

The role of general practice in promoting teenage health: a review of the literature

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Background and methods. Teenagers are acknowledged to be at high risk of health-damaging behaviours including smoking, teenage pregnancy, and drug and alcohol use. Additionally, the recognition of high levels of psychological distress is cause for serious concern about teenage health. This paper reviews health promotion interventions for teenagers in general practice. Medline, BIDS, Psyclit and SIGLE databases for January 1990–February 1997 were systematically searched for English language studies on adolescent/teenage health and health promotion interventions in primary health care/general practice; reference sections of articles were checked for earlier work.

Conclusions. The literature indicates that teenagers rarely receive health promotion advice from their physicians. The impact on behaviour change, of screening and health promotion for teenagers in general practice requires further evaluation to assess the potential effectiveness in preventing the onset or continuation of health-damaging behaviours.

Keywords. Adolescence, adolescent health services, health promotion, primary health care, review literature.

Introduction

Teenagers are acknowledged to be at high risk of health-damaging behaviours including smoking, teenage pregnancy, and drug and alcohol use. Additionally, the recognition of high levels of psychological distress is cause for serious concern about teenage health.¹ People aged 16–24 years tend to engage in behaviours damaging to health to a greater extent than those in other age ranges.² These behaviours may result in immediate health problems such as injuries or sexually transmitted disease, as well as increasing the risk of chronic diseases such as heart disease and cancer in later life. Health of the Nation targets for this age group,³ including reducing the prevalence of smoking, conceptions, suicide, accidents and sexually transmitted disease, have mostly not been met.⁴ *Our Healthier Nation*⁵ focuses on prevention in four areas: heart disease and stroke, accidents, cancer and mental health. The targets for the next 12 years are to cut heart disease and stroke by a third, accidents by a fifth, cancer deaths by a fifth and

suicide by a sixth. Teenagers exhibit a high prevalence of the risk factors associated with each of these areas. Promoting healthy behaviour among this age group aims to encourage the development of healthy adult lifestyles and thereby reduce the risk of morbidity and mortality in these target areas. In order to address fully these areas, several different approaches will need to be combined involving national and local policy, the media, schools and local initiatives in communities and in general practice. This paper focuses on the role of general practice and the primary health care team.

Method

A preliminary search indicated that there are no current literature reviews of adolescent health promotion in general practice. A systematic search and review was therefore carried out to determine what is being done and to gather evidence of interventions that are effective. Medline, BIDS, Psyclit and SIGLE (grey literature) and local library databases were searched (January 1990 to February 1997). Keywords and text words were combined to search for studies on adolescent/teenage health and health promotion interventions in primary care; reference sections of articles were checked for earlier work. Searches were limited to English language publications.

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Defining teenage

The term 'teenage' refers to those aged between 13 and 19 years. It is often used synonymously with 'adolescence', an ill-defined term, describing a transitional period between childhood and adulthood. World Health Organization⁶ defined adolescence as "those aged 10 to 19, and youth as those between 15 and 24 years, young people is a term that covers both age groups". Statistical information for this age group is limited in the UK since national data are usually collected in the age bands '5–14', and '15–24 years'.

Teenage attitudes to health

It has been reported that most teenagers agree that 'health is not a matter of luck' and are aware of the health risks they take, but may not put this knowledge into practice, for example by not smoking.^{6–9} Tuakli⁹ reported that knowledge of the health risks of smoking are high (80% correct responses) amongst adolescents aged 12–20, and that there is no difference according to smoking status. Regular teenage smokers have been reported to have significantly lower levels of 'internal control' compared with those who have never smoked ($P = 0.01$, adjusted for age), suggesting that they have weaker belief in their own control over their health.¹⁰ Locus of control is based on the premise that those who feel that they control their lives are more likely to embark on health-promoting behaviours than those who feel powerless to act or who abdicate this responsibility.¹¹ However, reviews have concluded that the relationship between locus of control and health-related behaviour is only modest.¹² Walston and Smith¹³ suggested that a strong relationship will be found when people place a high value on their health. Those with less optimism about their future have been shown to be more fatalistic¹⁴ and less likely to seek or want advice than others, although they may be the ones most at risk.¹⁵

