the government, and endorsement by key ministers. Our in-depth interviews with Strategy-related workers, provided amplification. National leadership meant having clear guidance and strategies; cross-cutting targets and indicators; good co-ordination by the TPU; support at regional and national levels; and a high profile for the Strategy. The directions and guidelines for implementing the Strategy were commended as providing a strong action framework and local leverage.

One tier down from this in the classification of themes were the resources - human and material – seen as having helped in implementing the Strategy. Overall the development of partnerships was considered to have played a key role in rolling out new and existing initiatives, and this theme is further elaborated in the next section on Joint Working. Again and again, a connection was drawn between strong commitment at a senior level, on the one hand, and ease of bringing people together, influencing agendas, and increasing opportunities for funding on the other. Staff commitment and effort were also listed as factors which had enhanced implementation, and though local co-ordinators who completed these questionnaires were too modest perhaps to mention their own role, others did so for them. Interviews with related agencies at local level confirm the pivotal role of the Teenage Pregnancy Co-ordinator in the effective execution of the Teenage Pregnancy Strategy. The small number of areas in which progress in setting up the Strategy was slower were, without exception, characterised by periods during which no local co-ordinator was in post, by staff changes in the role or by less than full time employment of the co-ordinator.

Figure 2.2a What factors have helped most in implementing the Strategy?



In terms of material resources, dedicated funds for co-ordination and implementation had increased the extent to which the issue was taken seriously locally, and also the extent of 'matching' funding, so that collaborating agencies were willing to pool their resources with Teenage Pregnancy Strategy funds, to support existing initiatives and set up new ones. Dedicated funding for co-ordination was seen as essential.

One factor which local co-ordinators, being in many cases too young to have had experience of a previous Strategy to compare with, omitted from their list was harmony of aims and aspirations. This was something to which some regional co-ordinators drew attention, contrasting the Strategy favourably with, for example, the AIDS and HIV Strategy of the 1980s which was characterised by some degree of conflict. Co-operation rather than competition was the spirit amongst co-ordinators. The relatively long time scale and the consequent continuity of the Strategy was also welcomed, and was again contrasted with HIV prevention work by those who had worked in that area, which was seen as having been more 'short-termist'.

OBSTACLES TO IMPLEMENTATION

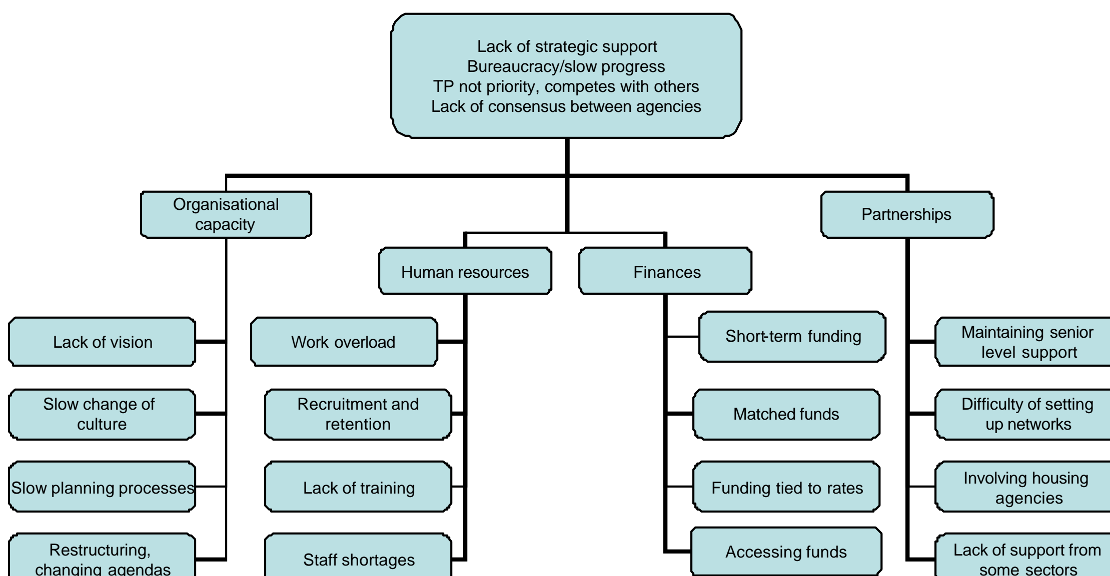
We also asked what factors had hindered implementation of the Strategy (Figure 2.2b). Hindrances identified by the agencies we spoke to were generally complementary to the factors enhancing implementation. Factors that were identified as strengths by some, were identified as counter-productive by others for example. Many respondents complained that teenage pregnancy was not a top-tier priority, either locally or nationally and that the issue competed with a variety of other important initiatives. Unenlightened attitudes on the part of politicians, the public and parents, hindered the implementation process for others.

Overall, weak organisational capacity in addition to unsupportive partnerships caused most harm at a local level. Though separate funds earmarked for teenage pregnancy initiatives was seen as a facilitating factor for many, for a few these were seen as insufficient or only available for short-term projects. Where there were problems with co-

ordination, they were attributed to overloaded, untrained or altogether absent, staff. Organisational capacity was said in some cases to have been weakened by NHS restructuring and so unable to maintain support from multi-agency partnerships. Housing and education were singled out as being particularly difficult to engage with.

Other issues raised included the problems of lack of boundaries, too many sources of funding and too many different agencies, and the difficulty of pulling everything together. A plea was made by several of those interviewed for greater rationalisation of effort. One pointed out '*you need to stop talking about dozens and dozens of priorities, which is a contradiction in terms*'. Two Directors of Public Health (DPH) complained that the TPU continued to be overly top-down, must listen more and be responsive to suggestions from local level. These views were not echoed among those working lower down the hierarchy, who appreciated the direction provided.

Figure 2.2b Which factors have hindered you most?



NATIONAL LEVEL RESPONSES

The Teenage Pregnancy Strategy is a high profile public health intervention and familiarity with its dual aims was near universal. Only in the commercial sector, represented chiefly by PR companies, were people less well informed. Agreement with aims was also widespread, though there was less consensus on the balance between components. A minority of respondents saw tension between the two aims of the Strategy and were of the view that reducing social exclusion might serve to encourage early parenthood. Another minority view was that teenage pregnancy was not a problem in itself and so should not be a priority on the policy agenda.

The Social Exclusion Unit (SEU) was credited with having given the Strategy a firm evidence base and the TPU were applauded as being an effective, credible and responsive team. The mood was described as one of commitment and enthusiasm, and a great deal of good will towards and praise for the Strategy was in evidence. The longer

time scale was appreciated. The Strategy was seen as ambitious and, though many considered it useful to have targets to work towards, for a minority they were a source of anxiety. Conflicting priorities in the different government departments made collaboration difficult at times.

Joint working was identified as a crucial component of the Teenage Pregnancy Strategy, the rationale being that to address such a multi-dimensional problem would require successful collaboration across agencies working at different levels and in different domains. This is the first instance in which joint action has been explicitly stated as the cornerstone of a major strategy and so can be expected to be of more general policy interest.

Our concern in the evaluation has been to document the experience of local and regional co-ordinators, as well as those working at national level, of joint working. We have probed vertical joins between levels of the hierarchy, and between local and national level and horizontal joins across sectors (statutory, voluntary, commercial and media) and between statutory agencies (health and social services). Considerable progress in joint working is in evidence. The consensus view is that there is more inter-agency liaison than has been the case in the context of other public health strategies and, moreover, that the extent of joint working has increased over time in the case of the Teenage Pregnancy Strategy.

Much of the success in achieving this seems to be attributable to the energy of local co-ordinators, the support received from regional co-ordinators and the TPU, and the explicit recognition of joint working as part of the Strategy. Our clear impression has been one of harmony and solidarity amongst the agencies working on the Strategy which has enhanced collaboration. In most cases respondents themselves shared the aims of the Strategy. Comments such as '*I take my hat off to them*', '*You can tell they mean business*'; '*I genuinely feel the TPU is working along the right lines*' '[*The Strategy] has validated our existing work and stimulated new work*' testify to the widespread support for the Strategy and the TPU. Where there was discordance in relation to aims, it tended to centre on the issue of choice; the suggestion was made that not all young people saw pregnancy as a bad thing and that not all young mothers wanted to be back in education.

We report specifically on definitions of joint working; the extent and nature of partnerships; factors facilitating or hindering cross working; and possible threats to such working.

HOW WAS JOINT ACTION DEFINED AND HOW EASILY HAVE PARTNERSHIPS BEEN FORGED?

- Joint working was seen as collaborative, multi-sectoral working in pursuit of common goals. Co-ordinators stressed the need for a holistic approach from the clients' perspective, and co-operation and mutual support among professionals.

> Co-ordinated activity that makes the best use of resources and gives as consistent a message as is possible to the public, whilst allowing for differences, linked rather than unified, so a single package which maximizes resources, money, people and time, avoids duplication, works to a similar set of objectives.
>
> Local Co-ordinator

- Vertical links between national level and local co-ordination have been easily made. Relationships between the TPU and local and regional co-ordinators were described as cordial and co-operative and the engagement of TPU staff at local level was acknowledged as a major factor in wielding influence at local level.

- Horizontal links across statutory bodies were achieved more easily with some agencies than with others; contacts with housing and education services were reported as problematic by some co-ordinators. Between sectors, links with commercial firms and retail outlets were relatively under-exploited.

- Links with other initiatives/related interventions were liberally cited in areas in which they were in place. Sure Start, Connexions and Healthy Schools were mentioned by most but Health Action Zone (HAZ) and Education Action Zone (EAZ) were also included.

- The size and composition of Teenage Pregnancy Partnership Boards and local action groups were seen as strengths in executing the Strategy at local level, but again caution was counselled with regard to the complexity of management and administration.

> In my first few weeks I visited all the agencies that could possibly be involved in teenage pregnancy and invited them along to the group – my fault it got so big – because they all came – they were interested
>
> **Local Co-ordinator**

WHICH FACTORS HAVE ADE FOR EASIER JOINT WOR ING?

- An explicit emphasis on joint working as an integral part of the Strategy has helped co-ordinators to instigate cross working. Although this was regarded by many as standard practice prior to the inception of the Strategy, the fact that it was made explicit and in job descriptions had accelerated progress towards the goal of joined up action.

- The identification of a separate and additional budget for the implementation of the Strategy through the Local Implementation Fund (LIF) and Local Co-ordination Fund (LCF) (now combined in the Local Implementation Grant) has conveyed a useful message to partner agencies in terms of the importance of the issue.

- The local standing of co-ordinators and seniority of members of the Partnership Boards emerged as critical in engaging interest and galvanising efforts.

- The location and background of co-ordinators has created selective affinities with certain agencies making it easier to work with some than others. Collaboration is easiest where people are under one roof, or location of the Strategy at local level is in a facilitative umbrella department.

- Representation of a range of agencies on Partnership Boards has increased the ease with which collaboration could be achieved. Our local area surveys showed that virtually all the Boards had representation from Social Services and Housing, and from Education, and input from Public Health, Youth and Community Work and Primary Care Trust was also near universal. The majority of Boards also contained at least one representative of a related intervention, such as

Connexions. Clinical practice was less well represented and fewer than half of the areas had media representation.

- Collaboration has also occurred as a result of shared membership of other strategy groups ('*you keep on meeting the same people with different hats on*'). In several areas, links with the Local Strategic Partnerships (mechanisms for providing a local co-ordinating framework for health and social service planning) have had a positive effect. Early in the evaluation, we found evidence of a PHSE co-ordinator on the boards of Sure Start Plus; Re-integration Officers and local Co-ordinators on Connexions; and a Re-integration Officer was on the Healthy Schools steering group.

- Joint working has been easiest where structures for collaboration already exist at local level. Where a tradition and understanding of joint working, has been absent, the 'collaborative deficit', particularly between health and social services, was identified as an obstacle.

HAVE THERE BEEN ANY THREATS TO JOINT WOR ING?

- ***Sustainability***: was seen as somewhat threatened by reliance on one or two key people in post, and on fashions in terms of policy priorities. The need was recognised for avoiding short-termism and 'projectism', and for initiatives to be mainstreamed by being incorporated into the regular activities of service providers.

- ***Increasing workload***: The administrative and executive burdens on co-ordinators have been considerable. As activities have proliferated, their workload in terms of surveillance is also expected to increase. Respondents described a plethora of local activities related specifically or more generally to the aims of the Strategy, *'almost too many, to be honest'* as one admitted, while another spoke of '*area-based initiative overload'.*

- ***Re-organisation***: Late in 2001, co-ordinators faced several organisational and structural changes likely to impact on ways of working. These included: boundary changes; re-routing of funding from Health to Local Authority; transformation of some local authorities into unitary authorities; NHS re-organisation from Health Authorities to PCTs and the change from PCGs to PCTs.

- ***Collaboration overload:*** Inter-agency working has inevitably increased the number of meetings which take place, and whilst some of those working on the Teenage Pregnancy Strategy have welcomed this *('opportunities to network'),* others have seen it as a threat to efficiency ('*so many - people are pulled every which way*').

Other concerns raised in the in-depth interviews with those working on, or close to the Strategy, have related to competition for both resources, and the credit for accomplishments. Duplication of activity is also seen as having the capacity to result in multiple offers of help to young people, though the creation of joint posts has eased this situation.

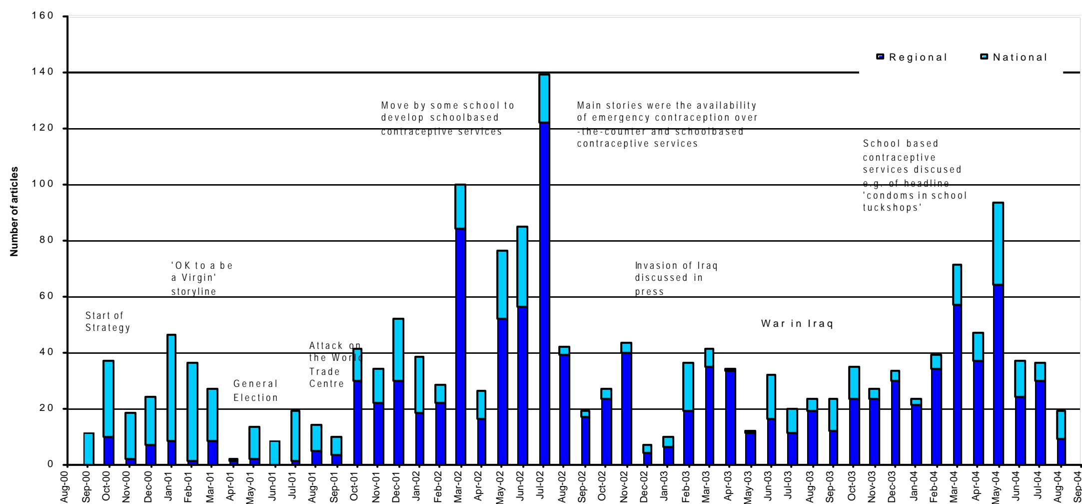
2.4 How has the Teenage Pregnancy Strategy been received?

Key factors influencing the success of the Strategy have been the reception of Strategy-related interventions by opinion formers, and response to the campaigns in the public arena, because of the potential of adverse reaction or conflicting messages to undermine intended goals. One of the aims of the component of the evaluation concerned with monitoring coverage of Strategy-related issues in the national and regional press was to monitor public reaction to the Strategy.

THE TONE OF NEWSPAPER COVERAGE

This component was pressed into service early in the four year period, when the national campaign received advance coverage after having been leaked to the press in October 2000. Media coverage of the campaign was unsupportive, largely as a result of the intervention of one or two spokespersons who aired negative views based on a partial awareness of the campaign components and messages, and familiarity with only one of the advertisements. As a consequence, the campaign was dubbed the ‘Virgin campaign’ and the press complained of intervention by the ‘nanny state’.

Figure 2.4a Total volume of coverage: regional and national press September 2000 to August 2004



The press has shown sustained interest in the issue of teenage pregnancy throughout the first four years of the Strategy (Figure 2.4a). There has been a significant ($p<0.0001$) increase in volume of the reporting of the Strategy and teenage pregnancy-related issues from the national and regional newspapers, despite the occurrence of events, such as the attack on the World Trade Centre in September 2001, and subsequently the Iraq war which have dominated the press. News stories and features on sex education and the availability of emergency contraception have been the most reported stories, making up 16% and 15% of the total articles collected.

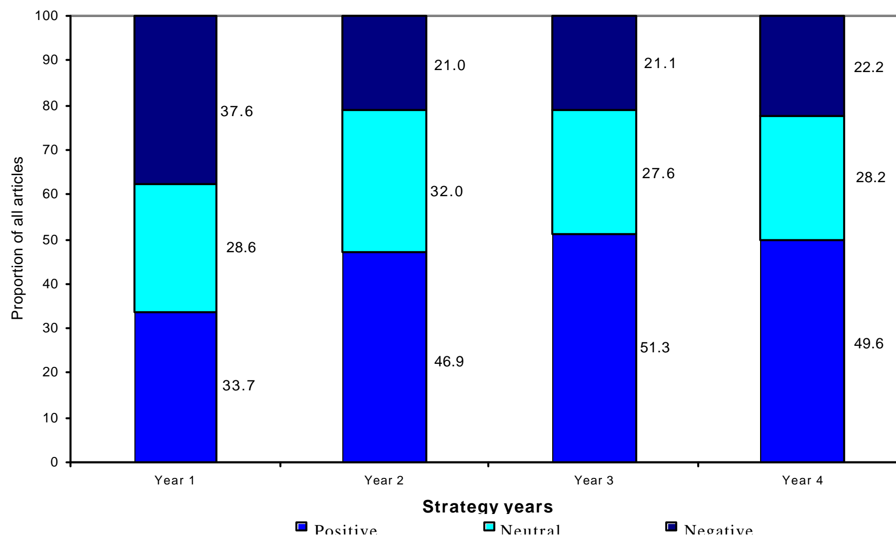
Media treatment of issues relating to sexual health is generally regarded as ambivalent in this country, and many of the issues were not dealt with in a manner helpful to the aims of the Teenage Pregnancy Strategy. Only 38% of articles relating to teenage pregnancy and the Strategy were assessed by the team as positive in tone, but by Year 4, this proportion had increased to 50% (Figure 2.4b). Regional newspapers have been significantly more supportive of the Strategy aims than have national newspapers and by Year 4 of the Strategy, regional newspapers were the main source of reporting on the Strategy and teenage pregnancy related issues (Figure 2.4a).

EDIA ADVOCACY BY AGENCIES WOR ING ON THE STRATEGY

At the start of the Strategy the evidence from the newspaper coverage was that there was very little input into press coverage from individuals and agencies working on the Strategy (Figure 2.4c). Family value campaigners, by contrast, had consistently voiced opposition to the Strategy and are significantly associated with negative stories in the press ($p<0.0001$). Over time, however, there were signs in the coverage that those working on the Strategy were increasingly acting as spokespersons and contributing to strategy-related news stories. The number of instances in which local teenage pregnancy co-ordinators have featured in articles in the press, especially at the local level, increased significantly ($p<0.0001$) over the first four years of the Strategy. By year 4, the main spokespersons in all the articles collected on the subject of teenage pregnancy were TPC/TPU spokespersons (Figure 2.4c)

Data from the local area surveys also lend support to this finding. Reported collaboration by local teenage pregnancy co-ordinators with local press and broadcasting agencies reached its peak in the second quarter of 2002, when more than 80% reported responses having been made in their area to requests for involvement in local press and broadcasting. The proportion of co-ordinators who report having done so increased notably over the first two years of the Strategy, from 15% to 49% when interest was most intense, but media involvement was still reported in more than 40% of areas in mid 2004 (Figure 2.4d).

Figure 2.4b Newspaper coverage by tone of coverage: Sept 2000 to Aug 2004



There is also evidence that teenage pregnancy co-ordinators have had a significant influence on the tone of articles (p =<0.0001). Evidence from the analysis of press coverage over the four years of the evaluation suggests that the Strategy has been, on the whole, enhanced by involvement by those working on the Teenage Pregnancy Strategy, particularly at local level, in broadcasting and press activities relating to the Strategy.

Teenage pregnancy co-ordinators have played an important role in improving the tone of press treatment of the issues related to teenage pregnancy. However, 'family values campaigners' have had a significantly negative impact on the press representation of the Strategy and issues related to teenage pregnancy.

