Trends in teenage pregnancy in England and Wales: how can we explain them?

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SUMMARY

Teenage pregnancy is associated with adverse social and physical outcomes for both mother and child. We drew on various sources—birth and abortion statistics from the Office for National Statistics, data from the National Survey of Sexual Attitudes and Lifestyles, and routinely collected data from family planning clinics—to identify trends in England and Wales and their possible determinants.

The rate of teenage sexual activity has increased steadily and consistently over the past four decades, whilst the rate of teenage fertility has shown greater variation. When the teenage fertility rate is calculated against the denominator of sexually active women, rather than the total sample of teenage women, the underlying trend in teenage fertility over the past four decades has been downwards, though not consistently so. Fluctuations in the teenage fertility rate seem to track intervention-related factors such as access to, and use of, contraceptive services and the general climate surrounding the sexual health of young people.

INTRODUCTION

Britain has the highest teenage birth rate in Western Europe[1]. For 15–19-year-olds the annual rate of births in 1997 in England and Wales was 30 per 1000[2]. England and Wales also ranks first among countries in Western Europe in abortion, with a rate of 22 legal terminations per 1000 women aged under 20 in 1997[3]. Early motherhood is considered more problematic when unsupported and the UK now has one of the highest birth rates among unmarried teenagers in the western world[4]. While not always unintended, teenage fertility is nevertheless often associated with adverse social and physical outcomes for both mother and child, carrying private and public costs[5]. Effective preventive efforts need to be guided by a long view of past trends and their possible determinants.

METHOD

Data from the Office for National Statistics (ONS)[2,3] are used to describe trends in teenage births and abortions in England and Wales since 1960. Survey data drawn from the National Survey of Sexual Attitudes and Lifestyles (NSSAL), a random sample survey of 18 876 respondents aged 16–59[6–8], are used to explore the relationship between teenage fertility, sexual activity and contraceptive use for successive birth cohorts born between 1931 and 1971. Routinely collected data from family planning clinics are used to chart trends in health service use by teenage women in England and Wales between 1975 and 1996[9,10].

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RESULTS

Trends in teenage pregnancies

The teenage birth rate for women in England and Wales increased in the 1960s, peaked in 1971, then declined until 1983 (Table 1). 1983–1990 saw a moderate rise in the teenage birth rate but in 1990 the trend again reversed and rates decreased slightly until 1995. Lately there have been signs of a further upturn. Teenage abortion rates rose sharply after decriminalization in 1967, but then track the teenage birth rate fairly closely.

Trends in teenage sexual activity

Figure 1 (based on NSSAL data) shows the proportion of women who had intercourse before the age of 20 for each year of birth, alongside the proportion who used contraception at first intercourse and the proportion who had a live birth. The dramatic fall in age at first sexual intercourse has already been described[6,8]. Here we chart the rise in teenage sexual activity in successive birth cohorts. Nearly 90% of women born in 1971 had sexual intercourse before the age of 20, compared with fewer than 30% born in 1931. The sharpest increase can be seen for women born in the decade following the Second World War, who were in their teens in the 1960s.

Trends in contraceptive use

The NSSAL data show a time lag between the increase in incidence of teenage sexual intercourse and the widespread use of contraception. For the cohort of women born between 1931 and 1951, the rate of teenage sex increased

Table 1 **Trends in births and abortions to teenage women, England and Wales, 1960–1997** [Source: Birth statistics series FM1; abortion statistics series AB (Office for National Statistics)]