Socio-environmental context can play an important role.⁷ In a US survey, 21% of high-school students reported feeling 'a lot of pressure' to drink alcohol and seven per cent reported a lot of pressure to use drugs;¹⁶ those from socio-economically disadvantaged backgrounds were three times more likely to report feeling under pressure.¹⁶ Self-efficacy has been incorporated into recent models of behaviour change.^{17,18} Perceived self-efficacy is concerned with judgements of how well one can execute courses of action required to deal with prospective situations;¹⁹ an individual cannot act upon knowledge until they believe that they are capable of such an action. A growing body of research has demonstrated that self-efficacy can modify behaviour,²⁰ for example contraceptive use,^{21,22} eating behaviour,²³ smoking^{20,24} and mental health.²⁵ Strengthening belief in their ability to control their own behaviour

is an important component in health promotion programmes.

Stott and Pill²⁶ reported that teenagers feel that health promotion is appropriate if, as with adult patients, the doctor asks permission to give advice and the messages seem relevant.⁷ Epstein²⁷ reported that London teenagers aged 13–15 years have a wide range of health-related concerns and many would like to discuss these with a doctor or nurse.

Teenage risk behaviour

Sexual health

Forty-eight per cent of girls and 36% of boys report sexual activity before the age of 16 years.²⁸ The UK ranks second in teenage pregnancy amongst developed countries; 8.3/1000 women conceived before age 16 in England and Wales in 1996.²⁹ This figure hides variation across districts from 4.2 to 19.3 per 1000. A third of British adolescents who are pregnant seek abortion, and women aged under 20 account for a quarter of all abortions in Britain.²⁸

Young people tend to underestimate their probability of getting pregnant.³⁰ On average, girls who are sexually active wait almost one year before making their first visit to a family planning clinic,³¹ and knowledge of access to services varies.³² Mellanby³³ surveyed 15–16 year olds at school in South-West England. Fifty-four per cent were sexually active and half of these had had sex before age 16 years. Those who had had sex before age 16 were almost twice as likely to have had sex at some time without using a condom, to have had sex during a short relationship and to have a friend who had had a sexually transmitted disease (STD). The Health Survey for England 1995 reported that less than half of 16–24 year olds were using the contraceptive pill,³⁴ and only 28% of this age group had used condoms at last intercourse.²⁸ Zelnick and Kantner³⁵ reported that 10% of a US national sample of sexually active teenagers wished to become pregnant.

The rapid growth of HIV infection has raised significant concerns.³⁶ By mid 1991, 14 666 people had been diagnosed as HIV-antibody-positive in the UK, of whom a quarter were under the age of 25.³⁷ Among sexually active women, adolescents have the highest rates of gonorrhoea, syphilis and chlamydia infection, and adolescents who engage in sexual intercourse at younger ages are more likely to have multiple partners in their adolescent years thus increasing their chance of infection.³⁶ Goodman³⁸ looked at the use of a confidential HIV testing service in a US primary care setting for adolescent girls engaging in risky behaviour; 41% of those that were counselled obtained testing. Those not shown the video were significantly less likely to be tested for HIV (RR = 0.20, 95% CI 0.07–0.58).

American Medical Association guidelines for adolescent preventive services (GAPS)³⁹ recommended that

“all adolescents should be asked annually about involvement in sexual behaviours that may result in unintended pregnancy and STDs, including HIV infection. Sexually active adolescents should be screened for STDs, and adolescents at risk for HIV infection should be offered confidential HIV screening.” However, in 1985 almost half of US medical schools offered no clinical curricula in STDs,³⁶ and only 10% of US primary health care physicians surveyed in 1988 asked their patients questions that might reveal their STD status.³⁶