Figure 2.4c Newspaper coverage by spokesperson: Sept 2000 to Aug 2004

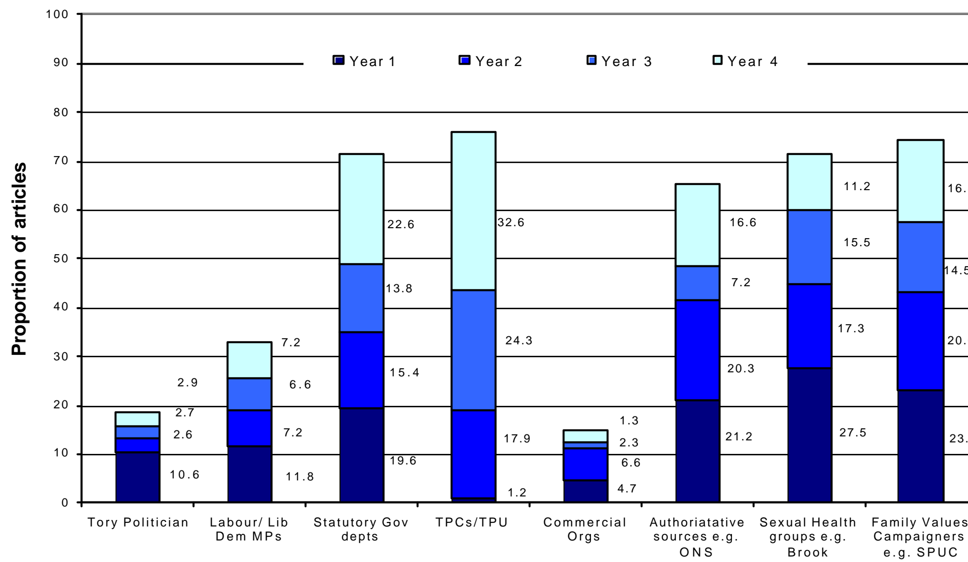
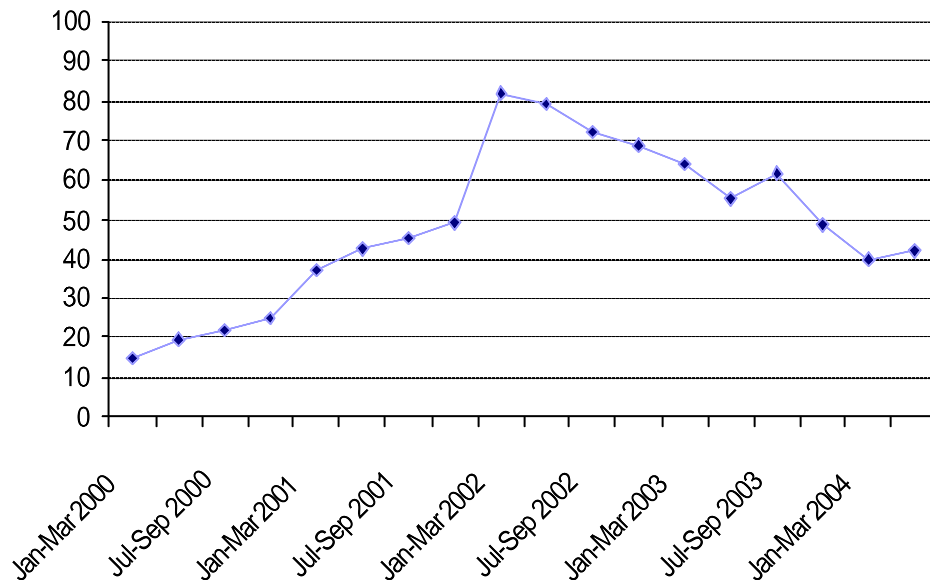


Figure 2.4d Proportion of local co-ordinators reporting involvement in local press and radio



INTERPRETATION

In terms of implementation, the first four years of the Teenage Pregnancy Strategy appear to have been characterised by high levels of energy, enthusiasm and activity. Strategy components appear to have been put in place in an atmosphere of co-operation and consensus among workers, rather than competition and conflict. In these first four years, the issue of teenage pregnancy has been considered sufficiently serious to warrant engagement of senior policy makers and dedicated funding. This has confirmed that the issue remains a high priority and has helped local co-ordinators to galvanise local agencies into activity. As a result, progress in setting up the Strategy has been rapid and efficient.

Despite the apparent harmony of the workforce, many of the issues related to teenage pregnancy - the sexual behaviour of the young, for example, sex education and contraception for young people - are controversial and prone to being dealt with in a sensationalist way by the British media. There has been ample evidence of this in the newspaper coverage of the Teenage Pregnancy Strategy over its first four years. There is also evidence from the in-depth interviews with those working on the ground, that unhelpful attitudes remain prevalent among some sections of the community. However, the increased visibility in the regional press of those working directly on the Strategy has had a positive effect on the tone of press coverage, and hence has undoubtedly influenced the way in which the Strategy has been received.

The Teenage Pregnancy Strategy is the first of its kind in which joint working has been explicitly included as a central component of its two aims, to reduce under 18 conception rates and to mitigate the social exclusion of teenage parents and their children. The Teenage Pregnancy Strategy is thus an exemplary case study for observing joined up action in practice.

There has been no strong tradition of successful collaboration between health and social services in this country to date. Seemingly against the odds then, the Teenage Pregnancy Strategy appears to be succeeding in implementing joint working where others have not. There is evidence here of considerable commitment to and endorsement of joint working both on their own part and that of potential partners. The apparent range of collaborative activities, the extensiveness of links established, the speed with which partners had been brought together, the seniority of those involved and the frequency with which they meet, has been impressive.

The local co-ordinator appears to be the lynchpin of implementation of the Teenage Pregnancy Strategy and has thus far been well supported at local, regional and national level. Their status within the community and the length of their professional experience appear to have been strong determinants of the ease with which joint action could be put in place. The evidence is that progress has been slowed to a halt in isolated instances of a co-ordinator not being in post. Given their apparent importance in the process of joint action, the continued employment of a dedicated workforce of local co-ordinators would seem to be an essential element in the longer term success of the Strategy.

3.0 How successful has the Strategy been in achieving its goals relating to preventing teenage pregnancy?

As stated in Chapter 1, we have taken a number of approaches to this question. We report here on several components of research:

i. an examination of time series data, at individual level, relating to knowledge, attitudinal and behavioural variables known to be key determinants of teenage pregnancy;
ii. area level analysis of factors associated with changes in conception rates;
iii. analysis of national trends in conception data, according to possible explanatory events;
and
iv. comparisons of teenage conception rates, and of contextual and intervention-related factors influencing them, in selected Western European countries.

3.1 Have young people's knowledge, attitudes and behaviour changed?

One of the main aims of the Strategy is to improve young people's knowledge of issues surrounding sex and relationships in order to help them make better decisions regarding their behaviour. The evaluation has monitored provision of information in the national teenage pregnancy campaign, in schools and in the family and assessed its reception by young people, using data from the tracking survey. We have examined associations between Strategy related variables (e.g. risk behaviour, SRE) for young men and young women separately and by deprivation and age group.

SE AND RELATIONSHIP ED CATION

Nearly two thirds of young people overall (63.5% of women, 63.1% of men) received 1-9 lessons of SRE, with over a third receiving 10 or more sessions. The total number of SRE lessons received was significantly associated with perceived ease of use of a condom on the part of young men, and with no experience of pregnancy among young women.

For young women there was a modest but significant increase in the proportion who reported learning most about sex from school (from 26.2% in Year 1 to 30.5% in Year 4, p=0.05). 24.4% of women in the most deprived quintile learned most from school with no change over time.

Men were more likely than young women to learn most about sex from school (35.4% for all years combined), with no significant increase over time. Findings were similar for young men in the most deprived quintile.

There was a modest but significant increase in the proportion of young women who felt that SRE had fully met their needs (from 25.1% in Year 1 to 30.0% in Year 4, p=0.02), but no change for men (31.1% for all Years), (Table 3.1a). However, receiving SRE that met their needs was significantly related to how easy young men thought it would be to use a condom and among young women with having no experience of pregnancy.

The proportion of respondents who felt SRE had occurred at about the right time remained fairly constant (63.5% for all women and 52.8% of all men for all Years) and was little affected by whether they were sexually active or not. Among sexually active young men and women, adequacy and timing of SRE was related to unprotected sex in the last 4 weeks.

Table 3.1a Adequacy of Sex and Relationship Education (Women) (%)

		Year 1	Year 2	Year 3	Year 4	P value for trend	Total
Lessons fully met my needs		**25.1%**	**30.2%**	**29.1%**	**30.0%**	**0.022**	28.6%
Sex ed right time (all women)		**60.2%**	**65.9%**	**63.1%**	**64.9%**	**0.007**	63.5%
Timing of sex ed (sexually active women)	**Right time**	38.6%	44.6%	43.3%	42.1%	0.256	42.0%
	Too late	25.5%	21.0%	19.1%	17.4%	0.256	20.8%
N° school sex ed classes	**< 10 lessons**	66.4%	61.7%	62.8%	63.2%	0.215	63.5%
	> 10 lessons	33.6%	38.3%	37.2%	36.8	0.215	36.5%

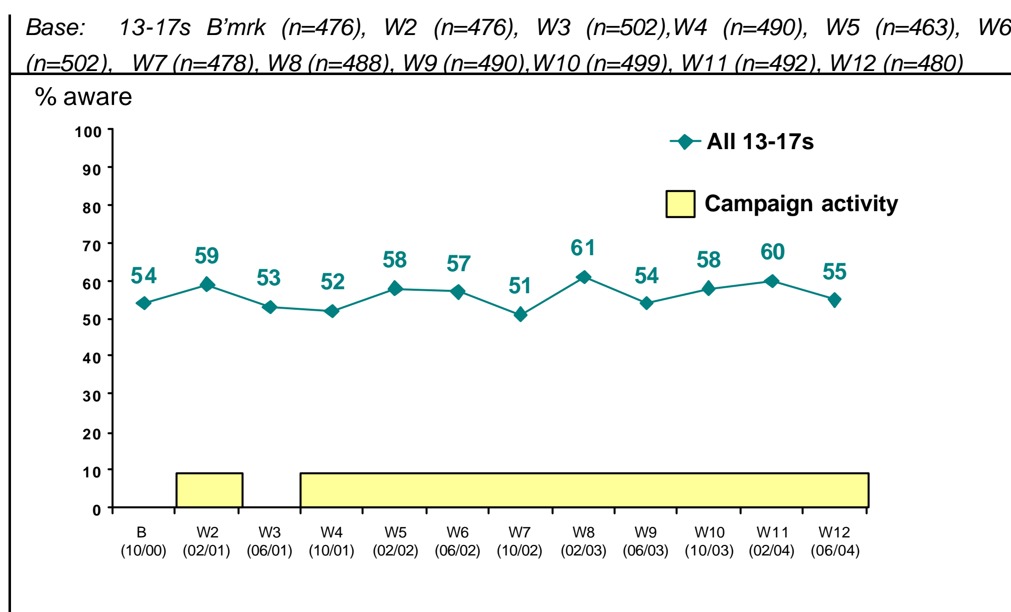
The proportion of young women in the most deprived quintile whose needs were fully met by SRE did not change over time (31.4% for all Years) nor did the proportion who felt SRE occurred at about the right time (50.3% for all Years). For young men in the most deprived quintile, the proportion who felt that SRE met their needs fully increased somewhat (from 26.1% in Year 1 to 33.5% in Year 4, p=0.06). The increase in proportion for whom SRE occurred at about the right time (from 49.8% in Year 1 to 58.8% in Year 4) was not significant (p=0.13).

There was a significant decrease in the proportion of young people who thought that having a baby under 18 is one of the worst things that could happen (from 64.8% in Year 1 to 59.1% in Year 4 for young women, p=0.01 and from 66.4% to 60.5% for young men, p=0.006). This decrease was more marked for young women in the most deprived quintile.

There was some improvement in how easy respondents thought it would be to use a condom (from 77.3% in Year 1 to 80.4% in Year 4 for young women, p=0.68, and from 86.5% in Year 1 to 90.1% in Year 4 for men, p=0.007). This increase was clearer in young men from the most deprived quintile.

The level of awareness of publicity on sex and relationships in media used by the Strategy among 13-17s has remained fairly constant, at around 55% (Figure 3.1b). Young women were more likely to be aware of advertising or publicity on sex and relationships than boys. Awareness varied little with age and social grade.

Figure 3.1b Awareness of publicity on sex and relationships



INTERPRETATION

These findings affirm the importance of school SRE as a source of learning about sex for young people, including those from deprived areas. The second National Survey of Sexual Attitudes and Lifestyles (Natsal 2000) showed that the proportion of men who learned most about sex at school doubled during the 1990s. It is hard to be sure about the existence or direction of cause and effect between perceived adequacy of SRE (meeting needs and delivered at about the right time) and sexual risk behaviour (recent unprotected sex and pregnancy), but the more objective finding that the amount of SRE received is related to ease of using condoms in men and avoiding pregnancy in women underline the importance of SRE in tackling unwanted teenage pregnancy. The modest increase in the percentage of women for whom SRE fully met their needs is encouraging but there is clearly still a considerable way to go in terms of the Strategy improving SRE so that it meets the needs of all young people. The status of SRE in the school curriculum could be improved by making it a statutory component of PSHE / citizenship. The finding that attitudes to teenage pregnancy have become less negative may reflect the success of the Strategy in supporting teenage parents.

CONTRACEPTIVE ADVICE AND SERVICES

A key aim of the Strategy has been to ensure access to contraceptive advice and supplies for all young people.

Knowledge of contraception and sexual health services

77% of all young women and 65% of all young men knew of a clinic or place they could visit if they wanted information about sex. Young women and men who had had sex were

more likely to know of a place (89% and 75%, respectively). There was no significant increase in this knowledge over the last four years.

62% of young women and 54% of young men were aware that contraception is available free of charge. A significant increase in young men's knowledge that contraception is freely available was seen over the four years of the evaluation (Table 3.1b).

Significant increases over the four years were seen in both young men and women's knowledge that a person of any age can get free condoms. Overall 71% of young women and 60% of young men knew this to be true.

Table 3.1b Knowledge of contraception availability (base = total sample)

	Year 1	Year 2	Year 3	Year 4	P value for trend	Total
WOMEN						
Contraceptives free of charge	59.4%	62.2%	63.9%	62.4%	0.110	62.0%
Any age can get free condoms	**68.0%**	**70.6%**	**74.6%**	**70.3%**	**0.051**	71.1%
Can get contraception without parents' knowledge	62.92%	63.7%	64.6%	63.6%	0.379	63.7%
MEN						
Contraceptives free of charge	**50.9%**	**52.8%**	**56.2%**	**55.9%**	**0.003**	53.9%
Any age can get free condoms	**55.9%**	**56.9%**	**64.2%**	**61.1%**	**<0.001**	59.8%
Can get contraception without parents' knowledge	55.1%	53.3%	58.6%	54.4%	0.509	55.4%

68% of young women and 55% of young men knew that girls can get a prescription for contraception without their parents' knowledge. Awareness did not increase over time.

Increased knowledge of free contraception over the four years was particularly strong amongst men from the most deprived areas. Women from the most deprived areas were less likely than those from more affluent areas to know that condoms are freely available (72% vs. 68%, p=0.015).

Young people under 16 years had poorer knowledge of contraceptive availability compared to those 16 or over. For example, 47% of young women and 40% of young men aged under 16 were aware that contraceptives were available free of charge, compared to 70% and 61% respectively aged 16 and over (p=<0.001).

Use of contraceptive services

64% of all young women and 45% of all young men (including those who had not yet had sexual intercourse) reported that they had accessed a service to obtain contraceptive advice. The most frequently cited service accessed for advice for young women was general practice (34%) and for young men was school, which included teachers, school nurses and school-based clinics (25%).

There have been significant increases in the proportion of young women accessing school-based services (19% in Year 1 to 27% in Year 4, p=<0.001), and identifiying phone

helplines and websites[6] (5% in Year 1 to 10% in Year 4, p<0.001) for advice. Significant decreases were observed in use of family planning clinics for advi ce over the last four years (for young women 32% in Year 1 to 29% in Year 4, p=0.043 and for young men 14% in Year 1 to 11% in Year 4, p=0.03).

The proportion of sexually active young people reporting having obtained contraceptive advice prior to first sexual intercourse declined over the four years (Table 3.1c). It was lower among those who first had sex before age 16 than among those who did so at age 16 or later (for women 36% vs. 54%, p=<0.001; for men 49% vs. 64%, p=<0.001). Young men living in more deprived areas were less likely to seek advice compared to those from more affluent area (50% vs. 58%, p=0.015, respectively). No association with deprivation was observed in the young women.

Table 3.1c Proportion of young people obtaining contraceptive advice prior to first SI (%) (base = sexually active)

		Year 1	Year 2	Year 3	Year 4	P value for trend	Total
WOMEN		**49.3%**	**41.9%**	**45.5%**	**41.3%**	**0.052**	44.5%
Age at first SI	<16	36.6%	33.3%	38.8%	33.8%	0.816	35.6%
	>=16	**62.7%**	**51.3%**	**53.2%**	**50.3%**	**0.023**	54.4%
Deprivation	Least deprived 4 quintiles	47.5%	43.0%	44.6%	41.1%	0.153	44.1%
	Most deprived quintile	54.4%	39.3%	47.9%	41.8%	0.187	45.4%
MEN		**66.5%**	**51.2%**	**56.1%**	**51.7%**	**0.006**	56.2%
Age at first SI	<16	**63.2%**	**42.9%**	**46.4%**	**44.9%**	**0.014**	48.8%
	>=16	70.3%	59.8%	65.8%	58.8%	0.153	63.8%
Deprivation	Least deprived 4 quintiles	**70.5%**	**52.5%**	**58.3%**	**52.4%**	**0.003**	58.3%
	Most deprived quintile	53.6%	47.9%	48.7%	50.0%	0.76	49.8%

92% of young women and 79% of young men who had had sexual intercourse said that they had accessed a service to obtain contraceptive supplies. The most frequently reported service for women was general practice (54%), followed by family planning clinics (50%). 54% of young men reported using commercial venues (either pharmacies or vending machines), followed by 27% using family planning clinics.

[6] These include the Sexwise helpline, the Contraceptive Education Service, the ruthinking website and the NHS Direct phone line and website.

Table 3.1d Use of types of contraceptive service for supplies* (%) (base=sexually active)

	School-based	General Practice	Family Planning	YPC	Retail outlet	Total %
WOMEN						
Age at interview						
Under 16 (n=157)		31%				
16-17 (n=615)		46%				
18 or over (n=1029)		62%				
Age at first sexual intercourse						
Under 16 (n=922)	23%	53%	55%	11%	40%	92%
16 and over (n=852)	16%	56%	43%	7%	39%	91%
Deprivation						
Least deprived four quintiles (n=1292)	20%	55%	48%	8%	43%	92%
Most deprived quintile (n=506)	18%	52%	53%	13%	30%	90%
MEN						
Age at interview						
Under 16 (n=132)	37%	8%	24%	10%	39%	71%
16-17 (n=554)	29%	8%	24%	8%	50%	76%
18 or over (n=1026)	18%	12%	29%	5%	59%	
Age at first sexual intercourse						
Under 16 (n=836)	25%	11%	29%	8%	51%	78%
16 and over (n=828)	22%	11%	25%	5%	55%	
Deprivation						
Least deprived four quintiles (n=1273)	24%	10%	26%	5%	58%	80%
Most deprived quintile (n=430)	23%	12%	29%	11%	44%	

* Waves 2-12 only, since question was asked differently in Wave 1

Young men's use of general practice and family planning clinics significantly increased over time (9% in Year 1 to 12% in Year 4, p=0.008; and 21% in Year 1 to 29% in Year 4, p=0.05, respectively). Use of commercial venues for supplies has declined over time (60% in Year 1 to 51% in Year 4, p=0.002). The only services used by women to see a significant increase in access to obtain supplies were school-based.

The prevalence of use of the different types of services is presented in Table 3.1d. The more vulnerable young people, that is of those having sexual intercourse prior to 16 years and those living in more deprived areas, were on the whole more likely to be using family planning and designated young people's services than those who have sex later and those who live in more affluent areas.

Young men living in areas rated as 'very good' quality in terms of the effort put into sexual health services (TPU data) were significantly more likely to be accessing services for contraceptive supplies compared to men living in areas rated as 'poor' (83% vs. 71%, p=0.022). No difference was observed for young women's access and the area service quality rating.

Access was not related to distance from any contraceptive service, except in the case of designated young people's services. 11% of women living under 1km from a young person's clinic reported that they accessed this type of service compared to 3% living 5km or more away (p=0.008). A similar pattern was seen for young men (10% living under 1km away compared to 5% living 5 or more km away, p=0.058). Distance is measured by road length, but does not take account of transport links.

Risk behaviour and risk reduction practice

29% of young women and 27% of young men aged 16-21 reported intercourse under the age of 16 (compared with 26% women and 29% men aged 16-19 in Natsal). There was

no change in the proportion of young people having sex before age 16 over the four years. There was no association between deprivation and sex before 16 years amongst young women (29% in women from more affluent areas and 30% in those from the most deprived areas, p=0.587), but young men from more deprived areas were more likely to have sex before age 16 compared with those from more affluent areas (37% vs. 24%, p=>0.001).

Table 3.1e Time series analysis of data on use of contraception

		Year 1	Year 2	Year 3	Year 4	P value for trend
CONTRACEPTION USED AT FIRST SEX						
Women		85.1%	83.9%	84.5%	82.4%	0.310
Deprivation	Least deprived 4 quintiles	85.9%	87.2%	88.5%	84.2%	0.657
	Most deprived quintile	82.4%	75.9%	74.2%	78.8%	0.409
Men		85.1%	84.5%	81.0%	81.5%	0.63
Deprivation	Least deprived 4 quintiles	87.5%	88.1%	84.7%	85.1%	0.190
	Most deprived quintile	77.9%	74.4%	69.6%	73.3%	0.306
PROPORTION HAVING UNPROTECTED SEX IN THE LAST 4 WEEKS						
Women		**11.8%**	**17.0%**	**19.6%**	**21.7%**	**0.003**
Deprivation	Least deprived 4 quintiles	**12.6%**	**13.8%**	**16.7%**	**21.5%**	**0.005**
	Most deprived quintile	9.6%	24.8%	27.1%	22.4%	0.203
Seen, heard, read*	Yes	**8.6%**	**17.0%**	**17.6%**	**21.1%**	**0.007**
	No	17.6%	17.3%	23.4%	22.6%	0.185
Men		13.5%	18.1%	19.0%	18.9%	0.146
Deprivation	Least deprived 4 quintiles	**8.8%**	**15.4%**	**15.5%**	**18.3%**	**0.016**
	Most deprived quintile	28.6%	25.7%	29.9%	22.2%	0.513
Seen, heard, read*	Yes	11.5%	21.5%	15.3%	20.3%	0.254
	No	16.1%	15.6%	22.6%	17.6%	0.400
USE OF EC OVER TIME						
Women						
Ever use of EC		**43.0%**	**44.5%**	**44.1%**	**50.1%**	**0.037**
Area of residence	Least deprived 4 quintiles	42.8%	46.6%	41.7%	51.0%	0.092
	Most deprived quintile	44.0%	39.4%	50.4%	47.6%	0.259
Men						
Ever use of EC		25.5%	26.5%	26.1%	27.7%	0.514
Area of residence	Least deprived 4 quintiles	25.6%	25.9%	25.9%	28.9%	0.366
	Most deprived quintile	25.2%	28.2%	26.8%	25.4%	0.973

(Denominator those who have had SI) *…publicity on TP

16% of young women and 17% of young men who had had sexual intercourse used no contraception the first time. No significant annual differences in the proportion of young people not using contraception were observed over the last four years (Table 3.1e). However, those having sex before 16 years were more likely to not use contraception than those who had first sex aged 16 and above (21% vs. 11%, p>0.001 for women and 22% vs. 11%, p=>0.001 for men). Those from more deprived areas were less likely to use contraception than those from more affluent areas (22% vs. 14%, p=>0.001 for women and 26% vs. 14%, p=>0.001 for men).