	*Births per 1000 women aged under 20**	*Number of live births*	*Abortions per 1000 women aged under 20**	*Number of abortions*
1960	34.0	51 534	NA	NA
1961	37.2	59 630	NA	NA
1962	39.0	67 127	NA	NA
1963	40.0	71 445	NA	NA
1964	42.4	76 547	NA	NA
1965	45.0	81 416	NA	NA
1966	47.6	86 528	NA	NA
1967	48.7	84 314	NA	NA
1968	48.9	81 853	NA	NA
1969	49.6	81 659	5.6	9233
1970	49.6	80 975	9.4	15 250
1971	50.6	82 641	12.5	20 472
1972	48.0	79 087	14.9	24 590
1973	43.9	73 270	15.9	26 570
1974	40.5	68 724	16.2	27 532
1975	36.4	63 507	15.9	27 692
1976	32.2	57 943	15.2	27 388
1977	29.4	54 477	15.2	28 216
1978	29.4	55 984	15.6	29 661
1979	30.3	59 143	16.8	32 726
1980	30.4	60 754	17.8	35 528
1981	28.1	56 567	17.3	34 924
1982	27.4	55 435	17.4	35 201
1983	26.9	54 059	17.6	35 318
1984	27.6	54 508	19.0	37 572
1985	29.4	56 929	19.8	38 210
1986	30.1	57 406	19.8	37 713
1987	30.9	57 545	20.9	38 932
1988	32.5	58 741	23.0	41 496
1989	32.0	55 543	22.8	39 565
1990	33.3	55 541	23.4	38 942
1991	33.0	52 396	21.6	34 288
1992	31.7	47 861	20.3	30 589
1993	31.0	45 121	19.9	28 889
1994	29.0	42 026	19.6	28 469
1995	28.5	41 938	19.2	28 215
1996	29.8	44 667	21.7	23 435
1997	30.2	46 316	21.7	33 357

*Denominator=women aged 15–19

faster than did the rate of contraceptive use (Figure 1). Only for the cohort of women born after 1950 was the increase in sexual activity paralleled by an increase in contraceptive use at first intercourse (used here as a proxy indicator of the prevalence of teenage contraceptive use). Fewer than 40% of women born in the early 1930s used any method of contraception at first intercourse, compared with 70% of those born four decades later (Figure 1).

Figure 2, based on NSSAL data, charts trends in the use of different contraceptive methods at first intercourse, together with the rate of teenage births for sexually active teenage women born between 1931 and 1971. The proportion of women adopting less reliable methods of contraception (mainly withdrawal) at first intercourse decreased from 15% of women born in 1931 to 6% of those born in 1971. Although the condom is the method most commonly used at first intercourse for all cohorts of women, its popularity waned among women born between 1950 and 1970. A marked increase in condom use at first intercourse can be seen for the cohort of women born in the early 1970s, for whom entry into their teenage years coincided with the advent of the AIDS epidemic[6,8]. Use of oral contraception increased for the cohort of women born from the early 1940s onwards, reached a plateau at 30% of those born in the early to mid 1960s, and declined for women born after that time.

The more recent decline in the use of oral contraception (OC) needs to be seen in the context of adverse publicity. Troughs in OC usage coincide fairly consistently with emerging epidemiological evidence of possible side-effects. In 1976 and 1977, 1983, 1986 and 1995, scientific reports of adverse effects of oral contraception received widespread media publicity and were followed by a fall in use of OC and higher than expected fertility rates[11–14]. Increases in the incidence of births to teenage women coincided with each of these years and a slight effect persisted some 3–4 years thereafter.

Sexual health service use

Family planning clinic attendance by teenage women in England and Wales, used here as a proxy indicator of service use [it does not include contraception obtained commercially or through general practitioners (GPs)], has increased steadily, despite the decline among older age women[9]. Trends in family planning service use mirror trends in teenage pregnancy fairly consistently over the period—increases in attendance corresponding with decreases in the teenage birth and abortion rate and *vice versa* (Figure 3).

The largest decline in service use by teenagers, in the period 1983–1985, coincides with the celebrated legal case brought by Mrs Victoria Gillick with the aim of restricting access to contraceptive services to under-16-year-olds[15]. Although her action was defeated in the House of Lords, the Gillick case generated widespread suspicion of GPs and family planning staff, and coincided with a decline in family planning clinic attendances not only among under-16-year-