Confidentiality has been identified as the single most important factor in the provision of sexual health services for young people,⁴⁰ although under-16 year olds are entitled to the same confidentiality as older clients in the UK.⁴¹ A Grampian survey of teenage abortion patients³² reported that half would not discuss contraception with their GP; 42% feared lack of confidentiality. Teenagers are often reported to be reluctant to seek regular reproductive health care⁴² or treatment for an STD.³⁶ Teenagers are used to the fact that often what they say about themselves is not to be treated as confidential but is discussed amongst parents and peers. Contact with a primary health care team in general practice may be the first time that confidentiality is assured and this needs to be explained to them clearly, verbally and in practice leaflets and posters.⁴³ Confidentiality also needs to be considered in a broader sense; just being seen attending a practice can result in a teenager having to explain to their family why they were visiting. This is a particular problem in rural areas. A systematic review looking at purchasing services to promote sexual health of young people concluded that informal drop-in clinics are needed, with guaranteed confidentiality.⁴⁴

A systematic review of the effectiveness of sexual health promotion interventions for young people⁴⁵ identified 21 soundly designed outcome evaluations, but none were UK based. A qualitative study of 60 primary care teams in England and Wales identified a need for up-to-date information and training.⁴⁶ Another recent systematic review on ‘preventing and reducing the adverse effects of unintended teenage pregnancies’⁴⁷ identified 42 evaluations again, most had been carried out in the US, and the majority were school based. There have been no controlled evaluations of the effectiveness or cost effectiveness of different approaches to the delivery of contraceptive services to young people in the UK. Two reviews^{44,47} provided information on service delivery and recommended that health services should provide education, contraceptive and antenatal care, and social support.

Mental health

Mental health problems are common amongst teenagers, with an estimated prevalence of psychiatric disturbance of about 15%,^{34,48–51} and have been associated with risk behaviours such as eating disorders,^{52,53} smoking,⁵⁴ drug abuse,⁵⁵ alcohol abuse,⁵⁶ suicide,^{57,58} and mental health problems in adulthood.⁵⁹ Westman and

Garralda⁶⁰ illustrated the feasibility of a mental health screening programme in general practice (see below). Adolescent mental health promotion has been discussed in detail elsewhere.⁶¹

Alcohol abuse

Approximately 10% of children aged 10 years consume alcohol weekly³⁴ and by age 16 over 40% of boys and girls are reporting weekly alcohol consumption at an average of 3.4 units per boy (7.9 per drinker), and 1.6 per girl (3.8 per drinker).³⁴ Most people drink at the highest consumption levels in their lives while they are between the ages of 16 and 24 years,³⁴ with a third of men and 17% of women in this age group drinking over the 1995 recommended weekly limit.⁶² Binge drinking is a common and hazardous behaviour among this age group, who are at high risk of dying in alcohol-related traffic accidents.² Oler⁶³ reported that brief interventions (10 minutes advice) for adult alcohol misuse can result in 20% reduction in alcohol consumption. Rickert⁶⁴ evaluated a ‘well-adolescent’ clinic providing anticipatory guidance for prevention of marijuana and alcohol use, for 13–18 year olds. He compared three groups: computer-assisted instruction, physician-delivered guidance and control (no guidance). The computer intervention presented multiple choice questions for 15–20 minutes; wrong answers triggered additional information, correct answers triggered positive reinforcement. The physician condition involved 10–15 minutes discussion with the teenager about the effects of alcohol and marijuana. Knowledge scores for both intervention conditions were significantly higher ($P < 0.001$) than for the control group. The mean knowledge score for controls was 8.2 (SD = 2.74), for the computer intervention group 11.2 (SD = 2.04) and the physician group 10.5 (SD = 2.38). Impact on actual behaviour was not evaluated.

Smoking

The Health of the Nation national target to reduce the smoking prevalence of 11–15 year olds to 6% by the year 1994⁶⁵ was widely missed, and by 1996 the overall prevalence for this age group had risen to 13%, with 28% of boys and 33% of girls aged 15 being regular smokers.²⁹ Smoking is a major risk factor for heart disease, stroke and cancer, two of these areas having been targeted in *Our Healthier Nation*.⁵ Early smoking is a particular problem because the younger someone starts, the less likely they are to give up, and early initial use of tobacco greatly increases risk of lung cancer.⁶⁶ Those who do not smoke regularly in their teens are unlikely to do so in adult life,⁶⁶ most adult smokers having acquired the habit by age 19 years.⁶⁷ Tuakli⁹ reported that the majority of teenage smokers had tried to quit at least once and Townsend⁶⁶ reported that 60% of teenage smokers who received smoking cessation counselling agreed a contract with the GP to give up.