18% of young men and women who had had sexual intercourse reported unprotected sex in the last four weeks. The proportion of women having recent unprotected sex has increased over time, from 12% in Year 1 to 22% in Year 4, p=0.003, as has the proportion of men, but the association over time was not significant, (19% in Year 4 vs. 14% in Year 1; p=0.146). The proportion of young women aware of publicity on teenage pregnancy who reported having unprotected sex increased significantly over time. This may be explained by reverse causality. For example, this group may be more concerned about unplanned pregnancy or STIs because of their risk behaviour and therefore looked for information relating to sexual health.

The proportion of young women who had ever used emergency contraception (EC) has increased over time, from 43% in Year 1 to 50% in Year 4, p=0.037. 20% of women had used EC two or more times. There was no evidence that frequency of use had increased over the last four years. There was no association between deprivation and use of EC. 26% of young men reported that a partner had used EC.

INTERPRETATION

Young people are increasingly using school-based services and information sources such as helplines and websites to gain contraceptive advice. These types of service are able to provide young people with more anonymity and are generally easier to access compared with statutory health services. More young people are aware that contraception (including condoms) is freely available (although a large proportion remain unaware). This increased knowledge corresponds with increased use of health services to obtain supplies in men and decreased use of retail outlets. Family planning clinics and designated young people's clinics appear to be attracting the most vulnerable young people, i.e. those having sex at an early age. Local authorities rated as very good quality in terms of services provided have been particularly successful in attracting young men, a group often identified as hard to reach.

It is of concern that the proportion of young people obtaining contraceptive advice prior to first sexual intercourse, and in particular for those having sex before 16, appears to be declining over time. Those having sex under the age of 16 also appear to be less likely to use contraception at first sex. The increase in the proportion of young people having recent unprotected sex coincides with the increase in STI rates amongst young people in the UK. Although it is evident that young people's knowledge and use of different types of services has changed over the last four years, it may be too early to observe any positive changes in behaviour.

2

TOP TIER AUTHORITIES

The handicap of not having comparison areas in which there has been no Strategy-related intervention or activity is very much in evidence here. We have been obliged to compare, instead, levels of Strategy-related activity between areas and relate this to conception outcomes. Yet there has been little heterogeneity in this respect with which to differentiate between areas. As we have seen, this has been a Strategy in which energy and enthusiasm has been near universal. Moreover, some areas have done well on some dimensions, for example, education, some on others, for example, services, and a summary score tends to mask these differences.

Since 1998, 80% of all 148 local authorities (LAs) in England have seen a decrease in the rates of under-18 conceptions. In the remaining 20% of Local Authorities, the rates have increased or shown no consistent change. Under 18 conception rates, births, abortions and abortion ratios (the proportion of pregnancies terminated) were calculated for 148 top tier local authority areas of England. Analyses were made of:

i). the change in rates between the five years (1994 to 1998) preceding the Teenage Pregnancy Strategy and the four years following its launch (1999 to 2002)

ii). the rate of decline in conceptions from 1998 to 2002

These changes and trends were examined in relation to characteristics of top-tier authority level areas reflecting socio-economic factors, teenage pregnancy services, and strategy-related interventions. Only a selected subset of analyses are presented here, based on the following variables and data sources:

i. Index of Multiple Deprivation – derived from a population weighted average of values for Super Output Areas (ODPM)

ii. Unemployment rate for women aged 16 to 19 years (ONS)

iii. Population density, calculated as residents per square kilometre (ONS)

iv. Proportion of 15 year olds achieving five or more GCSEs at grades A* to C (DfES)

v. Variables reflecting the quality of coordination, media response, SRE and quality of services (assessment based on local TPS annual reports)

vi. Indicators of strategy-related activity (annual questionnaires to Teenage Pregnancy Co-ordinators)

vii. Access to young persons services (average distance between population weighted ward centroid and the nearest service (SexWise database)

viii. Local Implementation Grant (LIG) award and total strategy-related expenditure (area-based cost data)

Findings

In the five years before the introduction of the Teenage Pregnancy Strategy, 1994-98, the under 18 conception rate was 44.3 per 1000 women aged 15-17, abortions 18.0 per 1000, and births 26.4 per 1000. Compared to this baseline, conceptions were lower by 1.1 per 1000 girls under 18 years in 1999-02 and abortions were higher by 1.4 per 1000; births were lower by around 2.6 per 1000 in this period. The average rate of decline in conceptions from the peak rate in 1998, the year before the inception of the Strategy, until 2002 was 2.3% a year.

Within England, there was appreciable variation between top-tier level authorities in the average change over the period 1998 to 2002 (Figure 3.2a), although the shortness of time-period means there is considerable imprecision (wide confidence intervals) in the estimation of these trends. However, while conception rates have fallen in the majority of top-tier level authorities, rates appear to have increased in some. Among regions, London had some of the largest increases in rates and the smallest overall change.

Table 3.2a Change in under 18 conception rates, and proportion of under 18 conceptions leading to abortion, 1994-98 to 1999-2002

	No. of top-tier author-ities	Conceptions: Rate / 1000 women aged 15-17, 1994-1998	Rate / 1000 women aged 15-17, 1999-2002	Percentage change, 1994-98 to 1999-02: Unadjusted	P-value (trend)	Abortions: Percent of conceptions, 1994-1998	Percent of conceptions, 1999-2002	Odds ratios, 1999-02 compared with 1994-98: Unadjusted	P-value (trend)
Deprivation index (quartiles)									
1 (least deprived)	37	**31.7**	**31.7**	**-0.26 (-2.55 to 2.09)**	**0.01**	**47.2**	**50.6**	**1.15(1.10 to 1.19)**	**<0.001**
2	37	**41.6**	**40.4**	**-3.01 (-5.07 to -0.96)**		**41.3**	**44.8**	**1.16(1.12 to 1.20)**	
3	37	**51.7**	**50.6**	**-2.21 (-4.49 to 0.07)**		**38.3**	**43.2**	**1.21(1.17 to 1.26)**	
4 (most deprived)	37	**61.8**	**59.0**	**-4.64 (-6.68 to -2.60)**		**36.5**	**41.6**	**1.23(1.19 to 1.28)**	
Unemployment (quartiles)									
1	37	37.6	37.2	-1.31 (-3.37 to 0.79)	0.22	**42.3**	**45.4**	**1.14(1.10 to 1.18)**	**0.001**
2	37	40.1	38.9	-3.11 (-5.26 to -0.97)		**41.3**	**44.7**	**1.16(1.12 to 1.20)**	
3	37	52.4	50.7	-3.31 (-5.62 to -1.01)		**37.4**	**42.8**	**1.24(1.19 to 1.28)**	
4	37	55.4	53.9	-3.17 (-5.48 to -0.86)		**41.6**	**46.8**	**1.24(1.19 to 1.29)**	
Population density (quartiles)									
1 (lowest)	37	**37.6**	**36.2**	**-3.93 (-5.87 to -1.94)**	**0.04**	**41.2**	**44.9**	**1.16(1.12 to 1.20)**	**0.03**
2	37	**41.1**	**40.3**	**-2.18 (-4.21 to -0.14)**		**39.8**	**43.2**	**1.15(1.11 to 1.19)**	
3	37	**54.9**	**52.6**	**-4.29 (-6.46 to -2.13)**		**36.4**	**41.3**	**1.23(1.19 to 1.28)**	
4 (highest)	37	**52.4**	**52.9**	**0.68 (-1.85 to 3.21)**		**47.1**	**52.0**	**1.22(1.17 to 1.27)**	
Proportion attaining 5 GCSEs									
1 (lowest)	37	**62.2**	**59.8**	**-3.90 (-6.03 to -1.72)**	**0.03**	**36.7**	**42.3**	**1.26 (1.21 to 1.30)**	**<0.001**
2	37	**52.9**	**50.8**	**-3.93 (-6.06 to -1.80)**		**37.8**	**41.9**	**1.18 (1.14 to 1.22)**	
3	37	**39.3**	**38.8**	**-1.65 (-3.73 to 0.43)**		**42.8**	**46.3**	**1.16 (1.12 to 1.20)**	
4 (highest)	37	**32.5**	**32.3**	**-0.94 (-3.34 to 1.46)**		**46.2**	**49.6**	**1.15 (1.10 to 1.19)**	
Coordination									
Poor	16	40.4	40.1	-1.19 (-4.50 to 2.24)	0.33	42.6	46.9	1.20 (1.13 to 1.27)	0.51
Satisfactory	44	45.0	43.2	-4.45 (-6.57 to -2.32)		40.4	44.7	1.19 (1.15 to 1.24)	
Good	57	45.0	43.9	-2.78 (-4.46 to -1.10)		40.7	44.9	1.18 (1.15 to 1.22)	
Very good	31	44.4	44.1	-1.02 (-3.39 to 1.36)		40.5	44.5	1.18 (1.13 to 1.23)	
Media									
Poor	21	39.7	38.7	-2.61 (-6.08 to 0.99)	0.32	44.3	49.0	1.22 (1.15 to 1.29)	0.32
Satisfactory	52	43.7	42.5	-3.69 (-5.60 to -1.78)		40.8	45.3	1.20 (1.16 to 1.24)	
Good	42	42.4	41.5	-2.23 (-4.24 to -0.22)		40.3	43.5	1.14 (1.10 to 1.18)	
Very good	33	49.9	49.1	-1.88 (-4.02 to 0.26)		40.0	44.7	1.21 (1.16 to 1.25)	
SRE									
Poor	15	40.2	39.7	-1.58 (-5.71 to 2.73)	0.34	40.8	45.6	1.23 (1.14 to 1.32)	0.29
Satisfactory	40	42.8	40.8	-5.00 (-6.96 to -3.04)		39.6	43.5	1.18 (1.14 to 1.22)	
Good	59	42.9	42.8	-0.93 (-2.66 to 0.81)		43.3	47.1	1.17 (1.14 to 1.20)	
Very good	34	50.6	49.1	-2.94 (-5.10 to -0.78)		38.1	42.8	1.21 (1.17 to 1.26)	
Services									
Poor	10	**39.8**	**38.3**	**-4.22 (-8.87 to 0.66)**	**0.02**	39.2	42.6	1.15 (1.06 to 1.25)	0.46
Satisfactory	51	**44.1**	**42.6**	**-4.09 (-5.98 to -2.21)**		41.3	45.8	1.20 (1.16 to 1.24)	
Good	54	**43.7**	**42.8**	**-2.45 (-4.21 to -0.68)**		41.2	45.6	1.20 (1.16 to 1.23)	
Very good	33	**46.9**	**46.7**	**-0.68 (-2.95 to 1.58)**		39.7	43.3	1.16 (1.11 to 1.20)	
Summary quality score$									
0	13	46.3	44.9	-3.21 (-6.19 to -0.13)	0.12	39.4	43.3	1.18 (1.12 to 1.24)	0.79
1	38	41.2	41.2	-0.38 (-2.44 to 1.69)		43.3	47.4	1.19 (1.14 to 1.23)	
2	22	45.0	43.9	-2.69 (-5.28 to -0.11)		40.0	44.4	1.20 (1.15 to 1.25)	
3+	6	54.1	50.6	-6.95 (-10.8 to -3.09)		37.3	42.0	1.21 (1.13 to 1.30)	
Access to services (quartile)									
1 (lowest)	37	37.0	36.3	-2.15 (-4.26 to 0.01)	0.41	**42.7**	**45.7**	**1.13 (1.09 to 1.17)**	**<0.001**
2	37	42.1	40.7	-3.74 (-5.65 to -1.83)		**39.8**	**43.9**	**1.19 (1.15 to 1.23)**	
3	37	52.3	50.5	-3.54 (-5.86 to -1.22)		**36.9**	**41.1**	**1.20 (1.15 to 1.24)**	
4 (highest)	37	55.0	54.8	-0.53 (-3.06 to 2.00)		**44.2**	**49.8**	**1.25 (1.20 to 1.30)**	
Expenditure (£s/girl, quartile)*									
1 (lowest)	37	**32.7**	**33.1**	**0.87 (-1.28 to 3.07)**	**0.001**	**45.9**	**49.0**	**1.14 (1.10 to 1.18)**	**<0.001**
2	37	**40.8**	**39.7**	**-2.85 (-4.92 to -0.77)**		**42.1**	**45.8**	**1.16 (1.12 to 1.20)**	
3	37	**53.2**	**50.9**	**-4.31 (-6.44 to -2.18)**		**37.8**	**42.1**	**1.20 (1.16 to 1.24)**	
4 (highest)	37	**61.7**	**59.1**	**-4.34 (-6.41 to -2.27)**		**36.8**	**42.5**	**1.26 (1.21 to 1.30)**	

** – Local Implementation Grant $ – Based on data from local teenage pregnancy co-ordinators; data incomplete for 69 (47%) of top-tier authorities*

Figure 3.2a Change in top-tier authority under 18 conception rates, 1998 to 2002, ranked within 1999 RHA region. (Vertical bars represent 95% confidence intervals.)

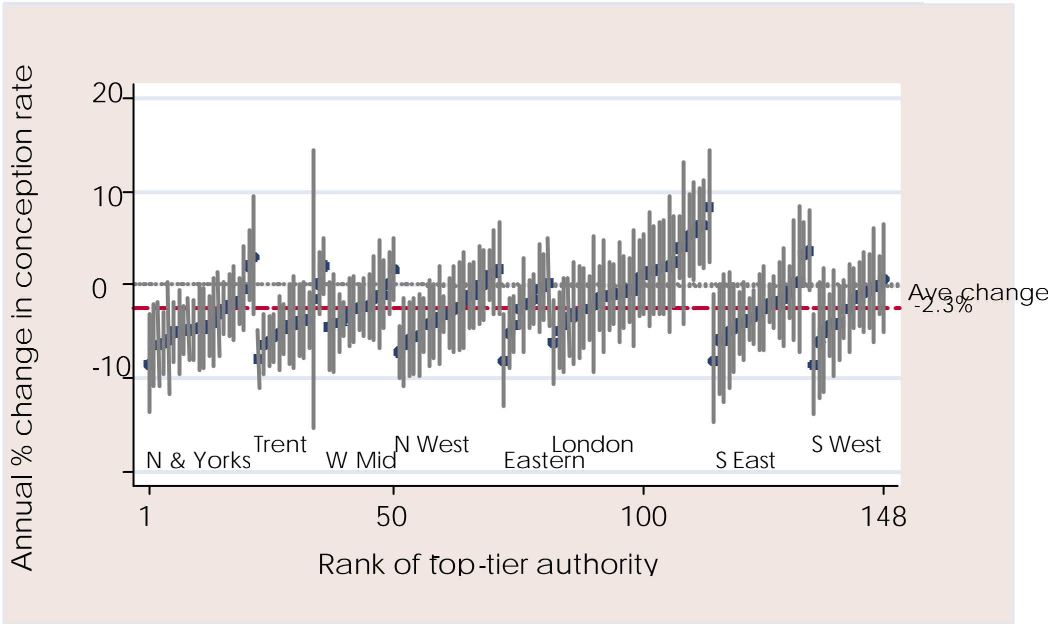


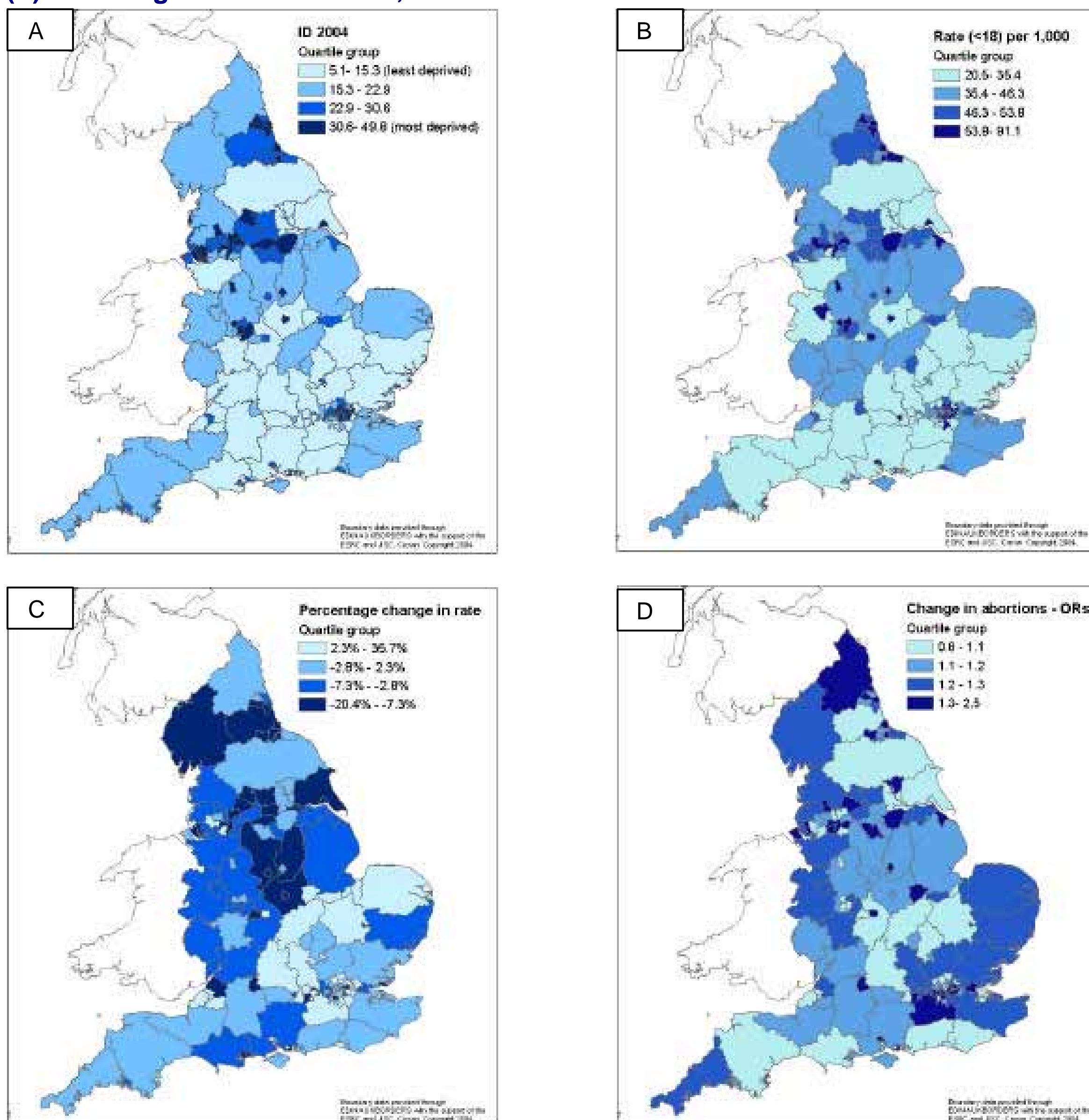
Table 3.2b Summary of change in conceptions, births and abortions, 1994-98 to 1999-02, by quartile of LIG award.

	Baseline rate, 1994-98, /1000 girls,	Unadjusted		Adjusted for region, deprivation* and baseline conception rate	
		Percentage change (95% CI)	Absolute change in rate / 1000 girls	Percentage change (95% CI)	Absolute change in rate / 1000 girls
Conceptions					
LIG quartile 1 (lowest)	32.7	1.04 (-1.13 to 3.25)	+0.3	1.88 (-1.21 to 5.07)	+0.6
LIG quartile 2	40.8	-2.67 (-4.76 to -0.57)	-1.1	-1.47 (-3.70 to 0.82)	-0.6
LIG quartile 3	53.2	-4.15 (-6.30 to -1.99)	-2.2	-3.19 (-5.58 to -0.75)	-1.7
LIG quartile 4 (highest)	61.7	-4.11 (-6.21 to -2.02)	-2.5	-5.43 (-8.00 to -2.79)	-3.4
		p-value for trend = 0.001		p-value for trend = 0.004	
Births					
LIG quartile 1 (lowest)	17.7	-5.18 (-7.67 to -2.62)	-0.9	-4.87 (-8.81 to -0.77)	-0.9
LIG quartile 2	23.7	-9.08 (-11.4 to -6.77)	-2.2	-7.90 (-10.7 to -4.99)	-1.9
LIG quartile 3	33.2	-11.1 (-13.4 to -8.81)	-3.7	-10.4 (-13.4 to -7.35)	-3.5
LIG quartile 4 (highest)	39.2	-12.9 (-15.1 to -10.7)	-5.1	-14.0 (-17.1 to -10.9)	-5.5
		p-value for trend < 0.001		p-value for trend = 0.002	
Abortions					
LIG quartile 1 (lowest)	15.0	8.04 (5.17 to 11.0)	+1.2	10.3 (5.71 to 15.0)	+1.5
LIG quartile 2	17.2	5.75 (2.82 to 8.67)	+1.0	6.99 (3.64 to 10.5)	+1.2
LIG quartile 3	20.0	6.99 (3.74 to 10.2)	+1.4	6.87 (3.20 to 10.7)	+1.4
LIG quartile 4 (highest)	22.5	10.5 (7.24 to 13.8)	+2.4	7.53 (3.32 to 11.9)	+1.7
		p-value for trend = 0.03		p-value for trend = 0.60	

** – Index of Multiple Deprivation*

Maps of top-tier level authorities in England show the correspondence between socio-economic deprivation and conception rates. (Figure 3.2b). There was some geographical correlation between the areas with the largest falls in rates between 1994-98 and 1999-02, and socio-economic deprivation, and broad correlation between the increase in abortion ratios and the fall in conceptions.

Figure 3.2b Maps of (A) socio-economic deprivation, (B) mean conception rates, 1999-02, (C) the percentage change in under 18 conception rates, 1994-98 to 1999-02, and (D) the change in abortion ratios, 1994-98 to 1999-02



The change in conceptions between 1994-98 and 1999-02 correlated with a range of characteristics of top-tier level authorities (Table 3.2a). The strongest association (in unadjusted analyses) was with socio-economic deprivation, with more deprived areas showing a substantially greater decline in rate. There was also evidence of a small urban-rural gradient in decline, with more rural areas (areas of low population density) having generally greater decline in rate than the most urban areas. This gradient disappeared with adjustment for region and socio-economic deprivation (data not tabulated).