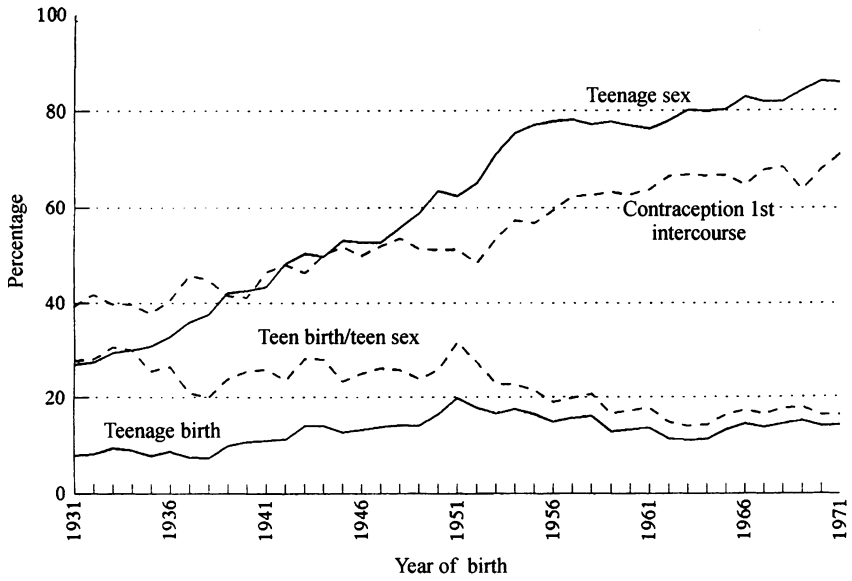

Figure 1 **Teenage birth and teenage sex, women aged 20–59.** 2-year moving averages [Source Ref. 6]

olds but also among 16–19-year-olds (Figures 3 and 4). In Figure 4, trends in sexual behaviour and service use are superimposed on trends in conceptions to under 16s. A subsequent increase in the conception rate was seen among 16–19-year-olds, but there was no apparent corresponding increase among under-16-year-olds, perhaps because of reliance on condoms (which are available without medical prescription) in this age group. No decline was seen in sexual activity during this period in either age group (Figures 1 and 4).

DISCUSSION

An interpretation of trends in the prevalence of teenage fertility must necessarily take account of the progressive increase, in the past few decades, in teenage sexual activity (Figure 1). The rise in the teenage birth rate during the 1960s certainly concurs with such an explanation. Yet recourse to termination of pregnancy and availability of reliable contraception have since 1970 mitigated the effects of increased sexual activity on teenage fertility. This is reflected in marriage rates among teenage women, which increased steadily in the 1960s but declined dramatically thereafter, from 67 per 1000 in 1970 to 9 per 1000 in 1994. Increasingly women were avoiding unwanted pregnancies and the consequent need to legitimize births in wedlock.

The decline in teenage birth rates during the 1970s coincided not only with the advent of oral contraception and the availability of abortion but also with a period of considerable activity in terms of contraceptive service provision for young people. With the granting of a mandate to family planning clinics in 1979 to advise single women, and provision of contraception free of charge under the National Health Service in 1974, birth control became

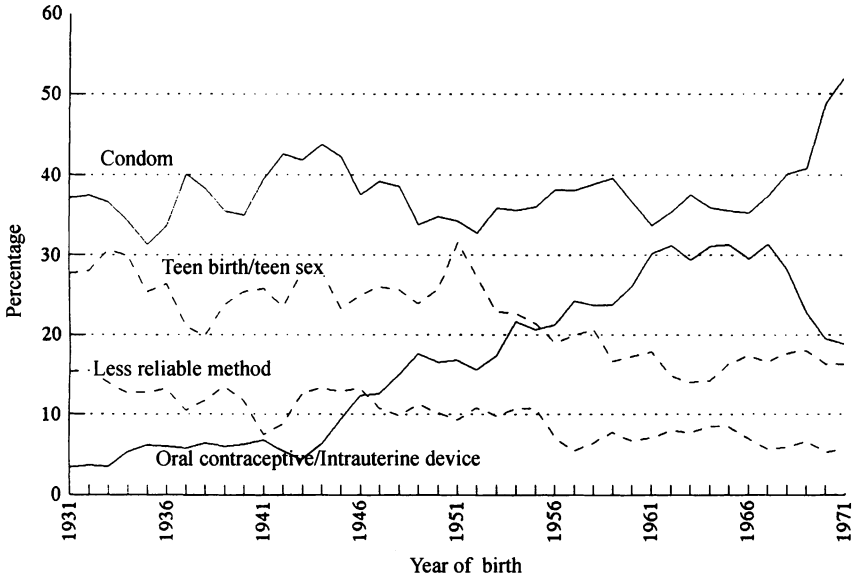

Figure 2 **Teenage birth and contraception at first intercourse, women aged 20–59.** 2-year moving averages [Source Ref. 6]