Stead *et al.*⁶⁸ systematically reviewed the literature on the prevention of teenage smoking. Approaches have included school-based programmes, media campaigns, community-based initiatives and environmental measures. They concluded that each had limitations. School programmes have been shown to delay but not prevent onset of teenage smoking, and they have tended to reach low- rather than high-risk groups. Mass media campaigns appeared to perform better when embedded in a range of initiatives than when standing alone. Community-based initiatives are relatively new and conclusive evaluations had not been carried out, and the long-term impact of environmental strategies had not yet been determined. Youth who have the highest tobacco use rates are among those least likely to be reached through school-based programmes,⁶⁹ but little research has been carried out to implement and evaluate smoking interventions for teenagers in general practice.

Illegal drug use

Teenagers have an increasing knowledge of, and contact with, drugs. The 1994 British Crime Survey asked 10 000 16–59 year olds about drugs; 13% of 45–59 year olds and 46% of 16–19 year olds said they had taken drugs. This dropped slightly to 44% among 20–24 year olds. One in five 16–19 year olds and 15% of 20–24 year olds had taken a drug in the last month.⁷⁰ Balding⁷¹ surveyed 18 000 schoolchildren in Britain in 1995. Nine per cent of 12–13 year olds said that they had taken illegal drugs or solvents, rising to 30% of 14–15 year olds and 37% of 15–16 year olds. The proportion of 12–13 year olds admitting to having misused drugs in 1995 was greater than that of the 15–16 year olds in 1987. The Health Education Authority interviewed 5000 11–35 year olds in England. Six per cent of 11–14 year olds reported the misuse of drugs, and lifetime misuse was around 30% for 14–16 year olds.⁷² These prevalence levels are supported by Miller and Plant,⁷³ who surveyed teenagers from both state and private schools throughout the UK, and reported that, overall, 42% had taken a drug at some point in their life. In England, 41% of 15–16 year olds admitted to ever having misused drugs. Scotland had the highest level of drug misuse, with 55% of responders admitting to ever having misused drugs.

Greenwood⁷⁴ reported that the prevalence of HIV infection is 50% among drug users in the Edinburgh region, although only half have been tested. Half the referrals to a community drug support service in Scotland in year one were aged under 25 years; most were multiple-users of 2–10 years' duration. Perry⁷⁵ reported the relationship between drug abuse and road accident mortality and morbidity, long-term chronic illness and other risk-related behaviours such as precocious or unprotected sexual intercourse.

Drug prevention programmes have been evaluated in schools,^{76,77} communities and residential centres.⁷⁸ This

literature search did not identify any evaluated general practice prevention programmes. Many teenagers appear to be eager for the opportunity to discuss these issues, as long as confidentiality and a non-judgmental approach are assured.⁷⁹ Since many of the problems associated with substance abuse are directed toward the health care system, primary health care providers are in a unique position to identify substance abusers and initiate interventions.⁷⁹

Greenwood⁷⁴ reported that if psychiatric services offer consultation and regular support for drug users, many GPs will share the care of such patients and prescribe for them under contract conditions, whether the key worker is a psychiatric nurse or a drug worker from a voluntary agency. Tantom⁸⁰ reported that detoxification was given a low priority by GPs and they were unwilling to take on the treatment of addicts in the general practice setting without ready support from a specialist unit. When dealing with drug users, GPs ranked assessment and referral as their highest priority, followed by treating physical complications.