Educational attainment, as reflected in the proportion of 15 year old children attaining five or more GCSEs at grades A* to C, was negatively correlated with the decline in

conceptions, which is consistent with the positive association observed between socio-economic deprivation and the magnitude of the decline in rate.

Conception rates were also analysed in relation to assessments of the quality of local teenage pregnancy strategies made by regional panels from local co-ordinators' annual reports. Their four-point ratings (poor to very good) for (i) coordination, (ii) media and (iii) sex and relationships education, were not clearly associated with the decline in conception rates. Nor was a summary score for quality of the local strategy based on a number of variables included in annual questionnaires to Teenage Pregnancy Co-ordinators.

The rating of local services was apparently correlated with the change in conception rates, but in counter-intuitive fashion, with larger declines in top-tier level authorities rates as having poor services, and smaller declines in areas with good or very good services. This may be a chance finding within the context of multiple comparisons. There was no convincing evidence either of variation in the rate of decline in conceptions and geographical proximity to dedicated young persons services.

Expenditure on the Teenage Pregnancy Strategy, as reflected by the size of the Local Implementation Grant award per 1000 girls, was however strongly related to the direction and magnitude of the change in conceptions. Top-tier authorities in the lowest quartile of LIG award in fact had a slight increase in conception rates between 1994-98 and 1999-02, while those in the top quartile of LIG award had a substantial fall. There was clear evidence of a trend of greater reduction with greater expenditure. Financial resources were allocated by the scale of the problem, as measured by under 18 teenage pregnancy rates. In terms of cost-effectiveness, the observed variation with LIG may well be simply a reflection of the increased activity contingent on increased financial resources, but it is gratifying to see that higher levels of investment appear to have brought about sharper decreases in under 18 conception rates.

Changes (increases) in abortion ratios showed correlations with a similar range of top-tier level authority characteristics to the change in conceptions. Thus, the increase in abortion ratios was greater in more deprived areas, and in areas with poorer educational attainment. There was a small urban-rural gradient, though here the most urban areas had the largest increase. None of the measures of quality of the local strategy were associated with change in abortion ratios, nor was access to services.

In parallel with the findings for conception rates, there was a clear association between LIG expenditure and the increase in abortion ratios, which remained after adjustment for region, socio-economic deprivation and baseline conception rates (data not shown). The rise in abortion ratios in combination with the encouraging, but modest, reduction in conception rates resulted in a comparatively large reduction in births (9.7%) between 1994-98 and 1999-02. The reduction in births per 1000 girls was greatest in relative and absolute terms in top-tier level authorities which received the largest LIG awards. This was apparent with and without adjustment for region, socio-economic deprivation and baseline conception rates.

Births fell in each quartile of the LIG award, but in the lowest quartile of LIG award, this was entirely attributable to the rise in abortions, while in areas with the largest LIG award, it was the reduction in conceptions that contributed most.

The (absolute) change in numbers of conceptions, births and abortions /1000 girls by quartile of LIG award are shown in Table 3.2a. The gradient in avoided conceptions and births provides encouraging but uncertain evidence of Strategy-related impact.

Table 3.2c Summary of characteristics of 16 in-depth areas

	Deprivation and conception rates								Implementation																
	Deprivation quintile	Population density (quintile)	Conception rate (quintile)	Conception rate 1998	Conception rate 1999	Conception rate 2000	Conception rate 2001	% change 1998-2001	Other interventions	Co-ordinator's start date	1st meeting Partnership Board	TP Strategy < 2000	SH Strategy < 2000	Frequency PB meetings	FTE of co-ordinator	Total LIF/LCF (2000 -2002) £ / K	YP Involvement	Local campaign	Response to media	% Schools adopted SRE guidelines	PSHE co-ordinator in post	Teacher training in place	Dedicated YP SH services	% services met all TPU criteria*	Re-integration Officer in post
Area 1	2	3	3	55.9	46.2	43.0	44.2	-20.9	HAZ, SS (+), CS	Q4, 00	04/00	x	✓	9pa	0.4	152	✓	x	x	29	✓	✓	✓	100	x
Area 2	4	2	5	75.0	67.5	70.0	59.6	-20.6	EC, HAZ, SS (+), CS	Q1, 00	1997	✓	✓	12pa	2 x 0.25	310	✓	x	✓	53	✓	✓	✓	100	x
Area 3	1	1	1	31.5	27.8	27.2	31.3	*-0.4*	CS, SS	Q1, 00	04/01	x	✓	2pa	2 x 0.40	116	✓	✓	✓	30	x	x	✓	23	x
Area 4	2	1	2	40.0	39.2	38.7	30.7	-23.2	CS, SS	Q1, 00	10/01	✓	✓	6pa	1.0	185	✓	✓	✓	48	✓	✓	✓	43	✓
Area 5	2	1	2	41.8	35.8	35.3	37.4	*-10.4*	CS, EAZ, SS	Q1, 00	06/00	x	✓	4pa	1.0	170	x	x	✓	52	✓	✓	✓	100	✓
Area 6	5	3	5	78.4	83.5	58.3	63.1	-19.4	SS (+), HAZ, CS	Q1, 00	01/01	✓	✓	4pa	0.5	197	✓	✓	x	17	✓	✓	x	n/a	✓
Area 7	4	5	3	41.8	46.2	44.3	44.2	-12.2	EC, HAZ, CS, SS	Q1,01	9/01	x	x	4pa	1.2	90	✓	✓	✓	33	x	✓	✓	88	x
Area 8	2	5	3	50.5	39.2	46.5	44.9	-11.1	CS, SS	n/a	n/a	x	x	no PB	n/a	139	x	x	x	55	#	#	#	n/a	?
Area 9	5	4	5	54.4	61.60	58.7	59.3	*9.1*	CS, EC, SS (+), NDC, HAZ	Q1,00	2001	x	✓	6pa	1.5	185	x	✓	x	29	x	✓	✓	n/a	x
Area 10	5	5	5	56.2	54.1	55.6	57.2	*1.8*	E/HAZ, EC, SS (+), EEC, NDC, CS	Q2;00	08/00	x	✓	9pa	1.0	290	✓	✓	x	47	x	✓	✓	13	✓
Area 11	3	1	4	54.0	56.8	45.2	46.3	-14.2	CS, SS	Q2/00	08/00	x	✓	9pa	1.0	227	✓	✓	✓	54	✓	✓	✓	n/a	✓
Area 12	3	2	3	57.4	51.9	47.4	52.7	*-8.2*	CS, SS	Q2,00	10/00	x	x	9pa	0.6	135	✓	✓	x	23	✓	x	✓	33	x
Area 13	3	5	4	54.3	53.0	39.1	47.7	-12.2	CS, EEC, HAZ, SS	Q2,00	04/00	x	x	4pa	0.5	185	✓	✓	✓	40	✓	✓	✓	40	x
Area 14	3	3	2	34.5	38.2	39.9	33.1	*-4.1*	CS, EC, HAZ, SS (+)	Q2,00	01/02	x	x	9pa	1.0	160	✓	✓	x	32	x	✓	✓	n/a	x
Area 15	2	1	1	34.1	33.7	28.7	31.6	*-7.2*	EAZ, CS	Q1,01	02/01	x	✓	3/4pa	0.4	89	✓	x	✓	41	x	✓	✓	100	x
Area 16	4	4	5	67.4	58.7	63.5	62.9	*-6.7*	CS, E/HAZ, EC, SS (+), NDC	Q1/00	02/01	x	✓	9pa	2.4	310	✓	x	✓	56	x	✓	x	100	x

Red figures denote a decline in under the 18 conception rate, greater than that for England as a whole, and those in blue denote a lesser decline or an increase.

16 in depth areas

Our examination of 16 local areas in greater depth, and the more focussed work we carried out in eight areas characterised by increasing and decreasing conception rates, further reveals the complexity of influences on teenage conception rates.

When all characteristics of the areas were summarised (Table 3.2c) it was frustratingly difficult to identify factors which might have made a difference in terms of the main outcome, that is, the conception rate. There were areas, (Area 4, for example) in which the level of local activity, expertise, and tradition of managing sexual health problems seemed entirely consistent with the marked (23%) decrease in conception rates. But there were others (Area 5, for example), in which co-ordination and implementation had been exemplary, yet the decrease was only just in line with the decrease for the country as a whole. There were also areas (Area 8, for example) in which co-ordination and implementation were, on the admission of those involved, in disarray, in which there was no continuity in co-ordination, poor knowledge of the Strategy on the part of key players, and from which we received little in the way of data[7], yet the decrease in conception rates was marginally higher than in England as a whole. We see clearly in the area reports the problems involved in looking to single attributes of the Strategy to explain outcomes, key appointments being one example.

8 focussed areas

Our methodology here differed in so far as we made site visits, asking local representatives for their explanations of conception rate changes in six of the 16 areas selected for in depth analysis, together with the area from all 148 LAs with the highest rate decrease during the period 1998 to 2002 and the area with the largest increase (see Chapter 1). Again, our findings counselled caution in interpreting trends over a short time period. Figures are unstable in areas in which the numbers of conceptions is small and a rise or fall of only a small number of women becoming pregnant in any year can make a great deal of difference to the rates. Much depends on whether the baseline year, 1998, coincided with a peak or a trough. Furthermore, in some areas of high teenage conception rates, preventive interventions had already been set up in the 1990s, and under-18 conception rates had fallen appreciably between 1992 and 1998. In these areas, much of the rate reduction which was amenable to early preventive interventions may already have been achieved by the start of the Strategy, so that what remained was the more intractable increment related to the wider socio-economic determinants of teenage pregnancy.

In terms of implementation and co-ordination of the Strategy, no clear pattern seemed to separate the areas which were more and less successful in reaching the goals of the Strategy during the period in question. Factors which were thought by those we interviewed to have made a difference related to the extent to which co-ordinators possessed clout in the area, the priority of the issue of teenage pregnancy on the local public health agenda, and the extent of collaboration or joint working.

[7] In general, the quality of the information provided to the team is likely to be related to the quality and extent of intervention activity.

Changes in the demographic composition of the area were seen to have impacted on the rates, but the local culture appeared to operate through social norms, particularly those relating to early childbearing, which are difficult to shift, and typical of the old industrial areas in the country.

A strong impression from this work was of the overwhelming importance of the socio-economic context in explaining differences in rates. Areas with larger inner city populations and multiple problems of deprivation, high crime rates, poor educational attendance and achievement, poor housing and instability, feature more prominently among areas with static or rising rates than among those with falling rates. In areas with multiple social problems, not only does the Teenage Pregnancy Strategy compete constantly with other important agendas, but the wider social determinants of teenage pregnancy are also more intractable than those relating more proximately to individual risk reduction. In some areas, teenage pregnancy, which may not be seen as a problem by the local community, is the last of the public health worries.

Figure 3.2c Area 7, the wider context

Area 7 illustrates the importance of wider contextual factors influencing teenage pregnancy rates. A large marina has been built promoting leisure and tourism. With urban renewal and regeneration, problems of poverty, unemployment and crime are diminishing. The gradual erosion of traditional norms relating to childbearing, an increasingly optimistic economy and close knit networks in terms of teenage pregnancy work, have contributed to sharp declines in conception rates in recent years.

There are obvious pitfalls in interpreting data retrospectively, not least those relating to the use of hindsight wisdom to identify factors which may have contributed to what are known to be changes. Yet it seems clear that a complex set of variables interacts to reduce or increase conception rates and that the explanation for differences between areas must be multi factorial. We summarise, below, the factors we identified as characterising areas with increasing and decreasing rates.

Increasing rates	Decreasing rates
Base line statistics unfavourable	Base rate favourable to interpretation
Population instability	Small population size
Multiple deprivation indices	Increasing affluence in area
Socio-economic heterogeneity	Access to YP's sexual health services
Social norms favouring early motherhood	Strong, senior co-ordination
History of effective preven tative work predating Strategy	Effective partnerships
Delay in start of Strategy	Prompt start to Strategy
Junior co-ordinator	Support from LEA
Local opposition to Strategy	Local support for the Strategy
Organisational change unhelpful	Organisational change helpful

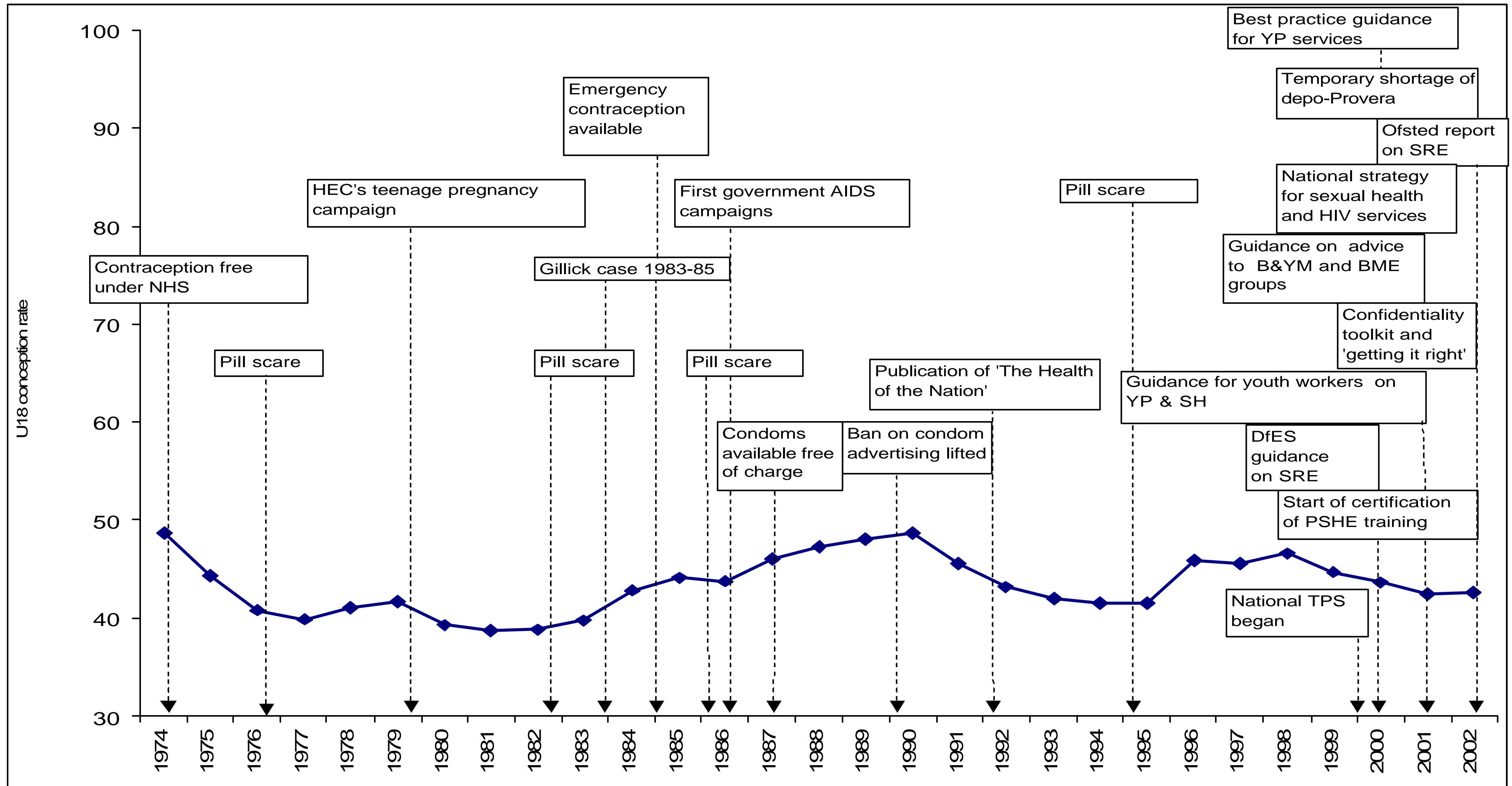
Though essentially impressionistic, this exercise suggests that differences between areas in terms of meeting Strategy targets cannot be explained simply with reference to single factors, such as support from a highly placed policymaker or the absence of a co-ordinator. Rather, in the areas in which most progress has been made, many of the apparently facilitating factors are present, and in those in which least has been made, many are absent. As we have seen, not only can the Strategy not explain all the change, but there is a good deal of interaction between the local context and the interventions.

3 3

Figure 3.3a shows the trend in the rate of under 18 conceptions over the past three decades. The longer term trend shows the tail end of the sharp decline in the conception rate in the 1970s, a decade in which contraception became available free of charge on the NHS to all women, regardless of marital status and ability to pay. Thereafter, the trend has tended to fluctuate within fairly narrow bands. The decrease in the conception rate in the 1970s was halted by two 'pill scares' in the 1980s, one occurring in 1983 the other in 1986. The upward trend was not interrupted by the Gillick case of 1983 to 1985, when Mrs Victoria Gillick brought an (ultimately unsuccessful) action against her local health authority aimed at preventing local practitioners from prescribing contraception without parental permission.

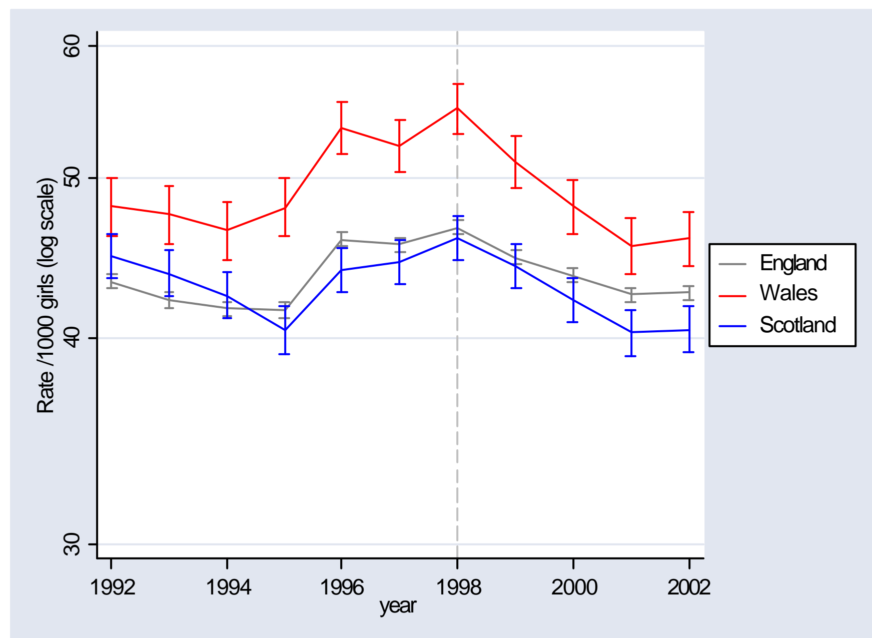
The decline in the rate in the early 1990s began before, but its continuation was coincidental with, the publication of 'The Health of the Nation' which included a target for the reduction of under 16 conceptions, prompting an increase of 83% in the number of sexual health services for young people. The downward trend was interrupted by a further pill scare in 1996. What cannot at this stage, be determined with confidence, is whether the subsequent decline, from 1998 to 2001, is attributable to the Teenage Pregnancy Strategy, whether it represents merely a 'correction' to the pill scare-related rise, or both. One factor which will almost certainly have influenced the slowing of the downward trend in 2002 is the shortage of supplies of Depo-Provera in October of that year.

Figure 3.3a Under 18 conception rate and related key events, England 1974-2002



In the absence of opportunities at sub-national level for comparing areas with and without interventions, we have used international comparisons to help address the issue of counter factuality, that is, whether the decrease in conceptions would have occurred in the absence of a Teenage Pregnancy Strategy. Adjacent home countries provide some opportunities for comparison, but both Scotland and Wales have their own sexual health interventions, which include a focus on teenage pregnancy and, additionally, publicity given to the English Strategy has no doubt influenced public opinion North and West of the border.

Figure 3.4a Comparison of under 18 conception rates for England, Wales and Scotland, 1992 to 2002



The rate of decline from the 1998 peak was broadly similar in England Scotland and Wales, and in all three countries the peak followed a similar rise in conception rates.

Recent Statistics

As yet, we are hampered in this task by lack of up to date comparison data. The most recent year for which a standardised data set on teenage pregnancy for all European countries is available is 2000, the first full year in which the Teenage Pregnancy Strategy was in operation in this country. Moreover, the data which are available do not generally relate to the age group of greatest interest in the domestic context. Because the preventive focus in England has been on under 18 conceptions, the ONS have made available data relating to this age group here, but this is not the case in other countries. The age groups available for comparison relate to 15 years and under, and 16 to 19 years. From our site visits, however, we have been able to obtain some data and to draw some generalisations about the general situation with regard to teenage pregnancies in the countries selected for comparison, that is, Denmark, France, Germany, the Netherlands and Switzerland.

Figure 3.4b Births per 1000 women aged under 20 in selected countries

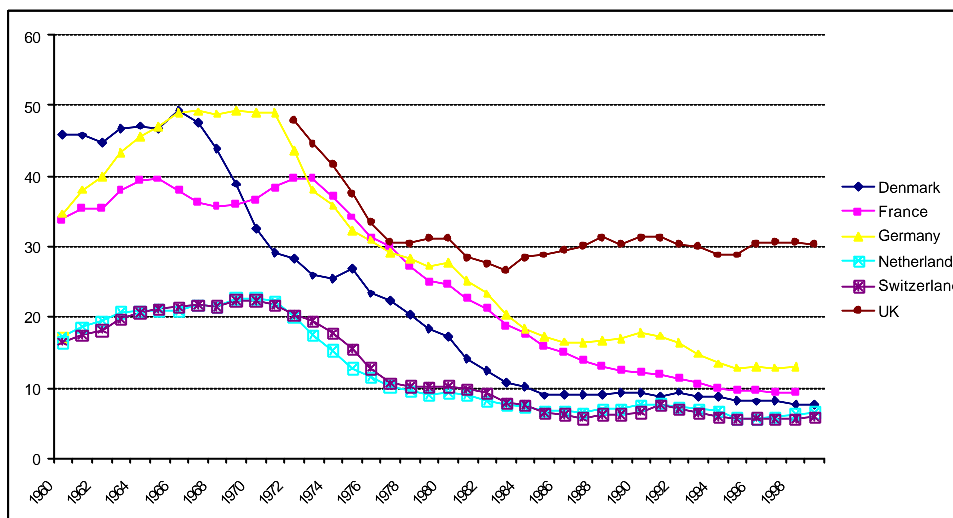


Figure 3.4b shows not only how very much higher teenage birth rates are in the UK relative to the comparison countries, but also that the halt to the decline seen in the 1970s occurred here a decade or so earlier than it did in other countries. By the 1990s rates were relatively stable in all countries. In Switzerland and Denmark the stabilisation continues, and there is no sign of a recent upturn. In France, the Netherlands and in Germany however, there have been signs of an increase in recent years (Table 3.4a and Figure 3.4b).