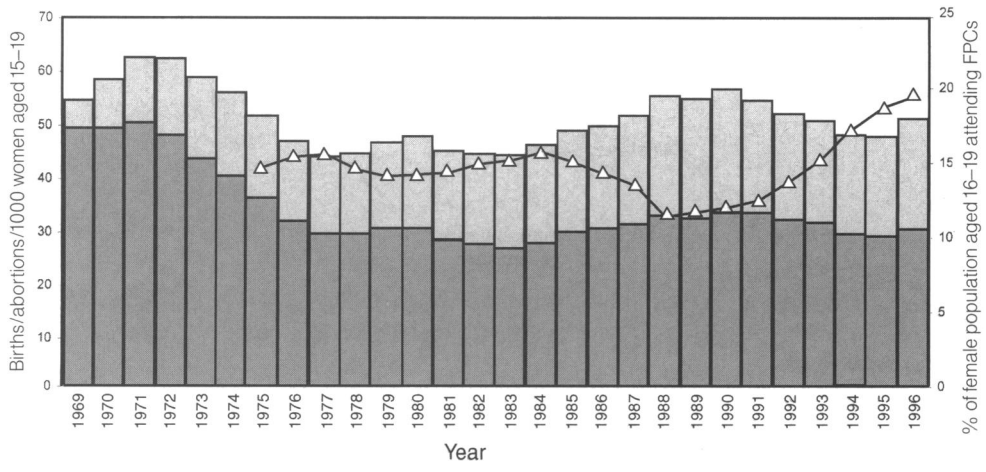

Figure 3 **Teenage birth and abortion rates and family planning clinic (FPC) attendance, England and Wales 1969–1996** [Sources: Birth statistics: Series FM 1 (ONS); Abortion statistics: Series AB (ONS); Department of Health Family Planning Clinic Services. Summary Information for 1996–7, England (1998); Health Statistics (1998) Welsh Office] Live birth rate ■; abortion rate ▩; percentage of women attending FPCs △

available irrespective of marital status or ability to pay (Figure 5). The significance of this can be seen in the fact that, while live birth rates among older women began to decline in 1964 (almost immediately after the advent of oral contraception in 1961), the decrease among 15–19-year-olds is not seen until 1971, when services were opened up to unmarried women (Figure 6). In 1974, a decade after the first Brook Advisory Centres were set up, the Department of Health and Social Security (DHSS) recommended further separate and less formal service arrangements for young people. Access to abortion increased after decriminalization in the 1967 Abortion Act. Research was set up to study the sex educational and contraceptive needs of young people[16], recommendations on provision of sex education were produced by the Schools Council and the DHSS[17] and the Health Education Council mounted interventions to prevent teenage pregnancy[18] (Figure 5).

The 1980s were characterized by a much harsher climate surrounding sexual health. The upturn in the teenage birth rate in the early 1980s is often linked, in the minds of those involved in family planning, with the Gillick case. Yet the case was perhaps more symptomatic than definitive of the climate of the time. The decade saw successive efforts to restrict provision of abortion[19], fewer efforts to assist young people to control their fertility and cuts to family planning clinics[20]. The situation no doubt compounded the effects of the October 1983 pill scare and the lower profile pill scare of 1995[12]. In such a climate, young women may have been reluctant to take concerns about the safety of oral contraception to family planning clinics and GPs.

Not until the 1990s did teenage birth rates fall again. The decrease can be seen against the backdrop of a possible recovery of confidence in the pill, but also renewed efforts to address the sexual health of young people. Working groups were set up to address the issue by the Royal Colleges, by the Department of Health, and by other agencies. After publication of *Health of the Nation* targets relating to young women under 16 years old, a large number of sexual health clinics were set up specifically to cater to the needs of young people (M Jones, personal communication). More than half of teenage women were seeking advice and treatment from their family doctor[21], and while attendances at family planning clinics among women in older age groups were declining, those among teenage women were increasing[9,10]. The increased workload may have reflected a restoration of faith in the family doctor after the loss of trust contingent on the Gillick campaign[22]. Efforts to prevent HIV infection also impacted on fertility control. The proportion of family planning clinic attenders receiving condoms rose dramatically from 6% in 1975 to 32% in 1995 and 1996[9,10] and the proportion of young people reporting condom use at first intercourse increased from one-third to two-thirds between 1985 and 1990[6,8].

It is too early to know whether the more recent upturn in the teenage birth rate will be a continuing trend. It coincided with yet another 'pill scare' causing further concerns about the safety of contraception[13,14]. Some feel it has occurred within a period in which the momentum of efforts to reduce early conception is once again being lost[23].