Diet

Doyle⁸¹ investigated the food intake of 12–13 year olds in a socially disadvantaged area. Most were eating unhealthy diets, according to government recommendations; 74% did not eat the recommended amount of fibre; and 85% consumed more than the recommended levels of saturated fat and sugar. A third ate no breakfast before school. Younger people were less likely than older people to eat fruit, vegetables or salads on a daily basis, or bread more than once a day.² One of the developmental transitions of adolescence is that of body image,⁸² and self-presentational concerns involving weight can have both positive and negative effects on health.⁸³ Excessive concerns can lead to the eating disorders of anorexia and bulimia.^{83,84} Anorexia has frequently been associated with difficulties imposed by the developmental demands of adolescence,^{52,53} but almost no prevention programmes have been implemented.⁸²

Exercise

A sedentary lifestyle is associated with all-cause mortality in later life and children's physical activity patterns are reported to track into adult life.^{85–87} Armstrong⁸⁶ studied patterns of physical activity among British school children aged 11–16 years. Boys were more active than girls, but all had low levels of exercise and few (4% of boys and less than 1% of girls) undertook the recommended amount of physical activity during the school week (20 minutes or longer three or four times a week). Interestingly, children who were overweight were not significantly less active. Armstrong⁸⁸ reviewed ways of encouraging more active lifestyles in the community, home, school and universities; although the potential role of medical professionals was mentioned, no examples were given.

Risk behaviours are inter-related

Longitudinal data⁸⁹ on health-behaviour of school children aged 11, 13 and 15 years in Wales and Norway indicated two underlying factors: a health-negative factor linking monthly alcohol consumption, weekly smoking, daily coffee consumption and unhealthy food consumption; and a health-positive factor linking healthy food consumption, good oral hygiene, use of vitamins and regular physical activity. Research has also shown the interrelation of risk behaviours and poor mental health, but cause and effect is disputed and further research is needed.⁶¹

Children who smoke tend to expose themselves to multiple risks. A MORI health and lifestyle survey of 9–15 year old school children in England⁹⁰ reported that regular smokers in this age range, even accounting for the different age profile, were significantly more likely to be regular drinkers than non-smokers (49% drank regularly compared with 6% of non-smokers). They also consumed larger quantities; one in six regular smokers exceeded the safe alcohol limit recommended for adults. Similarly, there was a strong link with use of illegal drugs; 50% of smokers said they had tried illegal drugs (38% cannabis, 11% acid, 10% glue sniffing, 10% amphetamines) compared with only 2% of non-smokers. Twenty-nine per cent of regular smokers aged 9–15 years never had breakfast in the morning, compared with 6% of those who had never smoked, and 23% of smokers opted for lunches from newsagents or fish and chip shops compared with 4% of those who had never smoked.

Females who initiate sexual intercourse before age 17 are almost twice as likely as their peers who are not sexually active to use alcohol or marijuana,¹⁶ and teenagers who use marijuana are about three times more likely to be sexually active before age 16 than those with no drug history.¹⁶ Adolescents who are sexually active and substance-abusing are at high risk of HIV infection from needle sharing and lowered inhibition leading to sexual activity following substance ingestion.¹⁶ A study of adolescent use of steroids reported that use correlated with increased use of cocaine, marijuana and smokeless tobacco, but had a weaker correlation with smoking, alcohol, AIDS/HIV risk-taking behaviour and age.⁹¹

The role of general practice

A *Lancet* (1995) editorial⁹² highlighted the fact that teenagers rarely receive health promotion advice from their physicians. Epstein²⁷ questioned 13–15 year olds in inner-city London about their health concerns and health-related behaviours. They reported concerns about nutrition, unemployment, acne, weight, menstruation (girls) and exercise. Although nearly three-quarters of them had seen a GP recently, few had discussed their

health concerns with them; 64% of girls and 44% of boys said that they would like to discuss STD, but only 14% of girls and 7% of boys had done so. Sixty-seven per cent of girls and 26% of boys wished to discuss contraception, but only 19% of girls and 6% of boys had actually done so. Such evidence indicates that teenagers may have a hidden agenda behind the apparent physical symptoms they bring to the surgery.⁹³

In Jacobsen *et al.*'s⁹⁴ survey of teenagers aged 14–18 years, 81% felt that GPs should know more about their age group and would have welcomed more patient-centred services. Adolescents have reported that they are not given sufficient time to discuss health issues,⁹⁴ and a study by Jacobsen *et al.* reported that GPs gave less time per consultation to teenagers (aged 11–19 years) than to any other age group.⁹⁵ Improving communication and allowing more time for discussion may enable teenagers to express more of their concerns.