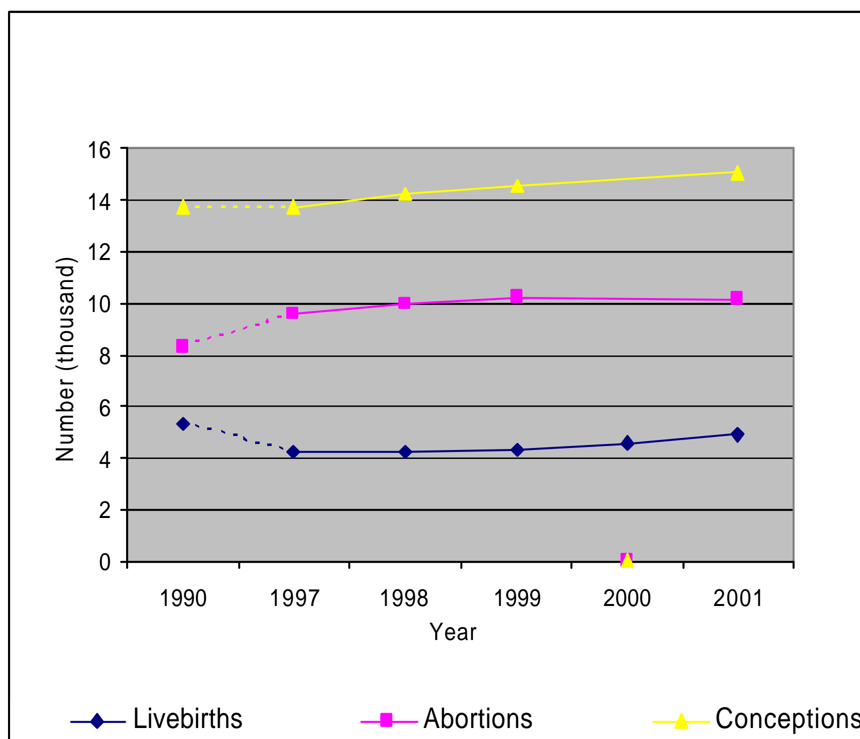
In France, a steep decrease in teenage conceptions occurred in the 1980s, affecting both live birth rates and, to a lesser extent, abortion rates, which continued until 1997. Since then there has been an increase in under 18 conceptions, mostly accounted for by live births. England is the only one of the six countries to have seen a recent fall, though it should also be said that it was also the only one which saw a rise attendant on the 1996 pill scare. The Dutch media reportedly provoked some mistrust of the pill at the time, but condoms have always been free of charge in the Netherlands and their use among teenagers high.

Table 3.4a Teenage abortion, pregnancy and birth rates in the Netherlands 1980-2003

	Birth rate	Abortion rate	Pregnancy rate
1980	9.2	5.3	14.5
1985	5.0	4.4	9.4
1990	6.4	4.0	10.4
1992	5.8	4.2	10.0
2000	5.5	8.6	14.1
2001	5.9	10.3	16.2
2002	5.8	10.4	16.2
2003	-	8.8	-

(per 1,000 women aged 15-19)

Figure 3.4c Under 18 abortion, pregnancy and birth rates in France 1991 - 2001



The abortion ratio, the proportion of pregnancies that are terminated, has increased in all six countries, with the exception of Denmark and France. It has increased in England too, from 40.5% of all under 18 pregnancies in the period 1992-1997 to 44.9% in the period 1998-2002, but it is still considerably lower than it is in other European countries, in most of which it is nearer 60% (Tables 3.4a and 3.4b). Abortion figures in France are unreliable at present, for a number of reasons, but although the abortion ratio was increasing until the late 1990s, this is not seen for the most recent time period (Table 3.4b).

Abortion rates in Denmark have been decreasing, but have stabilised at around 10 per 1000 under 20-year-old women (11.3 in 1992; 10.2 in 2002). The continued decrease in the conception rate is largely accounted for by a further decrease in the teenage birth rate. Around 60% of pregnant teenagers terminate their pregnancy and this has changed little in the past 30 years.

Table 3.4b Ratio of live births to abortions among under 18 year olds in France

Year	1990	1997	1998	1999	2001
Live births	39.2%	31.5%	29.6%	29.7%	32.5%
Abortions	60.8%	69.5%	70.4%	70.3%	67.5%

The abortion ratio in Germany is lower, but increasing. 49.8% of under 16 year olds terminated their pregnancies in 1996, and by 2001 this number had risen to 59.1%.

RISK BEHAVIOUR

Increasing risk behaviours amongst young people are described in all six countries as is the increasing sexualisation of society in the past 5-10 years. However, age at first intercourse is said to be stabilising in most of the countries and in Denmark there is evidence that it is thought to be falling slightly. The median age in England (16) is not lower than in other countries (with the exception of the Netherlands where it is 17), and the prevalence of contraceptive use at first intercourse is higher in England than it is in other countries (89% according to Natsal, compared with 75% in Germany and 76% in Denmark). The major difference in England appears to be in the prevalence of early intercourse (i.e. before 16) and that of current use of contraception. According to data from the HSBC report recently published by WHO Europe, 40.4% of 15 year old girls (vs. 29% TPSE and 26% Natsal 2000), in England have had sexual intercourse, compared with 33.5% in Germany, 21.6% in the Netherlands, 20.6% in Switzerland and 18.3% in France, and an average for all European countries surveyed of 20.2%. The estimates for the proportion of young women who are sexually active before the age of 16 are considerably higher than those found in Natsal 2000, and as absolute figures should therefore perhaps be regarded with caution. However, the methodology used in the WHO study was the same for each of the countries studied and so comparisons between countries should be valid.

According to the WHO study, England also compares unfavourably in terms of rates of contraceptive use at first intercourse. The proportion of 15 year old women who used some method of contraception at last intercourse was 97% in the Netherlands, 92.5% in France, 94.9% in Germany, 95.2% in Switzerland and 87.5% in England. The European average was 84.6%.

CONTEXTUAL FACTORS

The movement or mixing of populations has had implications for teenage pregnancy rates in nearly all these countries. In Germany, for example, reunification has had major implications for sexual health, since East and West Germany each had differences in legislation with regard to abortion, agendas for sexual health education and customs and attitudes relating to sexual behaviour. This is held by some to account for increasing teenage pregnancy rates in Germany. Others attribute the rise to higher rates among immigrant populations, particularly the Turkish community, though there is no hard evidence that this is the case. Unification no doubt partly accounts for the increase in the abortion ratio in Germany, termination having been more accepted in East Germany, and perceived as a method of contraception.

The Dutch attribute their rise in teenage pregnancy rates partly to a rise in immigrant populations in the Netherlands particularly amongst Antillean, Suriname and African women. Only 38% of teenage abortions in the Netherlands in 2003 were to Dutch women, the rest were to women from other countries. Additionally, the increasingly multi-cultural landscape of the classroom, particularly in urban areas of the Netherlands, has reportedly led to an increasing reluctance on the part of teachers to instruct classes with large proportions of Islamic students, these students being less likely to receive sex education at home.

The abortion ratio is held to have been pushed up in Switzerland by immigrants. In a survey in the Canton of Vaud, requests for an abortion were two to three times higher

among non-Swiss than Swiss women. In Germany, the reverse is true; abortion services are more likely to be used by German girls, and non-Germans are more likely to carry the pregnancy to term.

Poverty Only in Germany were reports of a declining economy linked with increasing teenage pregnancy rates. An increasing deficit and unemployment problems (in some parts of eastern Germany, the rate is as high as 20%) are said to have reduced opportunities for young people.

Interestingly, spokespersons in the countries visited ventured their own explanations for the higher teenage conception rates in England. These were couched in terms of polarisation of rich and poor and the existence of pockets of serious poverty (Danish spokespersons) and a multi-ethnic and more socially diverse population (Swiss spokespersons). These are, apparently, the ways in which the differences are portrayed in the media in other European countries. Discussion in the Swiss press around high rates of teenage pregnancy in the UK and the US have reportedly brought the issue into the public domain.

Education In Switzerland and Denmark, there is said to be an increasingly strong 'culture of career' such that career comes before family. Students in Switzerland are reported to be some of the most satisfied students in Europe. Denmark particularly has seen an egalitarian expansion of education during the last twenty or thirty years. In Germany, the assurance of further education has decreased dramatically recently because of high unemployment levels.

Public attitudes towards sexuality and teenage pregnancy In none of the five European comparison countries was attention specifically drawn to sensational media coverage of issues relating to sexuality, and England appears to be unique in the extent to which successive 'moral panics' around teenage sexuality have been witnessed. General attitudes towards teenage mothers appear to become more lenient in countries in which rates have risen, in Germany for example. Teenage pregnancy is also rather well tolerated in Switzerland, that is, it is not stigmatised. By contrast, early motherhood is met with prejudice and some repugnance in Denmark even among vulnerable young women from lower social classes; it is certainly not seen as "cool" to get pregnant.

PUBLIC HEALTH INTERVENTIONS

Sexual health service provision

Abortion is legal in all six countries, though only recently so in Germany, where a compromise had to be arrived between East Germany (where abortion during the first trimester was legalized in 1972 with costs paid for by the state) and West Germany (where abortion on social grounds was largely illegal for most of the postwar period) such that women undergoing abortion are not prosecuted providing they undergo counselling. Law and practice relating to abortion provision has recently become more liberal in Switzerland (where a new facilitating law was passed in 2002) and in France (see below).

Contraceptive provision Contraception is free to young people in all these countries, with the exception of Denmark, where young people have to pay for their supplies. Contraception was until recently free of charge to people of all ages in the Netherlands, but since has been taken off the Sick Fund. In January 2004, the Dutch government

removed all contraceptive provision from the Sick Fund to little public reaction. Free contraceptive provision is still available for under 21 year olds.

Confidentiality There is some variation in rules relating to parental consent across the countries. In Switzerland it varies with canton and though it is common practice among Danish GPs to prescribe contraception to under 15 year olds and confidentiality is guaranteed, nevertheless young women under the age of 18 need their parent's permission before seeking an abortion. But there have been no major changes relating to confidentiality which might help explain changes in conception rates.

Sexual health services are available for teenagers in drop in centres in Germany where sexuality and relationship counselling is offered, and free condoms. In both Denmark and the Netherlands, sexual health clinics are being reduced in number. Only three are left in Denmark and seven in the Netherlands. In 1980, there were 30 sexual health clinics (Rutgers Stichting Centred) in the Netherlands. School nurses are available in Denmark. Very few dedicated young people's services exist in France, but access to contraception for young people is free, anonymous and confidential, and a proactive approach to school based health programmes , including contraceptive provision, has recently been adopted.

Sexual health education

Nowhere amongst the five comparison countries did sex education appear to stir the controversy it does in this country. In Denmark, reception for sexual health education programmes has improved and there is comparatively little dissent. Sex education is mandatory on the school curriculum in Denmark for primary schools and in the 1st year in high schools. Despite its long tradition for providing sex education and information to young people, Denmark is still revising its programmes. The National Board of Health and the Danish FPA are currently evaluating the sex education situation, and will make recommendations for a new national strategy.

In Switzerland, another country in which sex education has a long tradition, there are reports of mothers taking their daughters to the same FP clinics to which they themselves first attended for contraception, and in many Cantons, provision of sex education begins at age 5-6. In Germany too, in the last fifteen years, the state health education agency, the BZgA, has begun a sex education initiative at a younger age. Two and three year old children in kindergarten are targeted to increase knowledge of their bodies. Reception for programmes has improved and there is comparatively little dissent.

Sex education is not mandatory in France, and is largely biological in focus. Legal efforts have been made to improve coverage requiring, from July 2001, that a minimum of three sessions of sex education per year should be made available from 3-4 years to 18 years. This reportedly remains insufficiently implemented.

Dutch society had a positive attitude towards sexuality and successfully fought for sex education during the 1970s and 1980s, so that by the 1980s, sex education was universal in the schools. But previously exemplary models of sex education have not been updated and some professionals believe the declining quality of sex education to be the reason for the recent increase in teenage pregnancy in the Netherlands.

SPECIFIC INTERVENTIONS AIMED AT PREVENTING TEENAGE PREGNANCY

In countries in which teenage pregnancy is not a public health problem, it tends not to be on the policy agenda as such. There are no public health initiatives addressing the issue of teenage pregnancy in the Netherlands and Switzerland, nor in Germany. France and

Switzerland had intensive and effective HIV/AIDS campaigns in the 1980s and 1990s, which kept sexual health issues to the fore, and these have been credited with the continued decrease in teenage conceptions into the 1990s.

Although rates of teenage pregnancy are still relatively low in France, despite the recent increase, the issue is of concern to the government. In 1997, the French Ministry of Employment and Solidarity announced a government plan of action to improve access to contraception and abortion particularly, but not specifically, for adolescents. A mass media campaign was launched in 2000, with the aim of informing the French population on contraception. Evaluation suggested that this did not reach the target groups as effectively as had been hoped, and a second campaign was launched in 2000. Almost simultaneously, legislative changes and public health measures were introduced to improve access to information and services. The evaluation of this is not yet available.

In Denmark, the concern has been not with teenage pregnancy but unplanned pregnancy, since abortion rates are higher than is thought acceptable, and the recent public health focus has been on abortion. In 1993-1996 the project “Fewer unwanted pregnancies” funded by the Ministry of Health set out, mainly through campaigns, to reduce the number of abortions among 15 to 29 year olds. More recently, an “Abortion Strategy” (1999) has focused more explicitly on reducing the abortion rates and runs from 2002-2005. This strategy mainly focuses on 20-30 year olds, who account for the highest number of abortions.

The Netherlands is notable in this context as an example of a country in which the eye has perhaps been taken off the ball. The Dutch approach to sexuality has traditionally been one of pragmatic liberality, and to date Dutch sexual health programmes have been the envy of other countries. Great awareness in the 1970s and 1980s of teenage pregnancy and abortion led to measures being introduced to prevent teen pregnancy and abortion and other countries came to the Netherlands to learn from Dutch successes. There was, as a result, always funding and support for sexual health services. Because of their success perhaps, teenage pregnancy is uncommon and therefore no longer a major policy issue in the Netherlands. Over the past decade, however, programmatic and policy changes have occurred in the opposite direction to those in England. These include the closure of majority of sexual health clinics, removal of free contraception from the Sick Fund, and failure to update sex education programmes. At the same time, the impact of HIV/AIDS campaigns is wearing off. Teenage pregnancy and abortion rates have increased over the past decade but it is now difficult to mobilise people and resources for a problem that is perceived not to exist. The question now facing the Netherlands is not how to reduce teen pregnancy and abortion, but how to maintain low rates over time.

Interpretation

Despite the absence of up to date figures which would make possible a systematic comparison of trends occurring in the selected countries during the period of the Teenage Pregnancy Strategy, these data nevertheless enable us to make some observations relating to the recent time period. It is noteworthy that, during a period in which teenage pregnancy rates have either stabilised or increased in the comparison countries, those in England have declined. During the period in which the Teenage Pregnancy Strategy has been in existence in England, only in France has an initiative to reduce rates of prevent teenage pregnancy been launched, and this has taken the form of a media campaign rather than a comprehensive programme of preventive action.

The higher rates of teenage pregnancy in England are chiefly attributed by those in other countries to higher levels of deprivation and poverty, and to more widespread inequalities, in this country. Yet there is evidence of other factors having contributed to lower rates in other European countries. The comparison countries in which teenage pregnancy rates have remained low appear to be characterised by ample educational and career opportunities, and a high value placed on the achievement of young women; by the widespread provision of sex education, unaccompanied by controversy and political resistance; by an absence of conflicting and confusing media representations of sexuality, particularly amongst the young; and by good access to sexual health services. It is salutary perhaps that the country in which there has recently been a degree of dismantling of sex education and sexual health services for young people is already beginning to experience an increase in teenage pregnancy rates.

An inescapable conclusion of this comparison exercise is that the increased risk of teenage pregnancy in England is, in part at least, accounted for by the fact that young people in England have sex at younger ages than their peers in other European countries, and are less likely to use contraception at most recent occasion of sex. Given the high levels of regret amongst young people who have sex at an early age, there would seem to be considerable potential in public health approaches which equip them to delay becoming sexually active until they are personally ready to do so.

3.5 The economic evaluation of the Teenage Pregnancy Strategy

Conventionally, an economic evaluation involves a comparison of two or more alternatives in terms of their costs **and** effects. The result is then usually reported as a cost-effectiveness ratio, hopefully to provide some evidence of the relative "value for money" or efficiency of the alternatives. This report summarises the economic evaluation of the Teenage Pregnancy Strategy (TPS) up to 2003-04 where the comparator option is ***no strategy***.

The UK government established the Teenage Pregnancy Strategy in response to rates of teenage pregnancy which were the highest in Western Europe with the rationale being that this was "bad for both parents and children". The objective of the TPS included, naturally, a reduction in teenage conceptions and ambitious targets were set for 2004 and 2010. However, the TPS also aimed to mitigate the adverse social and economic effects of being a teenage parent by offering better support. So the TPS also sought to provide improved opportunities for teenage mothers to remain in education, employment and training and to provide supported housing for teenage mothers no longer living at home.

In practice the TPS is an umbrella for myriad interventions, all potentially varying in terms of their cost-effectiveness. Part of the TPS is a National Media Campaign and part of the overall funding is allocated towards this. However, the majority of the TPS is implemented through England's 148 top tier local authorities, each of which has a ten-year teenage pregnancy strategy in place. Each year of the TPS these authorities are allocated a **Local Implementation Grant** (initially the award had 2 parts – Local Implementation Fund and Local Co-ordination Fund) which they are able to use to fund new initiatives, support and extend existing services, and provide effective co-ordination of the local strategy.

It is important at the outset to be aware of the considerable methodological problems in measuring the costs and effects of a complex intervention like the TPS:

I. **the counter-factual** – the comparator against which the TPS is being evaluated is no strategy, but the incremental costs and effects of TPS relative to no strategy is largely a matter of conjecture and assumption, rather than empirical observation.

II. **'noise' and attribution** – the determinants of the effects (and the costs arising from them) is complex and may be subject to an amount of random or unexplainable variation. This makes is difficult to attribute particular changes within the time period to the Strategy. This problem is compounded by the relative short period of the evaluation making it difficult to discern any longer term trends within the 'noise'.

III. **averted versus delayed births** – to the extent that reductions in teenage conceptions are attributed to the TPS, what proportion of teenage births prevented are permanently averted, leading to a concomitant fall in the overall birth rate, and what proportion are deferred to later in life? An economic evaluation of deferred conception/birth differs markedly from one of averted births. The latter must also consider the loss of human capital which generally makes human reproduction a cost effective activity!

IV. **No single measure of effect** – the TPS has multiple objectives but it is difficult, if not impossible, to sum these into a single measure of effect in order to derive a single cost-effectiveness ratio. Whilst it may be possible to

produce different cost-effectiveness ratios for different objectives this ideally requires that the different components of the strategy don't have elements of joint production[8] and that resources allocated to producing different objectives can be clearly identified. Using the total cost for different ratios will lead to the cost-effectiveness ratio being biased upwards.

V. **Wider societal impact** – teenage pregnancy is seen by the government as part of the wider problem of social exclusion, leading to, among other things, mental health problems, educational problems and crime. To truly assess the cost-effectiveness of the TPS it is necessary to be able to reasonably quantify the wider 'downstream' societal costs and effects of the TPS. This would be an incredibly complex task even if the problem of attributing the more immediate costs and effects to the TPS did not exist.

COSTING THE STRATEGY

At one level this is quite a straightforward exercise as it is a simple matter to add up the sums that the government has allocated to the TPS in a "top-down" fashion. However, it is the net cost of the strategy which is of crucial importance to the economic evaluation but analysis of this gets increasingly complicated as more distant societal end-points are considered. However, for the purposes of this evaluation it was agreed that analysis would be restricted to the immediate costs of the strategy to the government, including any savings made by the NHS as a result of a reduction in teenage conceptions. It was also agreed that, as a separate exercise, we would consider the potential savings that the government could expect in terms of state benefits as a result of the strategy. The various cost elements are listed below:

- Teenage Pregnancy Strategy Programme Budget[9]
- Local Implementation Grants
- Including allocation to media, prevention/SRE, support
- Other sources of funding used to support local teenage pregnancy strategies
- Savings to NHS
- State Benefit 'savings'

The direct government support for the strategy includes the expenditure on the TPS Programme Budget and Local Implementation Grant. The total annual spend is given in Table 3.5a

[8] Joint production is the production of two or more outputs from a single resource or economic activity. For example, part of the funding of the strategy was to facilitate co-ordination and this could potentially impact on a number of strategy outputs.
[9] This includes the national media campaign and helpline, funding of the regional co-ordinators, and centrally funded work such as the PSHE certification programme and Getting it Right initiative

Table 3.5a Direct government contribution to Teenage Pregnancy Strategy

Category	1999-00	2000-01	2001-02	2002-03	2003-04	**Total Spend**
Teenage Pregnancy Strategy Programme Budget	None	£4.2m[10]	£4.2m[11]	£4.2m	£5.2m	£17.8m
Local Implementation Grant	£4.2m	£12.0m	£16.0m	£16.0m	£24.0m	£72.2m
Annual Total	£4.2m	£16.2m	£20.2m	£20.2m	£29.2m	£90.0m

However, these figures underestimate the actual costs of strategy related activity. Most local teenage pregnancy strategies were able to secure additional mainstream funding from sources other than the Local Implementation Grant. These sources could include the Local Authority, Health Authority, Primary Care Trusts, other government funded programmes (e.g. Health Action Zones, Education Action Zones, Single Regeneration Budgets, Sure Start Plus) and the voluntary sector. Data for this expenditure comes from the Teenage Pregnancy Partnership Board Annual Reports however the dataset is only relatively complete for 2002-03 and 2003-04. The data on additional mainstream funding to support the strategy is given in Table3.5b However, because this does not include values for 2000-01 at all and because the data for 2001-02 is incomplete, this is likely to represent a lower bound for an estimate of this funding.