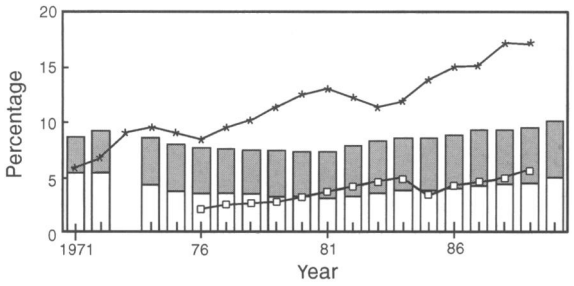

Figure 4 **Under-16 conception rates for England 1971–1990** Sources Ref. 6; Department of Health Family Planning Clinic Services. Summary information for 1996/7; Birth statistics: Series FM 1 (OPC); Abortion statistics: Series AB (OPCS)] Live births □; terminated by abortion ⊡; *—*=% of under-16-year-old girls reporting first sexual intercourse; □—□=% of under-16-year-old girls attending NHS family planning clinics

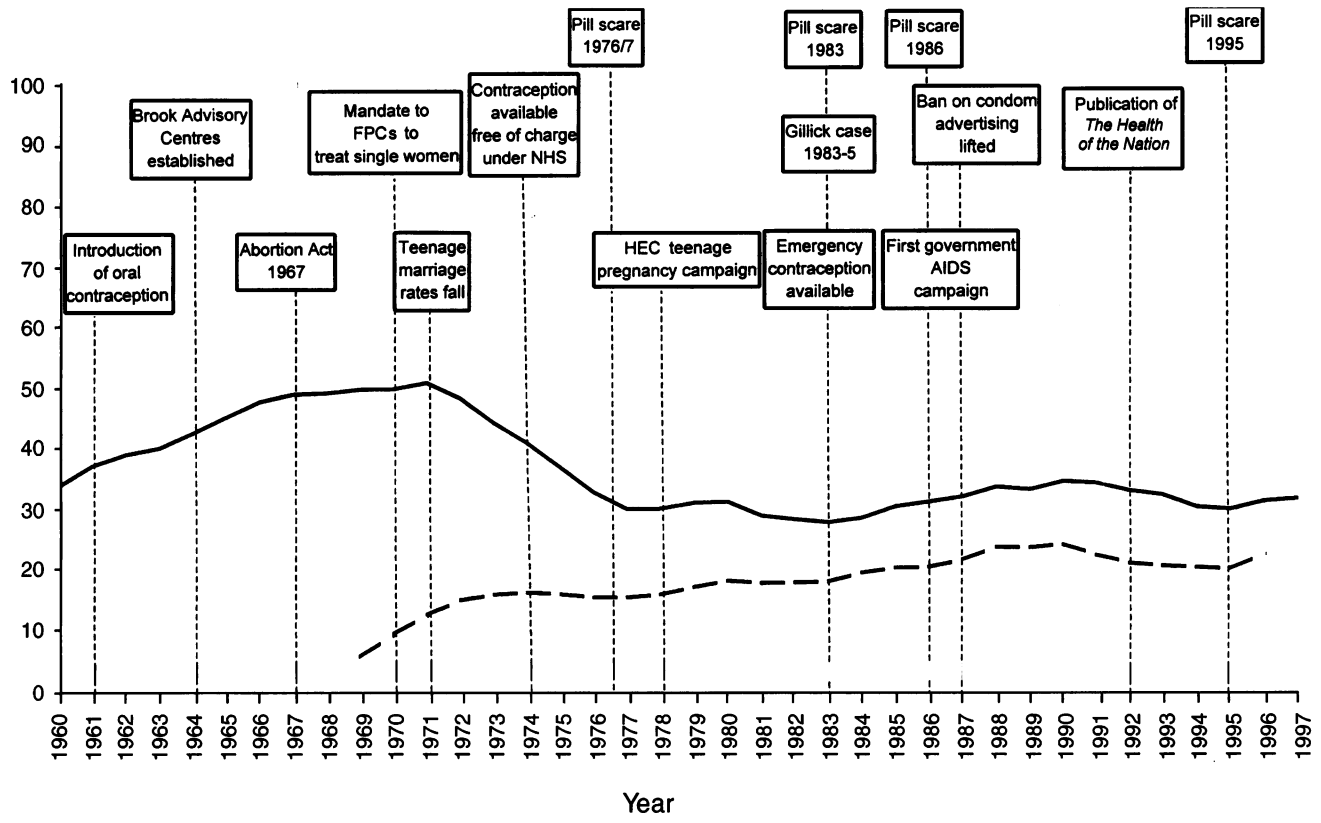

Figure 5 **Live births and abortions to teenagers, and associated events, England and Wales 1960–1997** [Sources: Birth statistics: Series FM 1; Abortion statistics: Series AB] Live birth rate —; abortion rate – –; FPC=family planning clinics; HEC=health education centres