Screening for risk behaviours

Teenagers visit their GPs on average two to three times a year^{62,96} and report considering their regular doctor's surgery to be the most appropriate place to receive health care.⁹⁷ Screening for risk behaviours could enable intervention before they become an established part of an individual's lifestyle. Few examples of teenage screening or systematic health checks have been published (see Table 1). Health checks can be an opportunity for general health promotion or to screen for specific risk behaviours.

Donovan and McCarthy⁹⁸ sent letters to all 16–17 year olds on their London practice list inviting them to attend the surgery to discuss 'any medical or general problems' including immunization, smoking, skin or weight problems. A letter for their parents was enclosed if they wished to give it to them, but confidentiality was ensured. Over 50% (92) of those invited attended after one letter. The most common problems reported were obesity, depression and acne. A quarter of young women smoked regularly. Townsend *et al.*⁶⁶ invited patients aged 13, 15 and 17 years for health-check appointments at their general practices. Seventy-three per cent of 677 eligible teenagers attended. They were offered smoking counselling and given information, verbally and in leaflets, on smoking, drinking, healthy eating and exercise. Sixty per cent of the teenage smokers who received smoking cessation counselling agreed a contract with the GP to give up.⁶⁶

Hibble and Elwood⁹⁹ piloted a school-leavers' clinic run by a practice nurse in Lincolnshire in 1988. Patients aged 16 years were invited to visit the clinic and discuss health matters with the nurse; they could attend alone or bring a parent or confidante with them. The aims were: to give non-judgmental advice, to clarify facts on issues relevant to the age group (information leaflets were

TABLE 1 *Studies of teenage screening in general practice in the UK*

Author	Age group	Intervention	Sample size	Attendance	Follow-up	Location
Donovan and McCarthy ⁹⁸ (1998)	16–17-year-olds	invited to GP surgery to discuss medical/general problems	not stated	> 50%	None	London
Townsend et al. ⁶⁶ (1991)	13, 15 and 17-year-olds	invited for health check with GP or practice nurse	667	73%	None	Inner city, country town and a Welsh Valley
Hibble and Elwood ⁹⁹ (1992)	16-year-olds	school leavers invited to visit a clinic to discuss health matters with the practice nurse	171	83%	None	Lincolnshire
Campbell ¹⁰⁰ (1993)	14-year-olds	TeenScreen: parents sent a letter inviting their child to a screening appointment with the practice nurse	115	55.6%	Six-month follow-up indicated small changes in health behaviour	Cheshire
Smith and Melville ¹⁰¹ (1996)	13–16-year-olds	invited to attend teen health clinic	177	52%	None	Dundee
Westman and Garralda ⁶⁰ (1996)	14–15-year-olds	invited to a health promotion clinic to explore mental/physical health concerns	not stated	22% (higher if invited without parents)	None	London

given away to encourage family discussion), to reintroduce this age group to the surgery, to ensure that they were up to date with immunizations, to encourage them to take personal responsibility for their health and to express any health or lifestyle anxieties. In the first year, 141 of 171 young people invited attended (83%). All but two reported that the clinic had helped them make better use of the services provided by the surgery. In 1991, the clinic was combined with the well-person clinic and attendance dropped to 73%; feedback indicated that the teenagers missed the dedicated health care time.