Table 3.5b Additional mainstream funding to support the Teenage Pregnancy Strategy

Year	1999-00
1999-00	None
2000-01	Insufficient adequate data
2001-02	£20.3m
2002-03	£29.3m
2003-04	£28.0m
Total	£77.6m

Taken together this enables us to say that funding of the TPS in the period 1999-00 to 2003-04 amounted to £167.6m. For reasons already outlined this may represent something of an under-estimate. However, it may also underestimate the "true" immediate cost of the strategy by excluding "off-budget" expenditure. If, for example, the National Media Strategy has encouraged teenagers to access existing provision such as GP services then this represents an opportunity cost – the additional time the

[10] Data not available – assumed similar to 2002-03
[11] From correspondence with DoH, figure for 2001-02 was similar to 2002-03

GP takes providing these services means that alternative uses of the time are foregone. It is likely that the importance of "off-budget" expenditure is positively related to the success of the strategy but we were not able to estimate its size within this evaluation.

The above values relate to an outflow of government money but as noted earlier it is the net impact on scarce resources which is the real variable of interest in economic evaluation. As part of this evaluation the costs of the strategy are considered net of any immediate savings to the NHS arising from a reduction in teenage conceptions. In order to calculate these savings a cost per conception was calculated. The method involves determining a unit cost for various health care services associated with pregnancy and then weighting these costs according to the number of episodes of care.

The unit costs and their weights are listed in Table 3.5c

Table 3.5c Cost per teenage conception[12]

Outcome/service	Unit cost	Weight
Spontaneous abortion	£314.50	0.10
Legal abortion (surgical/medical)	£426.50	0.38
Costs of monitoring a pregnancy & delivery of baby	£3,117	0.52
Hospital birth	£1,197	1.00 per birth
GP fees	£232	1.00 per birth
Other maternity events	£469	1.03 per birth
Ante-natal outpatient visits	£74	2.47 per birth
Obstetric outpatient visits	£101	1.97 per birth
Other outpatient	£81	0.40 per birth
Health visiting	£49	5.64 per birth
Intensive Care	£665	0.53 bed days per birth
Neonatal care	£995	0.12 episodes per birth
Mother & Baby Units (inpatient)	£369	0.05 bed days per birth
Mother & Baby Units (outpatient)	£164	0.02 per birth
Tests	£32	0.65 per birth
Cost per teenage conception	**£1,814**	

[12] It is assumed that 60% of spontaneous abortions require hospital treatment and that 40% only require GP treatment [Macfarlane & Mugford, 1984]. GP fees are taken from NHS General Medical Services Revised Fees and Allowances [2003-04] and hospital costs are based on NHS Reference Costs [2003]. Costs of monitoring a pregnancy and delivering a baby are calculated using episode and cost data available in NHS Reference Costs [2003]. Weights for different outcomes of teenage pregnancy are derived from ONS [2000] and McGuire and Hughes [1995]

These calculations assume that pregnant teenagers have the same outcomes in pregnancy as those of the general population. However, as reported by Fraser et al. [1995] pregnant teenagers typically have worse reproductive outcomes and therefore these costs may underestimate the actual costs of teenage births. There is some debate in the literature as to whether teenage pregnancy is simply a confounder for social class in explaining these worse outcomes [Smith and Pell, 2001]. It should also be noted that the above calculations assume that the strategy is neutral in terms of the end-point being prevented – i.e. averted pregnancies would be no more likely to result in a legal abortion if they had not been averted than in a pregnancy which actually occurred. If averted pregnancies are disproportionately "unwanted", as might be expected, then the weighted cost per conception will give too much weight to the cost of birth leading to an upward bias in the estimate of the cost per conception 'saved'.

In table 3.5d an estimate is made of the state benefits paid to teenage mothers, This estimate is based on child contingent benefits and excludes benefit that would be paid to teenagers in the absence of a child. It does not address the counter-factual issue of the extent to which teenage pregnancy may contribute to welfare dependency more generally. Ignoring the counter-factual will tend to lead to a downward bias in the estimate of benefit 'savings'. However, the benefits system is quite complex and a number of assumptions were made to simplify the calculation of state benefit paid over the 16 year period for which child contingent benefits can be paid. These assumptions will have tended to lead to higher estimate of the benefit 'savings' than is actually the case. In particular it was assumed that take up of benefits was 100%. Whilst, this is perfectly reasonable for universal payments such as Child Benefit this is generally not true for means tested benefits. However, at the time of writing there was not evidence on the take up of many of the benefits which have only been recently introduced. This is likely to lead to an upward bias in the estimation of the state benefit 'saving'.

Clearly these benefits are only paid in the event of a pregnancy proceeding to a live birth and therefore the weighted cost of state benefit paid per conception has to take this into account. Similarly, it is necessary to weight the costs of state benefits in each age group according to their relative frequency in order to produce an estimate of the welfare benefits saved by an averted teenage conception. This gives a net present value (NPV)[13] 'saving' in welfare payments of £44,566 per teenage conception averted.

However, as agreed in the implementation plan these 'savings' will not be included in the net costs of the TPS for the purposes of calculating cost-effectiveness ratios. State benefits largely represent a transfer payment from one group (taxpayers) to another (teenage mothers) and not the use of scarce resources.

[13] Net Present Value – is the discounting of costs which occur in the future to an equivalent present day value. Discounting is used to reflect the time costs of money and that a given cash sum in 10 years time **is not** worth the equivalent cash sum now. A discount rate of 3.5% was used in line with Treasury recommendations, HM Treasury [2004]

Table 3.5d State benefits to teenage mothers by age at birth

	AGE				
	<14	14	15	16	17
Child Benefit	£834.60 x 16	£834.60 x 16	£834.60 x 16	£834.60 x 16	£834.60 x 16
Child Tax Credit	0 x 3 £1990 x 13	0 x 2 £1990 x 14	0 x 1 £1990 x 15	£2535 x 1 £1990 x 15	£2535 x 1 £1990 x 14
Working Tax Credit (childcare)	£0 x 3 £4049.14 x 2	£0 x 2 £4049.14 x 2 £4501.22 x 1	£0 x 1 £4049.14 x 2 £4501.22 x 2	£4049.14 x 2 £4501.22 x 3	£4049.14 x 1 £4501.22 x 4
Working Tax Credit (Couple/lone parent)	£0 x 3 £1234.02 x 2 £1371.8 x 7 £1433.2 x 4	£0 x 2 £1234.02 x 2 £1371.8 x 7 £1433.2 x 5	£0 x 1 £1234.02 x 2 £1371.8 x 7 £1433.2 x 6	£1234.02 x 2 £1371.8 x 7 £1433.2 x 7	£1234.02 x 1 £1371.8 x 7 £1433.2 x 8
Housing Benefit	£0 x 3 £1001 x 13	£0 x 2 £1001 x 14	£0 x 1 £1001 x 15	£1001 x 16	£1001 x 16
Council Tax Benefit	£0 x 5 £611.83 x 11	£0 x 4 £611.83 x 12	£0 x 3 £611.83 x 13	£0 x 2 £611.83 x 14	£0 x 1 £611.83 x 15
Sure Start Maternity Grant				£500	£500
Disability Living Allowance (Care – Low)	£0.93 x 16	£0.93 x 16	£0.93 x 16	£0.93 x 16	£0.93 x 16
Disability Living Allowance (Care – Middle)	£2.27 x 16	£2.27 x 16	£2.27 x 16	£2.27 x 16	£2.27 x 16
Disability Living Allowance (Care – High)	£3.22 x 16	£3.22 x 16	£3.22 x 16	£3.22 x 16	£3.22 x 16
Disability Living Allowance (Mobility – Low)	£0.79 x 16	£0.79 x 16	£0.79 x 16	£0.79 x 16	£0.79 x 16
Disability Living Allowance (Mobility – High)	£4.03 x 16	£4.03 x 16	£4.03 x 16	£4.03 x 16	£4.03 x 16
Total	£85,049	£94,586	£104,123	£114,093	£115,968
NPV	£64,438	£73,252	£82,373	£92,288	£94,067

Cost per effect

The 'gold standard' measure of cost per effect for the evaluation is the cost per teenage pregnancy averted. Whilst it is relatively easy to calculate the immediate costs of the strategy, it is much more difficult to say how many teenage conceptions have been averted as a result of it. There are difficulties in using Wales and Scotland as 'controls' because both countries have also simultaneously developed strategies

to address teenage pregnancies and, perhaps as a result, have experienced a similar change in rates to England.

The baseline case is to assume that all changes in teenage conceptions since the strategy are attributable to it. The mean rate of teenage conceptions for the first 4 years of the strategy (1999 to 2002) is 44/1,000. A random effects estimate suggests that the annual rate of decline in teenage conceptions in this period is 2.3% per year (95% CI, 1.9% to 2.8%). Using an approximate teenage female population of 150,000 this represents an absolute fall in conceptions of 1,554 (95% CI, 1,279 to 1,902) over the 4-year time period.

Table 3.5e details the cost per teenage pregnancy averted under different scenarios (see also Annex A). Conception data only exists up to 2002 and therefore costs subsequent to that should not be used in the calculation of the ratio as they cannot have contributed to earlier effects. Unfortunately the cost year (April to March) is not synchronised with the data for conceptions. Therefore, only 75% of 2002-03 costs will be included in the calculations.

Table 3.5e Estimates of Cost per teenage pregnancy averted

	Effects – Annual rate of decline in teenage pregnancy		
Costs Included	1.9%	2.3%	2.8%
TPS Programme Budget + Local Implementation Grant – NHS savings	£4,616	£3,829	£3,161
TPS Programme Budget + 0.78[14] x LIG (excludes support spend) - NHS savings	£3,362	£2,789	£2,302
TPS Programme Budget + Local Implementation Grant + Other mainstream funding - NHS savings	£7,451	£6,180	£5,102
TPS Programme Budget + 0.78 x (LIG + other mainstream funds) - NHS savings	£5,573	**£4,623**	£3,816

All the figures in the table above should be interpreted with caution given the caveats expressed in the report. However, it could be argued that the underlined value represents a "best" estimate from those listed – the best estimate of annual decline in

[14] This is an estimate of the proportion of LIG spent on prevention. It is calculated from information supplied in the Teenage Pregnancy Partnership Boards Annual Reports which provide a breakdown of spending on different components of the strategy.
[16] The Sure Start Plus pilot programme was integrated more fully into the Teenage Pregnancy Strategy following its transfer in April 2003 to the Teenage Pregnancy Unit. This programme has been independently evaluated.

teenage conceptions and the best estimate of the net resources that may have contributed to this.

The estimates above assume that if the strategy was withdrawn teenage pregnancy rates would return to their pre-strategy levels. If instead, the TPS succeeded in affecting a lasting change in behaviour with permanently lower rates of teenage pregnancy the cost-effectiveness ratios would be much lower as additional effects would continue to be experienced long after the strategy was completed. Furthermore, in many ways this represents an intermediate measure of cost-effectiveness with the final end-point being the adverse consequences of teenage pregnancy avoided. However, it is worth sounding a note of caution before rushing to a conclusion that the above values form upper bounds for the estimates of cost-effectiveness. The problem is that of attribution of effects to the strategy and whilst teenage conceptions have fallen during the course of the strategy it could be argued that they have simply returned to their longer term trend level and that the strategy has had negligible impact on teenage pregnancy. If this were the case then the cost per teenage pregnancy averted would be infinite. A sensitivity analysis showing the effects of varying the attributable fall in teenage conceptions on the cost per pregnancy averted is shown in Annex A.

However, the cost-effectiveness of the strategy cannot be judged solely in terms of its effect on teenage conceptions. An important part of the strategy was aimed at providing better support to teenagers who became pregnant and thereby ameliorate some of the adverse consequences arising from teenage pregnancy. In particular the TPS aimed to increase the number of teenage mothers in employment, education or training and this could potentially have important "downstream" societal benefits in terms of improved productivity. However, attribution problems also exist for quantifying the short term effects of the strategy on support outcomes and therefore it is difficult to predict any future productivity gains which could be directly attributable to it. At this stage in the strategy it is just too early to say what impact it has had on longer term trends.

4.0 Has the Strategy achieved its aim of supporting pregnant teenagers and teenage parents?

An important task for the evaluation has been to assess progress towards the objectives of the second aim of the Teenage Pregnancy Strategy, that is, to provide support to reduce the risk of social exclusion among teenage mothers and their children[16]. As outlined in the description of Methods, in Chapter 1, we draw here on data from the tracking survey, (Waves 1-3, making up Year 1; Waves 4-6:Year 2; Waves 7-9: Year 3 and Waves 10-12: Year 4) focussing on the sample of 358 (8.0%) of the total of 4461 women interviewed, who reported becoming pregnant before age 18. Caution is needed in interpreting trends over time, because of the small numbers involved. We also draw on qualitative research with a sub-sample of young women who had a child conceived before the mother was 18 years old and who were willing to be re-interviewed. This sub-sample was selected to represent different ages and different regions at interview. The focus here is on their educational and employment opportunities and the extent to which they receive help with housing to reduce the risk of living alone and/or in unsupported accommodation.

Of the 4461 women in Waves 1-12, the first of which took place in October 2000, the last in July 2004, 358 (8.0%) reported a pregnancy under the age of 18, 108 in Waves 1-3 (9.6%), 88 in Waves 4-6, (7.8 %), 66 in Waves 7-9, (6.1%) and 96 in Waves 10-12, Year 4, (8.5%).

Table 4.1a Outcome of pregnancy

	Year 1 % (n)	Year 2 % (n)	Year 3 % (n)	Year 4 % (n)
I had/am having the baby	65.7% (71)	53.4% (47)	65.2% (43)	58.3% (56)
I miscarried	14.8% (16)	15.9% (14)	27.3% (18)	25.0% (24)
I had/am having an abortion	19% (21)	28.4% (25)	7.6% (5)	14.6% (14)
Refused	0% (0)	2.3% (2)	0%	2.1% (2)
Total	100% (108)	100% (88)	100% (66)	100% (96)

The proportion of pregnancies ending in abortion is lower than would be expected from national data (Table 4.1a). A higher proportion of women in Year 2 of the tracking survey reported having terminated their pregnancies than did so in Year 1 but this dropped significantly in the Years 3 and 4. This seems to be explained by an increase in the proportion reporting miscarriage, rather than those having the baby. We tried to explore the difference in changes to the outcome of conception across the 5 quintiles of deprivation, but numbers in each cell were too small to allow tests of statistical significance to be carried out.

In all 4 years of the tracking survey, as expected, the proportion of women reporting conception under 18 was higher in the top quintile of deprivation (living in the 20% of

areas ranked as worst off) than in the bottom quintile. In each year, the difference between quintiles was statistically significant (ie. pregnancies were more likely to occur in the most deprived groups). However, the change in the percentage experiencing a conception between the least and most deprived groups across Years 1-4 was not significant (p=0.175). The trends are illustrated in Table 4.1b below.

In Year 4, 4% of pregnancies were 'planned' (compared with 9% in Year 3, 3% in Year 2 and 10% in Year 1), 43% 'ambivalent' (compared with 52% in year 3, 32% in year 2 and 43% in Year 1) and 53% were 'unplanned' (compared with 40% in year 3, 65% in Year 2 and 47% in Year 1) on the Barrett scale.[17] The difference in those planning their pregnancy was not statistically significant between the 5 quintiles of deprivation in any of the 4 years.

Table 4.1b Proportion of <18 pregnancies by deprivation quintile

	Quintile 1 (least deprived)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (most deprived)	Total % (n)	P value for diffs in dep^n level
Year 1 % (n)	4.8% (11)	7.7% (13)	9.3% (19)	13.3% (33)	11.7% (32)	9.6% (108)	0.002
Year 2 % (n)	5.0% (10)	4.6% (9)	7.5% (15)	10.3% (22)	10.3% (32)	7.8% (88)	0.004
Year 3 % (n)	1.8% (3)	2.9% (5)	2.8% (7)	7.7% (18)	12.8% (33)	6.1% (66)	<0.001
Year 4 % (n)	2.3% (5)	5.6% (10)	10.2% (21)	7.3%(17)	13.7% (43)	8.5% (96)	<0.001

P value for overall change across the 4 years = 0.175

Our qualitative interviews with young mothers and fathers who had reported under 18 conception in the tracking survey provided some insights into the circumstances in which planned or ambivalent pregnancies occurred amongst these young parents. One young mother, aged 17 at first birth and 21 with two children at the time of interview, confessed in her in-depth interview that she had been afraid to tell her parents that the birth was planned, supposing an accident to be more acceptable. The young woman was in a stable co-habiting relationship with a man some ten years her senior, and this was seen among other young mothers reporting pregnancies which were not entirely unplanned. Another scenario described in relation to pregnancies categorised as ambivalent was one in which emotional deprivation in childhood had left an unmet need for love:

Young mother aged 15 at first pregnancy, South East England

I   Let's talk about getting pregnant. When you were having sex, did it cross your mind you might get pregnant?

R   Yeah.

I   Was it something you hoped would happen?

R   Yeah, I think so.

[17] The measure of pregnancy planning status developed by Barrett (2002) was used in the tracking survey. The content of the measure was informed by qualitative research, and it has established psychometric properties.

I	Why do you think you were hoping to get pregnant at such a young age?
R	I think that... Looking back now I think it was all to do with my mum leaving my dad when I was 11. And obviously my dad had to cope with having a teenage daughter. And I think it was just that I wanted the love really.
I	When you say you wanted the love was that about the baby or about your partner?
R	Both I think.

Two major objectives of the Support component of the Strategy are to increase the number of young mothers who return to education, training or work and to reduce the proportion living alone and/or unsupported. These have been key measurement objectives of the evaluation.

WORK, EDUCATION OR TRAINING

Participation rates changed little over the course of the Strategy. 56% of young mothers in Year 4, compared with 53% in year 3, 46% in year 2 and 60% in Year 1 said they had not returned to education, work or training after the birth of their child.

In Year 4, 35% of young mothers left school before the statutory age of 16; 51% at age 16 and 14% left after age 16. This compares with 29%, 58% and 13% respectively in year 3; 33%, 50% and 17% respectively in year 2 and 29%, 61% and 10% respectively in year 1. These differences were not statistically significant across the 4 years ($p=0.914$). This analysis was only carried out on women currently aged 17 and over, to exclude those for whom we could not know whether they left school before age 16, and so the numbers are small.

In Year 4, 43% of young mothers had no qualifications, (compared with 42%, 15% and 31% in Years 1, 2 and 3 respectively); 53% had GCSE or equivalent, (compared with 56%, 85% and 63% in the first three years); and 4% had higher qualifications (compared with fewer than 2% in Year 1, and 4% and 6% in Years 2 and 3). There are no clear trends here and differences between the four years were not statistically significant ($p=0.097$). Again, attainment was asked only of women aged 16+, and numbers are small.

In-depth interviews carried out with the sub-sample of mothers from the tracking survey revealed a variety of experiences surrounding education, some dropping out of school before becoming pregnant, some becoming pregnant whilst still at school and missing their GCSEs, others dropping out of college on finding they were pregnant and others becoming pregnant shortly after leaving school and so not in a position to work or study. Teachers were understanding but sometimes inflexible.

One young woman who originally intended to stay at school as long as possible cited her main reason for leaving as being made to tuck her shirt in. Interviews revealed unhelpful attitudes on the part of schools which do not seem to have improved over the four year period. By Year 4 it was still possible for a young mother to report

having been asked to leave school because of her pregnancy, despite clear DfES guidance that pregnancy does not constitute grounds for exclusion.

R	The teacher, she were my section Head at school, she said she'd prefer me to go to this school in [TOWN X] because it would have been like disrupting if I walked down the corridor with a big bump, you know – there's going to be people looking.
I	She didn't really give you the choice then to stay?
R	No, no. She didn't.
I	Do you think if you could have you would have done?
R	Yeah I would have done because I felt comfortable there..... I didn't want to go and have the trouble of making new friends or whatever at this other school.

Education was, however, seen as essential by young parents from the point of view of getting on, and ensuring that their children would not be ashamed of them. Even previously low achievers (one was unable to read or write) aspired to return to education. For those who were determined, having a child early in life was not incompatible with achieving ambitions, though it was clearly more of a challenge. One young woman with a four year old son, interviewed for the first time in 2004, was in full time education and had successfully completed a diploma in IT and was just about to start another one-year course. Another, who gained GSCEs whilst pregnant and planned to go to university, later began a part-time A level course.

Interviews with the cohort of young mothers in successive years enabled us to track the progress of young mothers in this respect. In Year 4, a woman who had been followed up for four years reported that with the help of her own parents and support from her college tutors, she had successfully completed a management course and was now in employment.

T was 17 when we first interviewed her in 2001, and lived at home with her parents and baby J aged 7 months. Before giving birth to J at age 16 she had been studying Business Law at college. She does not see J's father. Following the birth T obtained work from college which she did at home. In 2002, she began studying again. In 2003 she was still interested in Hotel Management, and planned to enter this field after she had finished her present studies (Business Law). In 2004 she reported:

T:	OK, I've finished college now, doing my hospitality management. I'm working in a private car track firm doing catering for them. J (son) now is at a childminder and he goes to playgroup four times a week at the moment.
I:	And what's the job?
T:	Catering. Basically, anything from cooking to washing up really. I've been trained to do all of those. It's interesting. It's hard work, but it's good
I:	And what do you think of it now, having finished it all?
T:	I think it put a lot of things in perspective for me. I've learnt obviously time management, how precious children are to you. But then if I had the option, if someone asked me would I have had him if I knew how hard it would be, no, I would seriously say no, because I can't... to be truthful I don't know how I passed.
I:	And what about any hopes you have now for the future?