Targets relating to the sexual and reproductive health of young people, which seemed to provide the impetus for preventive efforts earlier in the decade, are as yet notably missing from *Our Healthier Nation*[24]. Yet the joint effort to address both social and economic aspects of the problem by the Social Exclusion Unit, the Department of Health and the Health Education Authority are promising. The gaps between the haves and have-nots in material terms and between the highest and lowest education achievers—which have been shown to be associated with variations in health status[25]—has increased recently[26]. The receding fear of AIDS for many young people may also have consequences

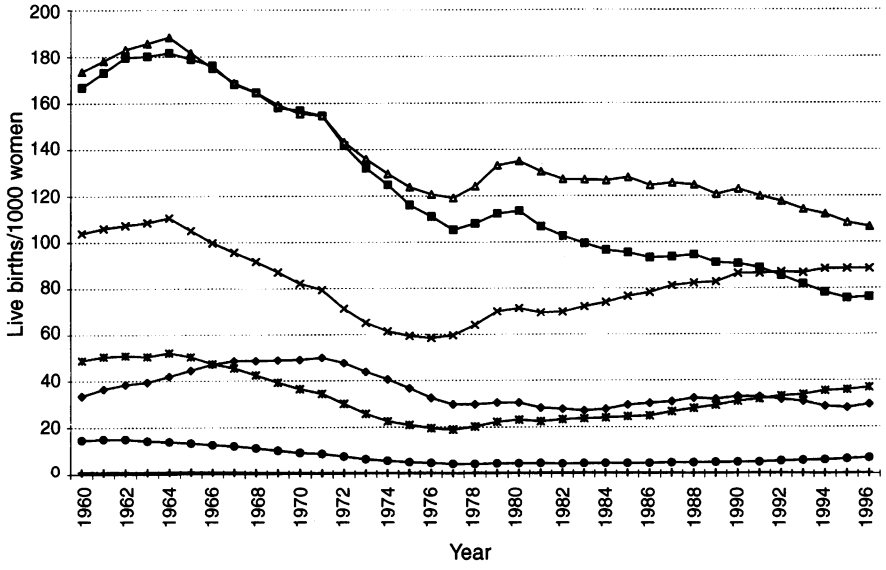

Figure 6 **Live birth rates by 5-year age groups, 1960–1996** ◆15–19; ■ 20–24; △ 25–29; X 30–34; ★35–39; ● 40–44; + 45–49

for fertility control. At the same time youthful pregnancy may be accorded glamour status as matronly images of motherhood are replaced by those of pregnant pop stars[27].

The underlying upward trend in teenage fertility is clearly associated with the pronounced increase in teenage sexual activity in recent decades. This does not, however, explain the fluctuations in the teenage fertility rate, interpretation of which must be multifactorial. Trends in teenage pregnancy seem to vary with access to reliable birth control, with availability of contraceptive services, with reports of possible adverse side effects of contraception, with social attitudes to teenage pregnancy and abortion, with provision of appropriate sex education, and with employment and educational opportunities and the availability of realistic alternative goals to motherhood.

Multifactorial problems need multidimensional solutions and some of these factors are less amenable to public health intervention than others. Yet the steep fall in the teenage birth rate during the spate of preventive activity in the 1970s in the UK, the striking congruity between trends in births and abortions, and the sustained decline more recently in other European countries, suggest that teenage pregnancy is responsive to preventive interventions. When the climate is favourable to preventive efforts; when positive and harmonious messages are transmitted to young people about control of their fertility; when a prompt response is made to reports of adverse side effects and effective advice is given about safety and efficacy of contraceptive methods; when easily accessible services are provided and confidentiality is assured; when there is unison between the preventive strategies of different sectors; when an integrated approach to sexual health promotion is adopted, aimed at preventing both sexually transmitted infection and unwanted conception—then we are more likely to see a decline in teenage pregnancy rates.

What is needed is a consistent and sustained public health response, in unison with strategies adopted by other sectors.

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