TeenScreen was launched in Cheshire due to concern about the apparent lack of health awareness among local teenagers.¹⁰⁰ As each child on the practice register reached his/her 14th birthday, his/her parents were sent a letter inviting their child to a screening appointment with the practice nurse. Thirty-minute appointments were arranged to take place after school hours. Patients were weighed and measured, their urine was tested for blood, sugar and protein levels, immunizations were carried out (with parental consent) and blood pressure and peak flow measurements were recorded. Physical health and lifestyle were discussed and advice and leaflets given when requested. Clinics were held once or twice a month, 115 invitations were sent out and 64 teenagers (55.6%) attended. Screening identified that some had a poor self-image and were feeling stressed. Six-month follow-up by questionnaire indicated increased discussion

of topics at home and small changes in health-behaviour such as diet.

Two health visitors in Dundee set up health promotion activities targeted at young people, including a teenage health clinic, drop-in family planning clinic, school project, community project and a teenage health magazine.¹⁰¹ The clinic provided a screening service to 13–16 year olds in the practice population. It included assessments of physical, lifestyle, medical, social and emotional problems and opportunity to promote health knowledge on a wide range of topics and services. One hundred and seventy-seven teenagers were invited to attend the clinics; 92 (52%) attended—61% of the girls and 37% of the boys. Six individuals said that they did not wish to attend, four invitations were sent to the wrong address, and among the others who did not attend many were already being seen on a regular basis at the surgery for treatment of conditions such as asthma. A full evaluation was not carried out.

Westman and Garralda⁶⁰ targeted 14–15 year olds, who were invited to a health promotion clinic to explore mental and physical health concerns. Overall attendance was low (22%), but with a higher response if invited to attend without their parents (7/17 versus 18/98, $P = 0.04$); confidentiality was important. Most had attended the general practice during the previous year; however, a high proportion (11/25) showed previously undetected psychiatric disorders, and they were offered

cognitive psychotherapy. The most common diagnosis was depression (six teenagers); the prevalence of 6/115 (5.2%) was comparable to expected rates in adolescence and the authors suggested that the clinic may have attracted all those with depressive disorder in this age group.

The high response rates in these studies suggest both a high level of need and an opportunity to make contact with a population at risk from health-damaging behaviours. Follow-up studies are required to determine the impact of screening for risk behaviour on health behaviour and outcomes.

The future?

Most teenagers start making decisions about their attendance for health care at around age 15, and over half attend by themselves by this age.⁹⁵ These visits provide an opportunity to develop an adult relationship with the GP and discover the range of services available through the NHS.¹⁰² This could be a prime opportunity for health promotion. Teenagers are receptive to information about themselves and their bodies, and anxious to become more autonomous in decision-making.¹³

It has been reported that information about practice services needs to be available in a form oriented to teenagers, and that it is important to advertise to 16 year olds that they can register with a different GP from that of their parents, and that consultations are confidential.¹⁰³ A Scottish project is aiming to make health services more accessible to young people by involving them in the planning.¹⁰⁴ It has produced a young people's charter specifying what they expect from health workers and services. The project will be evaluated by uptake of services, and feedback by health workers and young people.

Research into teenage health promotion in the general practice setting is limited but indicates that teenagers trust their doctors for health-related information¹⁰⁵ and would like to discuss a broad range of health concerns with them.²⁷ Teenagers exhibiting health-compromising behaviours are more likely to feel alienated from school, limiting the impact of school-based health interventions.⁸⁹ The large majority of adolescents who have left school still have contact with the health services,⁷ and studies indicate that teenage clinics and health checks have been well received by health professionals and patients alike. The need for intervention is indicated by the high prevalence of health-risk behaviour in this age group. It is important to be aware of the 'inverse care law'; those most in need are least likely to seek help¹⁵ and to use multi-component strategies at both national and local level to address these issues. These would involve government policy, media campaigns, school and community initiatives, youth workers and the primary care teams. GPs have not traditionally sought to actively

promote teenage health, perceiving teenagers to be physically healthy and infrequent attenders at the practice. Research findings suggest that teenagers actually attend more than once a year and welcome professional, confidential advice on issues that concern them. The impact on behaviour-change of screening alone or in conjunction with further interventions needs evaluation, but general practice clearly has a role to play in preventing the onset or continuation of health-damaging behaviours that may not yet be established as part of a lifestyle.

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