T: Well basically I've got bits on track and hopefully, if I work my way up in my company at the moment, hopefully I could do what I've always wanted to do and that's hotel management.

Others, who had performed less well at school, perhaps did better than they might otherwise have done as a result of having had a child early in life, aided by the impetus of parenthood, and opportunities provided to get them back into training.

A (Midlands) was 15 when she conceived and 16 when she had J [son] and became pregnant again when he was 4 months old. At her first interview in 2001 she was 21, married with two children aged 4 and 5. She was not working and had no qualifications. She described her experience of school:

A: ... it was a Catholic School, it was OK, quite strict, but I started to miss school quite a bit .... I didn't like it very much ... yeah I was just taking days off ... I suppose I started doing it before I met K [husband], just having odd days off and then ...

I: Did you have a plan then for what you were going to do with your life?

A: Um ..... I wanted to be a nurse, to work in a nursery but I didn't really think I was clever enough ... I hadn't got the patience to sit down and listen really I think, I wish I had have done .... But I just couldn't.

I: So, what subjects were you doing? What would they have been? GCSEs?

A: I missed my GCSE's because I fell pregnant at the time, I think I done one but the school told me that I couldn't go back into school once they'd found out I was pregnant, I wasn't allowed back on the premises at all, which my mum wasn't too happy about.

By the second interview (2002) A had returned to work, as a part-time care assistant in a home for old people. She had completed her NVQ 2 in care and nursing skills and was about to start her NVQ 3. She had the opportunity to train as a nurse in a hospital –she was interested in Maternity.

A: I really enjoy the job – it is a really caring home. The staff and the residents are lovely.

I: And in five years time?

A: Hopefully at the hospital, earning a bit more money...I like where I am at the moment, you get to know what the residents want...in hospital you wouldn't really get that..."

By 2003, A and her partner were saving for a deposit to buy their rented house. A worked in the same job, but part time and at weekends. She was looking for a job during school hours as a teaching assistant with dyslexic children and special needs. Sh e told us of her hopes for the future:

A: I will do things. I have just completed my NVQ3 in social care, I have completed my 2 and now my 3. I wouldn't mind becoming a social worker, but you need to drive first and I have to start taking my lessons again and pass my test and probably go into it then.

Having had one child, several of the young parents we spoke to went on and had a second, so as to complete their family building before going on to think about employment. They took the view that they were simply doing things in a different order. Having become mothers early in life, they reasoned that they would use the time to be with their children and that they would return when their child was in full time school. Several of those interviewed over the four years of the evaluation had made progress in achieving the personal goals they set for themselves. One young mother, for example, in her first interview in 2002, told us of her dual aims of getting married, to her partner of six years, and returning to college. When followed up a year later, was waiting for her place on a computer course. In her final interview in

2004, she had abandoned the computer course, and was fruit picking in Kent, a job which she could fit in around the children. But she had married, and her life was a happy one.

K:	I'm still living at the same address as last time. I got married on Saturday....
I:	Oh, congratulations.
K:	Yeah, so that's all gone well and the children are now 7 and 6.
I:	How is life in general for you all.
K:	We get on fine.
I:	Tell me about your children.
K:	The eldest one is K and the youngest one is R. No problems they're fine.
I	They're both at school? How do they get on at school?
R	They're brilliant, they're both brilliant at school.
I	That's wonderful. Do you have childminding help?
R	No. I work in school hours and I don't have to work school holidays or anything so I work around the children.
I:	And now their father is living with you and you are married. How were the children at your wedding?
R	They were very excited. They were bridesmaid and page boy and they were very excited.

Equally, there were young mothers with no ambitions regarding future education or employment and with little thought given to the future. Others gave up, some blaming the difficulty of breaking even in terms of the balance between benefits and salary, others blamed inadequate child care.

C I DCARE

At the time of writing, there was still an unmet need for good reliable childcare. This is likely to be improved with the inception of Care to Learn but the impact of this intervention was yet to be felt amongst young parents interviewed. In the absence of such a scheme, mothers of the young parents tended to be the chief carers, and where they were unavailable there were few alternatives. Barriers to take up of childcare include protectiveness, cost and availability. Young mothers expressed little incentive to work as wages would simply pay nursery fees. Some planned to postpone work or education until childcare became free. Encouragingly though, some were aware or had taken advantage of, crèche facilities at local colleges – often free to those on benefits. Awareness and use of crèche facilities seemed to be greater in the later interviews. One young woman reported very positive experiences

and indeed cited availability of a free crèche as the one thing that has helped her the most as a teenage mother:

> D: I needed that crèche because, being on state benefit, it was all-inclusive really which is brilliant. And it's funded for the next time I go too so, you know…it's so much easier. It encourages people to go out there as well'.

In Year 4, one young mother (3rd interview) reported feeling much happier now that she was at work. Her relationship with her son had improved since she was able to spend some of her week at work. She managed this with the help of a child minder and a playgroup, which he attended four times a week. Cost of childcare still remained a concern but in Year 4 there were reports that some young mothers were receiving working families' tax credit.

OU ING

We created a variable which enabled us to identify those living alone, without parents, siblings or a partner, in rented accommodation, preventing young mothers from being in unsupported accommodation being a key Strategy objective.

39% of young mothers interviewed In Year 4 were not living with their family or a partner, in rented accommodation, compared with 36% in Years 3 and 2 and 40% in Year 1. (The year on year change was not statistically significant; $p=0.961$).

In all 4 years women who had a child conceived before the age of 18 were significantly more likely to be living in social housing than those who did not; 67.3% compared with 31.1% in Year 4 (2% did not know in Year 4) ($p<0.001$); 77.8% compared with 28.8% in Year 3 ($p<0.001$); 62% compared with 28% in Year 2 ($p<0.001$) and 70% compared with 30% in Year 1 ($p=<0.001$). The year on year change for young mothers was not significant ($p=0.491$).

In-depth interviews showed that young mothers tend to have low expectations of the standard of accommodation offered to them, yet few are happy with their housing. Accounts of poor standards, undesirable neighbours, noise, dangerous locations, lack of security and unsuitable accommodation (such as a third floor flat without a lift) are still common. Several respondents expressed a desire not to be living in council accommodation over the next 5 years. Young mothers continue to live close to their parents and many request this as a priority when being housed.

The in-depth interviews also showed a progression through different kinds of accommodation and high mobility among young mothers. For some, accommodation was found quite quickly but others complained of long waiting times. One young woman in year 4 reported that she was just about to move into a council house, which she had been waiting three years for. However, among follow-up interviews with mothers who had been interviewed in Year 1, accommodation had changed for the better during the course of the years.

E ERIENCE O GO ERN ENT C E E

65% of teenage mothers interviewed in Year 4 had heard of Sure Start compared with 47% in Year 3, 21% in Year 2 and 15% in Year 1, and 20% had benefited from

the scheme in Year 4 compared with 24% in Year 3, 13% in Year 2 and 5% in Year 1.

41% were aware of child benefit in Year 4, compared with 47% in Year 3, 50% in Year 2 and 40% in Year 1.

41% had heard of New Deal for lone parents in Year 4 and 15% had benefited from it. This compares with 32% and 3% in Year 3, 63% and 11% in Year 2 and 60% and 18% respectively in Year 1.

7% in Year 4 were aware of Education Maintenance Allowances, compared with 9% in Year 3, 11% in Year 2 and 9% in Year 1, and 4% had received one in Year 4, compared with 3% in Year 3, 5% in Year 2 and fewer than 2% in Year 1[18].

The in-depth interviews document increased contact with government interventions as the Strategy has progressed. This is perhaps unsurprising given that many were in their early stages in Year 1. Several respondents, including those followed up from the beginning of the evaluation, had either heard of or had benefited directly from new Government programmes, including New Deal, Connexions, and Sure Start.

I: Alright. So it seems like really you've had quite a lot of support from.....

C: Recently, with Sure Start.

I: Not at the beginning?

C: Not at the beginning. This is all in t'last year, year and a half that everything's like, if you like, fallen into place. Starting to get back on track.

I: Right. Since Sure Start then, is it?

C: Yeah. Basically, yeah. And it did do a lot for me and my kid cos I were always stressed out, getting in trouble with police, violence, stuff like that. I were a bit of a rogue .. actually, but I've calmed down quite a bit now.

K: Sure Start, yeah, I heard about that at the end of my pregnancy - getting a Sure Start package.

I: Did you get one?

R: Yeah.

I: What's that then?

R: You get £500 – for single parents I think.

I: ... you must have found that helpful, did you find about that from the mid-wife?

[18] It should be noted that the Tracking Survey asks about some, but not all, funding schemes available to teenage parents.

R: Yeah, cos we were talking and she said there's this, this and this and oh £500. It came in handy – got a lot and lot of stuff given from friends and family.

I: Did you, what all the cot and.....

R: Cot, pram and everything yeah.

I: So you've been in touch with Sure Start and Connexions, you've had a lot of support from them. Is there anything else with Sure Start or is it just the initial?

R: It were just that, that were just it.

I: What about any sort of child care? Has he ever been to like playgroups or?

R: No.

Awareness of such initiatives was not, however, universal. We came across one young mother in a Sure Start Plus area who was clearly capable of pursuing university level education, and whose teachers and family had expected her to do so, but who knew nothing of the scheme. We passed her details to the Sure Start Plus team. Many young mothers were aware of less official interventions in the community and some had benefited greatly from attending mother and baby support groups, meeting and making friends with other young mothers.

Again, the cohort of parents followed up over several years provided useful insights into how the schemes helped young parents over time.

L was pregnant at 15 and had a daughter. She conceived again at 18 and was pregnant with her second child when we first interviewed her in 2001, and still with her partner. She is now 20 and her children are aged 4 years and 21 months.
2001:

I Projects and things like that for teenagers who are pregnant, do you think they are useful? Did you feel you got any benefit out of the project you went to?

L I just finished it this July, I went on to the other group, I did computers. I finished school before I got pregnant, with us bein' in care I got passed from school to school.

I What about a job in the future, do you have any plans?

L That's why I'm going to do computers, I didn't even know how to switch one on till I went with the project at Gateshead and I did the course and which was one day a week. But to do the next stage – it was 4 days a week and they didn't have a crèche so I couldn't do it 'cos he [partner] was on his New Deal, but if I do it through New Deal I could get Stage 1.

I So what kind of job would you like, have you any ideas?

L I did want to do accountancy which means I've still got to do GCSE Maths and then do the accountancy course at college so it's goin' to be a long hard trek.

I Can you see yourself getting there?

L I'm determined to get there.....

By 2002, L has had her second child. By 2003, L and her partner were planning to buy their house, but her training plans have been shelved, she says, because of child care problems. She had been accepted on a hairdressing course at college starting this September, but when she visited the college she decided that she did not want to send her son there.

I:	It was disgusting, not clean and I said to David I can't afford to put him into a nursery, as although I get the family credit I wouldn't actually get a nursery place for him. So I checked the nursery at *[Town x]* and I couldn't afford it for college, if I was working yes, but not for college. I thought I am not happy with the crèche so I'm not going to take my place"

4.3 Advantages and disadvantages of early motherhood

A good deal of evidence exists on the objective disadvantages of early parenthood perceived by others. Responses to attitudinal statements in the tracking survey provide insights into how the young mothers themselves draw up the balance sheet. Three quarters of young mothers felt they had had a child too early in years 1, 2 and 3. This proportion fell to 65% in year 4. The numbers here are small and confidence intervals are very wide, making it difficult to be sure that year on year changes did not occur by chance

The proportions feeling that they had lost out in terms of life chances and material prosperity have remained relatively stable across the 4 years. The proportion of mothers claiming that motherhood has increased their determination to get a good job remains high and has increased from 74% in year 1 to 83% in year 4.

Two thirds of young mothers felt lonely in Year 1 and this proportion had increased to three quarters in Year 2, but had fallen to half by year 4.

In all 4 years, over 90% of young mothers felt that motherhood had made them feel more responsible. The proportion of young mothers who felt that motherhood had increased their sense of self esteem, has remained relatively stable throughout the 4 years.

Table 4.3 Attitudes of young mothers, Years 1, 2, 3 and 4

Attitudinal statements	% in agreement			
	Year 1	Year 2	Year 3	Year 4
If I had my time again, I would not have a child so young	75.4	76.3	76.5	65.2
Having a child at the age I did has so far stopped me from having a good education	41.5	55.2	38.2	43.5
Having a child at the age I did has so far not stopped me from getting a good job	43.1	47.4	55.9	39.1
Sometimes it's really lonely being a young mother	64.6	76.3	70.1	52.2
Being a mum has stopped me going out and enjoying myself	49.2	36.9	47.1	43.5
Being a mum has meant I am a lot worse off financially	52.3	57.9	61.2	50.0
Being a mum has made me feel more responsible	97.0	100	97.1	91.3
Having a child has made me feel good about myself	63.1	52.6	64.7	63.0
Having a child has made me more determined to get a good job	73.8	78.9	79.4	82.6

* Responses 'agree a lot' and 'agree a little' are conflated

Some of these responses do appear to reflect the improvements in the lot of teenage mothers. Paradoxically, a possible explanation for the decrease in the proportion of teenage mothers who feel they had a child too early in life may be a shift in the perception of teenage pregnancy towards it being seen as more 'normal' as a result of the increased attention given to the issue in recent years. The apparent reduction in social isolation is entirely to be welcomed, and there has been a significant increase over the four years in the proportion of mothers for whom having a child has increased their determination to get a good job. Work on the improvement of the social and emotional well being of young mothers has been carried out through Sure Start Plus, integrated more fully into the Teenage Pregnancy Strategy following its transfer in April 2003 to the Teenage Pregnancy Unit (TPU). The evaluation of this initiative, showed that significantly more young mothers in Sure Start Plus sites than matched sites had received help from services in relation to emotional problems (though there was no evidence of significant difference in self-esteem or postnatal depression amongst young women in Sure Start Plus and matched areas)[19].

Interpretation

Strong justification can be seen in these data for efforts to address the loss of educational opportunities extending to women in their later teens who are returning to education and training, as well as younger girls in danger of leaving school education prematurely because of pregnancy. Continued opportunities to return to education are likely to capitalise on the strong motivation to succeed prompted by having a child. However, a consequence of early motherhood which seems to be equally if not more problematic than lost life chances, is social isolation and depression. Since this was a more typical problem among mothers who were not supported in a relationship or by their families, the role of interventions such as Care to Learn may well be as important in attenuating social isolation in young mothers as they are in facilitating a return to education and training. Issues of social isolation have also been addressed in a number of creative ways through Sure Start Plus, and referrals to CAMHS or counselling services for mental health problems can also be expected to improve the well being of young mothers.

Our findings suggest that prevention of a second child to those whose first child was conceived before age 18, may not be appropriate in all cases. According to some of the young mothers we spoke to, their inclination - having reversed the conventional order of training and childbearing – was to go on and have another child to complete their family before training for a job.

[19] Meg Wiggins, Mikey Rosato, Helen Austerberry, Mary Sawtell and Sandy Oliver, Sure Start Plus National Evaluation: Final Report May 2005. Social Science Research Un it, Institute of Education, London University

5.0 Implications of findings for future work

5.1 Overview

The evaluation has shown that the Teenage Pregnancy Strategy is widely seen, by those working at local and national level, as a well researched and carefully thought out approach to the problem of teenage pregnancy. There is near universal support for its aims and the approaches taken to achieve them. Considerable headway has been made in setting up its components. The general impression is of commitment, enthusiasm and energy.

During the first four years of the Strategy, conception rates for women in England aged under 18 have fallen.[20] This is a reversal of the upward trend seen in the period immediately preceding the Strategy, and a change of course from the largely static rates of the previous two decades in this country. It also runs counter to the current trend in the European countries used as comparison areas, which is towards stable or increasing conception rates. At the same time, although teenage pregnancy rates in the UK are still the highest in Europe, the proportion of pregnancies which are terminated has increased so that we are moving closer towards, though still some way from, the abortion ratios seen in other countries.

The analyses of tracking survey data also provide evidence of shifts in some of the shorter term outcomes of the Strategy. At individual level, there are promising findings relating to trends in young people's knowledge and behaviour. We have seen a reduction in the tendency for young people to overestimate the proportion who have sex before age 16; positive effects of SRE on young men's views on condom use and on young women's likelihood of pregnancy; a significant increase in the proportion of sexually active young women for whom sex education is appropriately timed, and near universal awareness of local sexual health services amongst young women, although some confusion about confidentiality persists. There are also trends that give cause for concern. We have also seen an increase in unsafe sex; a decline in the proportion of young people accessing contraception before first intercourse; and a decrease in contraceptive use at first intercourse, particularly among young people having sex at an early age. These trends are consistent with recent increases in rates of STIs.

Are these trends the result of Strategy-related activity?

The extent to which we have been able to attribute these trends to specific components of the Strategy has been limited. Four years is a short time span in which to see effects of what is a complex and ambitious programme of work, especially bearing in mind the length of time taken to set up structures and procedures. Moreover, the year (2002) for which the most recently available conception data on which we have been able to base our analyses of the primary outcome is only three years into the ten years of the Strategy.

We have also been hampered by the nationwide scope of the Strategy, which has allowed few opportunities to compare areas or individuals who have and have not been exposed to the Strategy. Nor have we had many opportunities to examine the effect of 'dose' since, as we have seen, differences between areas in terms of energy

[20] The 2003 conception data for England, which were not available at the time of analysis, show that the decline in under 18 conception rate has continued (a 9.8% reduction since 1998) and the under 16 rate fell by 9.9% from 1998 to 2003.

and zeal have not been considerable. We have had constantly to be wary of over-interpreting differences, and of seeing as real differences which are in fact likely to be arte-factual. Although at national level, the conception rates from year to year follow a fairly smooth curve, this is not the case within the local authority areas. The figures are unstable in areas in which the numbers of conceptions is small and a rise or fall of only a small number of wom en becoming pregnant in any year can make a great deal of difference to the rates.

We have not demonstrated any clear associations between change in conception rates at local level on the one hand, and any of our indicators of 'quality' of Strategy–related activity, on the other. Nevertheless, Strategy-related expenditure is seen to be strongly associated with the direction and magnitude of the change in the conception rate. Under 18 conception rates have decreased more steeply, and abortion ratios (the proportion of pregnancies which are terminated) have increased most sharply, in areas receiving more resources. Moreover, the rates have declined more sharply in areas of highest deprivation and lowest educational achievement, indicating that efforts have been well targeted.

The international comparisons do provide evidence for a possible Strategy-related effect. Only France among the countries selected for study had recently mounted a teenage pregnancy campaign, and this was more narrowly conceived than was England's Teenage Pregnancy Strategy. In England, conception rates have declined, while in the European comparison countries they have remained static or have increased over recent time.

ROADER DETER INANTS

Our research shows that contextual factors - educational attainment, employment rates and deprivation levels, for example - have a strong effect on changes in conception rates compared with Strategy-related interventions. However, it is clear that greater declines in conception rates occurred in the more disadvantaged areas that received greater financial input to the Strategy. It is also clear that a complex set of variables interacts to reduce or increase conception rates and that the explanation for differences between areas is multi-factorial. The evidence from every level of our research, from research in local authority areas in this country to international comparisons is that not one but many factors operate simultaneously to influence the teenage pregnancy conception rate. Intensive targeting to areas with high teenage pregnancy rates and more vulnerable groups needs to be supported and underpinned by broader measures to improve the quality of young people's lives in terms of educational attainment and aspiration.

It is perhaps not surprising that teenage conception rates have fallen more sharply in rural areas than they have in cities. In areas with larger inner city populations and multiple problems of deprivation, high crime rates, highly mobile populations, poor educational attendance and achievement, poor housing and multiple social problems, not only does the Teenage Pregnancy Strategy constantly have to compete with other important agendas, but the wider determinants of teenage pregnancy are more intractable than those relating more proximately to the means by which risk can be reduced, for example, by providing better contraception. Moreover, some sexual risk behaviours are notoriously resistant to change. The evidence from the National Survey of Sexual Attitudes and Lifestyles is that the median age at first intercourse changed by less than a year during the decade of the 1990s, and a significant change would be unlikely to be observed in a shorter time period.

5.2 Future Directions for the Strategy

The Teenage Pregnancy Strategy is settling into a mature phase of its development. The trajectory in terms of future implementation of the Teenage Pregnancy Strategy is thus likely to be multi-faceted and multi-phased. Although the direction of early trends is encouraging, targets set for the Strategy in terms of conception rates are challenging. Those aspects of teenage pregnancy most amenable to early preventive interventions have been addressed, although further improvements in SRE and services can and should be made. What remains is likely to be the more intractable aspects related to the wider socio-economic and behavioural determinants of teenage pregnancy. In the future, the greatest gains seem likely to be made from continuing to tackle the underlying causes of teenage pregnancy. Progress has been made in terms of reducing the differential between the most deprived and the most affluent areas in terns of conception rates, but the gap is still considerable. Universal implementation of the Strategy should continue while an increasingly targeted approach is developed to intensify efforts with more vulnerable young people, those who are socially marginalized and at highest risk. In areas in which the problems are more profound, and the associated factors more complex and deep-rooted in the socio-economic and cultural fabric of the area, improvements are likely to be seen only in the longer term. We offer below some observations on possible directions and emphases in the next phase of the Teenage Pregnancy Strategy.

ADDRESSING DE RIVATION

Both the area and individual level analyses show clearly how strong the socio-economic determinants are in explaining teenage conception rates compared with Strategy related efforts. Both data sets show that the Strategy has been successful thus far in addressing the issue of deprivation. The decreases in the conception rate have been most marked in the most deprived areas, and there have been significant increases in sexual health seeking behaviour amongst deprived young people, particular young men. Thus the Strategy is well targeted, but continued efforts are needed in this respect with an even sharper focus, perhaps, on vulnerable and less privileged groups. Young men living in deprived areas are still less likely to seek advice and more likely to have unprotected sex than are those from more affluent areas. Since a relatively small minority of young women, 6%, conceive before the age of 18, and since they are easily identified in terms of deprivation and underachievement, precise targeting is more feasible than in the case of some other public health interventions.

- **Interventions which selectively advantage young people from less privileged backgrounds seem likely to be most effective; an even sharper focus on deprivation and educational attainment may be justified**
- **Examples of apparently successful work , such as advice giving through youth work need perhaps further developing and evaluating**
- **Yet more focussed targeting of interventions which selectively advantage young pe ople from less privileged backgrounds and areas seems likely to be the most cost-effective use of funds**

ULTI-AGENCY A ROACHES

Since a firm conclusion of the evaluation relates to the overwhelming importance of the socio-economic context in explaining differences in rates, further gains in terms of

reductions in under 18 conception rates are likely to be achieved through the continuation of efforts across a broad front. As we have seen, considerable headway has been made already in effecting inter-agency collaboration. The Strategy is regarded as a model of joint working, and the benefits of collaboration are likely to continue beyond the scope of the Strategy. Links with other government initiatives, particularly those with similar objectives relating to addressing problems of deprivation, have been successfully forged and there are many instances in which funding from related interventions such as Quality Protects, SRB, EAZ, HAZ and Connexions, has supported activities related to the Strategy. Neighbourhood Renewal and Social Regeneration Budget resources are being used in 4 out of 10 areas to support the Teenage Pregnancy Strategy. The move of funding to LA instead of HA, and of the TPU to the DfES from the DH has created additional opportunities for providing a more integrated approach. Yet the evaluation has identified areas, education and housing for example, in which there is still scope for collaboration.

- **Efforts need to continue on a broad front, and across agencies**
- **More attention should be given to agencies and other interventions with whom collaboration has been less easy, including education and housing, in an effort to increase co-operation**
- **Further scope for enhancing links with other government initiatives, particularly those with similar objectives relating to addressing problems of deprivation, should be explored**

CO-ORDINATION OF THE STRATEGY

The research has shown that teenage pregnancy co-ordinators have been the lynchpin in the successful implementation of the Strategy, galvanising local activity, engaging in media advocacy, effecting cross working, and generating additional funds by forging collaborative alliances with agencies with similar goals. The role of the local co-ordinator is likely to be crucial in sustaining momentum. Where co-ordination has been consistently effective and strong from the start, efforts to keep teenage pregnancy on the public health agenda have been more successful. Yet with the end of ring-fenced funding for teenage pregnancy strategies in 2006, the danger is that teenage pregnancy co-ordinators may see their tenure as more precarious, and begin to seek other employment.

- **The research evidence strongly supports safeguarding the tenure of teenage pregnancy co-ordinators and maintaining funding of the post**

INFLUENCING THE SOCIAL CONTE T IN HICH THE STRATEGY IS RECEIVED

The choice of media, press and radio, has meant that the impact of the national media campaign has been consistent over time. The Strategy has avoided the peaks and troughs of public awareness of the HIV/AIDS Strategy, for example. We have described increasing involvement in the print media by teenage pregnancy co-ordinators, particularly at local level, with beneficial effect on the manner of reporting teenage pregnancy-related issues. The increased visibility in the regional press of

those working directly on the Strategy has had a positive effect on the tone of coverage.

- **The increasing engagement of Strategy-related staff in local press and broadcasting will be important in positi oning and maintaining the issue of teenage pregnancy on the public agenda**

RIORITISING TEENAGE REGNANCY AS A U LIC HEALTH ISSUE AND SUSTAINING EFFORTS

Because of the strong association with deprivation, areas with the highest conception rates tend also to be those in which a host of problems needed to be addressed, and teenage pregnancy is not necessarily a high priority. Urban areas with multiple social problems, despite being 'intervention-rich', face competing priorities and it is difficult to keep the issue of teenage pregnancy on the policy agenda. Not only does the Strategy constantly have to compete with other important agendas, but the wider determinants of teenage pregnancy are more intractable than those relating more proximately to the means by which risk can be reduced. Teenage pregnancy needs to continue to be seen as a priority issue, and not simply absorbed within other issues.

Much of the research we have carried out confirms that long term consistent efforts will be needed to reduce teenage conception rates in this country. Ultimately, a consequence of this will be that initiatives will need to be mainstreamed by being incorporated into the regular activities of service providers. The findings of the in-depth area analysis suggest that implementation of the Strategy has been easier in areas in which there has been an existing infrastructure of sexual health networks and structures. The international comparisons also suggest that countries in which sexual health interventions have been sustained have been more successful in effecting a continuing downward trend in teenage conceptions. The example of the Netherlands, a country in which the previously low teenage conception rate is now rising, and in which national complacency appears to be threatening to undo the good done in previous decades of sexual health prevention work, is salutary in this respect. The experience of Denmark, which has rejected short term strategies in favour of constant revision of a continuous strategy, would seem to be a useful model.

As 2006 approaches, and with it the end of ring fenced funding for the Teenage Pregnancy Strategy Local Implementation Grant, there are fears amongst those working on the Strategy relating to continuing the momentum built up thus far. However, there are grounds for optimism since local authorities are now obliged to develop Children and Young People's Plans, in liaison with key partners such as PCTs, which address the five outcomes of Every Child Matters, including reductions in under 18 conception rates and STI rates among under 16s and 16-19s.

- **Support to co-ordinators, in the form of evidence based briefings, etc. should be sustained to ensure that teenage pregnancy remains high on public health agendas**

- **The scale of local efforts and the extent of political will need to be sustained for success to be achieved**
- **The evidence base for what seems to be effective in other countries needs to be brought up to date**

CHANGING EHAVIOUR

A considerable challenge for the Teenage Pregnancy Strategy is that of influencing the behaviour of young people. The evidence is that a higher proportion of young people in this country have intercourse at an early age, and fail subsequently to use contraception, and this goes some way to explaining our higher rates of teenage pregnancy. Risk behaviour has also increased over time; the tracking survey findings showed that unsafe sex has increased in prevalence over the past four years.

Alongside addressing issues relating to deprivation and poverty, this would seem to be the area in which the Strategy is likely to have the greatest effect on teenage pregnancy rates in the future. Provision of services alone is not expected to have a major impact on sexual behaviours. The strategy is based on putting in place multiple components along a pathway intended to reduce sexual risk behaviour and teenage pregnancy. These components include greater openness and communication about sexual matters in the home, better SRE in schools, trust in the confidentiality and accessibility of advice and services that young people would wish to use and the ability to withstand pressure from media, peers or partners to hasten the start of sexual activity.

- **Creative and innovative interventions are needed in the context of the Teenage Pregnancy Strategy to empower young people, young women in particular, to resist pressure to become sexually active before they are ready**

SE UAL HEALTH SERVICES USE OF CONTRACE TION AND CONCE TION RATES

Considerable progress has also been made in terms of setting up contraceptive and sexual health services. In terms of sexual health services, at least, there is no evidence that England falls behind other countries in levels of provision. 90% of young women know where to go for their contraceptive supplies and there has been a striking increase in the number of local authorities with a dedicated service for young people. The inverse relationship between proximity of services and conception rates is not surprising because new services are likely to be set up in areas of high need. It may therefore be an ecological fallacy to conclude that increasing provision of contraceptive services leads to higher pregnancy rates. Many other factors, besides proximity of services, contribute to whether or not young people access services appropriately and actually use reliable methods of contraception.

We have seen that increases in teenage conception rates have coincided with 'pill scares' over recent decades. There is also evidence in our data that the shortage of Depo-Provera coincided with a halt to the downward trend in under 18 conceptions in

the fourth quarter of 2002. The decline in the teenage pregnancy rate in the US has been partly attributed to the increased prevalence of use of long acting methods of contraception among vulnerable young women. Clearly teenage conception rates are sensitive to changes in contraceptive provision. Doubts have recently been cast on the wisdom of prescribing injectable contraception to young women because of the adverse effect of early, long term use on bone density. No such concern exists for implants however, which remain a safe and effective, yet relatively little used, method of contraception by young women.

- **More evidence is needed on the relationship between configuration of service provision, uptake of services and use of contraception by target groups**
- **Services offering contraceptive implants to young women should be increased**
- **Easy to read leaflets should provide more accessible information on the range of contraceptive provision, and the relative costs and benefits**

ADDRESSING SE EDUCATION ISSUES

Considerable improvements have also been made to sex and relationship education. Most schools have implemented the DfES guidance on SRE and more than half have teacher training in place. There is ample evidence in these findings that increased exposure to sex education in school has beneficial effects in terms of sexual health status. The view that SRE in schools should have statutory status has been expressed strongly at local and national levels. We are among the minority of European countries in which sex education is not mandatory. While the majority of parents indicated that they would feel comfortable if their child asked them for advice on sex and relationships, a smaller proportion of young people felt they could talk to their parents about such issues.

- **Greater efforts are needed to bring to the attention of the public the relationship between provision of sex education and lower rates of teenage pregnancy, from individual level data and from international comparisons**
- **Given its proven beneficial effects, serious consideration needs to be given to making high quality sex and relationships education mandatory within a statutory framework on PSHE.**
- **The majority of parents express a need for 'props' to help them to raise issues with their children. Innovative approaches to improving communication about sex between parents and children should be developed and evaluated rigorously.**

SOCIAL NOR S REGULATING EARLY OTHERHOOD

The signs are that teenage motherhood is more tolerated in England than in other countries and this may be because it is more common. It may also be a function of

traditional social norms relating to early childbearing, which are difficult to shift, and typical of the old industrial areas. Furthermore, attitudes towards abortion are less favourable among the most at risk groups. Although it is not a goal of the Strategy to increase termination rates, an increase in the abortion ratio can be seen as a valid outcome if one objective of the Strategy is to interrupt the cycle of deprivation attendant on early childbearing. The trend is towards an increasing proportion of pregnancies which are terminated. Termination rates are important in assessing the success of the Strategy. Certainly there is some way to go before our rates are commensurate with those in the rest of Europe. Clearly a balance needs to be struck between stigmatising early motherhood and ensuring that it is not seen as 'cool'.

- **Negative social attitudes towards abortion still influence young women's decision relating to the outcome of their pregnancy and further consideration is perhaps needed on ways of addressing this**

SU ORT FOR YOUNG ARENTS

Participation: Our research provides no evidence to support the early fears of those who thought the Strategy might encourage young women to become pregnant. Two key findings from these data in relation to the support of teenage mothers have particular relevance for policy with regard to participation of young mothers. The first is the evidence that having a child early in life motivates young mothers to aim higher with respect to educational and employment goals than they might otherwise have done. The second is that many women (especially those in a settled relationship), having once become a mother, adopt a pragmatic approach and go on to complete their family before returning to activity outside the home. The temporary postponement of education and training goals, coupled with their upward revision, affirms the importance of providing education and training and child care opportunities for mothers of small children, as well as helping younger women who are pregnant to finish their formal education. Since young mothers see their aspirations as delayed rather than dashed by the birth of their child; since motivation to improve themselves increases after the birth of their child; and since there is resistance to childcare on the part of some, efforts to continue to draw them back into education and work are likely to be particularly effective at the time at which the child begins school.

Awareness of interventions is increasing among young mothers, as is their use. Where they are used, there is clear evidence, from the in-depth interviews, of a beneficial effect on the lives of the young women.

Addressing social isolation: Much of the focus thus far has been on participation and re-integration. However, a high proportion of young mothers still comment that the psychosocial costs of teenage pregnancy are high. This seems to indicate the need for increased efforts to reduce isolation.

- **The new child care schemes now coming on stream, such as Care to Learn, will be important in permitting young mothers to satisfy their goals in relation to training and employment and their evaluation should include an assessment of the extent to which they support young mothers returning to training and employment**
- **These findings also have relevance for efforts to prevent further pregnancy for existing mothers, since the evidence is that for some mothers wishing**

to complete their families before returning to education or employment, this may not be appropriate.

- **Psycho-social support for young mother has so far been addressed through efforts to place young women in supported housing, and many other initiatives, but there is still an unmet need for provision of real opportunities for young mothers to socialise and support one another and each others' children**

Glossary

BMRB	British Market Research Bureau
CAPI	Computer Assisted Personal Interview
DfES	Department for Education and Skills
DPH	Director of Public Health
EAZ	Education Action Zone
EC	Emergency Contraception
FP	Family Planning
HA	Health Authority
HAZ	Health Action Zone
HSBC	Local Coordination Fund
LEAs	Local Education Authorities
LIF	Local Implementation Fund
LIG	Local Implementation Grant
Natsal	National Survey of Sexual Attitudes and Lifestyles
ONS	Office of National Statistics
PCG	Primary Care Group
PCT	Primary Care Trust
PSA	Public Service Agreement
PSHE	Personal Social and Health Education
SEU	Social Exclusion Unit
SRB	Single Regeneration Budget
SRE	Sex and Relationship Education
STI	Sexually Transmitted Infection
TPCs	Teenage Pregnancy Co-ordinators
TPS	Teenage Pregnancy Strategy
TPSE	Teenage Pregnancy Strategy Evaluation
TPU	Teenage Pregnancy Unit
WHO	World Health Organisation

Publications List

Occasional reports

Press coverage of the young people's campaign, October 2000: Internal briefing No 1, 2000

Implementation plan for the evaluation of the Teenage Pregnancy Strategy, Internal briefing No 2, 2000

A conceptual framework for Joined Up Action, Internal briefing No 4, 2000

Teenage Pregnancy Co-ordinators' biographies, Internal briefing No 5, 2001

Related interventions: Internal briefing No 6, 2001

Audit of contraceptive services, Internal briefing 7, 2002

Audit of GPs, Internal briefing No 8, 2002

Local implementation of the Teenage Pregnancy 'Top Tier' local authorities: Internal briefing No 9, 2003

Local implementation of the Teenage Pregnancy Strategy in 16 in-depth areas, Internal briefing No 10, 2002

In depth study of implementation of the Teenage Pregnancy Strategy in 8 local authority areas, Occasional report No 11, 2004

Early trends in teenage conceptions and abortions. Internal briefing No 11,

Routine reports

Annual report of the evaluation of the Teenage Pregnancy Strategy; Year 1. 2001

Interim report of the evaluation of the Teenage Pregnancy Strategy; Year 2, 2002.

Annual report of the evaluation of the Teenage Pregnancy Strategy; Year 2, 2003.

Interim report of the evaluation of the Teenage Pregnancy Strategy; Year 3. 2003

Annual report of the evaluation of the Teenage Pregnancy Strategy; Year 3 2004

Interim report of the evaluation of the Teenage Pregnancy Strategy; Year 3/4. 2004

Final report of the evaluation of the Teenage Pregnancy Strategy; Year 4.

BMRB reports

Reports 1-12 on individual waves of the tracking survey

Papers published to date

Patricia Kingori *et al.* Sex and relationship education and the media: an analysis of national and regional newspaper coverage in England from September 2000 to December 2002. **Sex Education** 2004; 4 (2): 111-124

Annex A – Cost Component

1. Calculating the cost per teenage pregnancy averted

The table below shows the estimated number of teenage conceptions averted[21]

Female Population **902,446**

Mean - 2.3% annual decline

	Strategy	No strategy	strategy conception	no strategy conceptions	**No averted due to strateg**
1998	0.0461	0.0461	41599	41599	
1999	0.0450	0.0461	40642	41599	
2000	0.0440	0.0461	39708	41599	
2001	0.0430	0.0461	38794	41599	
2002	0.0420	0.0461	37902	41599	
			198646	207996	**9350**

Upper 95% CI - 2.8% annual decline

	Strategy	No strategy	strategy conception	no strategy conceptions	
1998	0.0461	0.0461	41599	41599	
1999	0.0448	0.0461	40434	41599	
2000	0.0436	0.0461	39302	41599	
2001	0.0423	0.0461	38202	41599	
2002	0.0411	0.0461	37132	41599	
			196670	207996	**11326**

Lower 95% CI - 1.9% annual decline

	Strategy	No strategy	strategy conception	no strategy conceptions	
1998	0.04610	0.0461	41599	41599	
1999	0.04522	0.0461	40809	41599	
2000	0.04436	0.0461	40033	41599	
2001	0.04352	0.0461	39273	41599	
2002	0.04269	0.0461	38527	41599	
			200241	207996	**7755**

The total cost of the strategy is estimated as the sum of:

TPS Programme Budget		£11.55 million[22]
Local Implementation Grant x 0.78		£34.48 million
Other mainstream funding x 0.78		£17.14 million
Less		
NHS savings	= Teenage pregnancies averted x £1,814 =	£19.95 million[23]
		£43.22 million

Cost per teenage pregnancy averted = £43.22m ÷ 9,350 = £4,623

[21] Female population is average population of females aged 15-17 between 1998-2003 based on ONS mid-year population estimates for England
[22] Only includes 75% of 2002-03 expenditure
[23] For a mean annual decline of 2.3%

2. Sensitivity Analysis

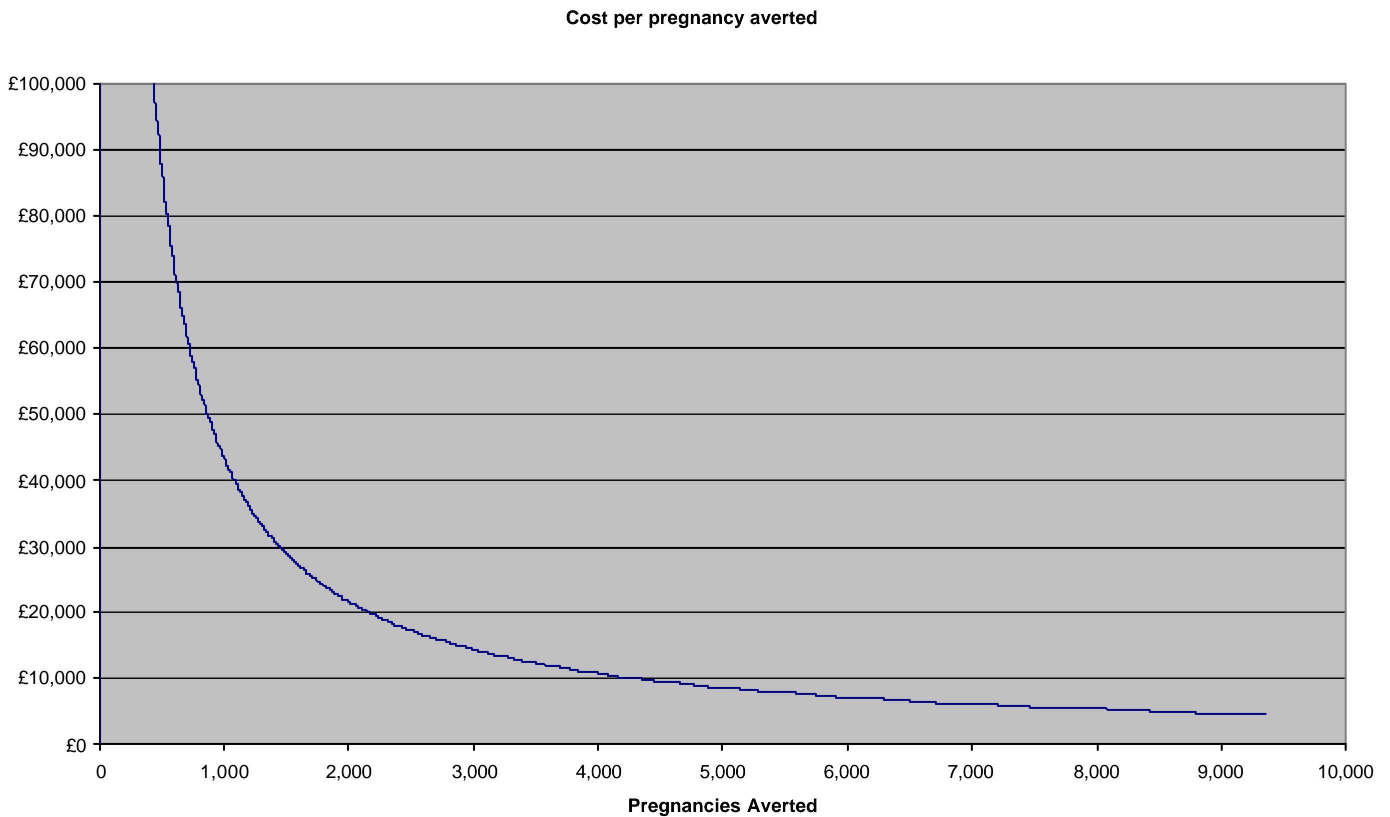
i) *number of teenage pregnancies to avert to make strategy cost neutral*

TPS expenditure is estimated as £77.73 million

However, it is also estimated that £1,814 is saved for every teenage pregnancy averted and therefore it can be calculated how many teenage pregnancies would have to have been averted for the TPS to have been cost neutral:

£77.73 m ÷ £1,814 = **43,000**

ii) *cost per teenage pregnancy averted according to different levels of Strategy attributed falls in teenage conceptions*[24]



[24] 'Best case' scenario = 9,350 'Worst case' scenario = 0

Cross Reference List

[1] Implementation plan for the evaluation of the Teenage Pregnancy Strategy, Internal briefing no. 2, 2000.

[2] Reports 1-12 on individual waves of the tracking survey.

[3] Local implementation of the Teenage Pregnancy Strategy in 16 in-depth areas, Internal briefing no. 10, 2002.

[4] Local implementation of the Teenage Pregnancy 'Top Tier' local authorities: Internal briefing no. 9, 2003.

[5] Patricia Kingori *et al.* Sex and relationship education and the media: an analysis of national and regional newspaper coverage in England from September 2000 to December 2002. *Sex Education* 2004; **4** (2): 111-124.

[6] In-depth study of implementation of the Teenage Pregnancy Strategy in 8 local authority areas. Occasional report no. 11, 2004.

[7] Annual report of the Evaluation of the Teenage Pregnancy Strategy. Synthesis no. 1. 2001.

[8] Audit of contraceptive services. Internal briefing no. 7, 2002.

[9] Audit of GPs. Internal briefing no. 8, 2002.

[10] Interim report of the Evaluation of the Teenage Pregnancy Strategy; Year 3/4. 2004.

[11] Annual report of the Evaluation of the Teenage Pregnancy Strategy; Year 2. 2003.

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