Table 1—Commonest reasons for stopping selected non-steroidal anti-inflammatory drugs in general practice database of 4000 prescribing weeks per year (new and changed therapy enquiry) between November 1990 and October 1995. Figures in parentheses are percentages of total withdrawals

	Ibuprofen	Diclofenac	Naproxen	Indomethacin
Total No of newly started courses	15286	9880	5839	1795
Side effects resulting in drug being stopped*:				
Anaemia	9 (0.6)	14 (1.0)	9 (1.4)	2 (0.5)
Rash	63 (4.2)	64 (4.8)	23 (3.6)	6 (1.5)
Dyspepsia	1103 (74.0)	950 (70.8)	488 (76.0)	247 (63.7)
Constipation	14 (0.9)	11 (0.8)	9 (1.4)	1 (0.3)
Diarrhoea	49 (3.3)	91 (6.8)	14 (2.2)	13 (3.4)
Urgency of micturition	3 (0.2)	4 (0.3)	1 (0.2)	2 (0.5)
Cardiac	25 (1.7)	27 (2.0)	13 (2.0)	2 (0.5)
Respiratory	19 (1.3)	24 (1.8)	1 (0.2)	8 (2.1)
Vertigo	15 (1.0)	36 (2.7)	7 (1.1)	29 (75)
Headache	15 (1.0)	20 (1.5)	7 (1.1)	46 (11.9)
Anxiety	6 (0.4)	7 (0.5)	2 (0.3)	2 (0.5)
Total stopped	1490	1341	642	388
Ratio of stopping to starting	0.10	0.14	0.11	0.22

*Numbers do not add up to total in each column as only commonest side effects are listed.

national systems for monitoring the safety of drugs. We are testing the feasibility of incorporating reasons for withdrawal into routine data collection, on an automated general practice database, as a new method of monitoring drugs.

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Data from several sources are needed to show numbers taking drugs

EDITOR,—R Bracchi raises the point of how many patients are taking a drug.¹ Pharmaceutical companies would very much like accurate data on this to help with calculations of the reported incidence of adverse drug reactions and with commercial monitoring. Several practical difficulties arise. The data cannot be obtained from the point at which prescriptions are measured since not all prescriptions written are dispensed and not all drugs prescribed are consumed.

For a product whose patent is protected—that is, no generic can be dispensed—the frequency of use can be estimated by calculating the shipped out British volume and dividing this by a recommended dose. This can be confounded by parallel imports from suppliers in the European Union which are not routed through the British company. Customs and Excise data for imports do not clarify this. A defined daily dosage can be used to convert these data into notional prescriptions and patients, but this may be misleading if the dose and duration of treatment vary. Use of the prescribed daily dosage is more realistic.

A possible solution would be to use the Prescription Pricing Authority's data on prescriptions dispensed. However, more medicines are moving from being available on prescription only to being available in pharmacies and even on the general sales list while remaining prescribable. The self medication element of these drugs is missing from the Prescription Pricing Authority's data. Also potentially missing are prescriptions costing less than £5.50 for patients who have to pay for their prescriptions (currently about half), which represent about 15% of prescriptions. These proportions vary according to the therapeutic class.

For a drug whose patent is no longer protected there may be many suppliers of generic drugs, and, unless the prescribing data are pooled, a true figure for use is unlikely to be obtained. Most safety reports for generic drugs still go to the companies that originated the branded drug.

The best ideas at present are probably to use a mixture of data on shipments from manufacturers; market research audits of purchasing, prescriptions, and conditions; the Prescription Pricing Authority's data for the United Kingdom, not just England; and judgment. It would be helpful if the Prescription Pricing Authority's data included both NHS and private prescriptions and if data could be made more accessible for non-NHS and non-academic researchers. Finally, a process for recording, or at least estimating, numbers of patients from prescription data would be helpful.

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Teenage sex

Trend towards earlier menarche stopped 30 years ago

EDITOR,—In her editorial on teenage sex Sue Stuart-Smith gives the impression that there is still a trend towards earlier menarche.¹ Roberts and I have long shown that that trend has stopped (it stopped in 1965) and that there now seems to be a reverse trend.²⁻⁴ Thus the trend towards earlier menarche, when it existed, is unlikely to have been an important factor in the decrease in the age at first sexual intercourse in girls, since it amounted to only three to four months per decade; thus even if it had continued

over the past 30 years it would have amounted to at most one year. This would hardly account for Stuart-Smith's quoted change in the incidence of first sexual intercourse below the age of 16 from 1% in women over 55 in 1994 to the present 20% or so in teenage girls.

It is disheartening to find the trend towards earlier menarche still being quoted in various papers and articles over 20 years after it was shown to have stopped.

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Image of various providers of sexual health care varies

EDITOR,—Sue Stuart-Smith's editorial on teenage sex¹ offers a sobering challenge to those who provide sexual health care for young people.² Stigma can be a powerful barrier to attendance at a service; conversely, however, image can be harnessed to focus marketing strategy. We present data from a large group of young students that show considerable differences in the market appeal of NHS providers of sexual health care with different names: genitourinary medicine clinics, sexual health clinics, family planning clinics, and general practitioners.

Students passing an unnamed stall at a 'freshers' fair at University College London in 1993 were asked to complete a questionnaire. Altogether 1000 of the 1018 questionnaires collected were completed: 466 were from men and 539 from women. The students' mean age was 20.9 (range 17-72) years; 86% were aged under 24.

The students were asked to imagine themselves in different scenarios covering a range of sexual health needs—for example, "You are worried about discharge from your genitals." For each of these needs they were asked to choose which of the providers listed they would go to first for medical help or advice (table 1). A polarity in the appeal of different providers was evident. The appeal of family planning clinics was polarised towards preventive needs and that of general practitioners and genitourinary medicine clinics towards symptomatic needs. Only sexual health clinics showed an even spread of appeal across both groups of needs.

For each of the providers the students were also asked: "Do you know what this clinic does?" The proportion of students who thought they knew was: family planning clinics, 533 (94%) of 566; general practitioners, 541 (95%) of 568; sexual health clinics, 354 (63%) of 566; and genitourinary medicine clinics, 241 (43%) of 562.

This study shows large differences in image between sexual health clinics and genitourinary medicine clinics, services that are mostly comparable except in name. Such terms are not mutually exclusive and can be used in a complementary way.^{3,4} Overall, family planning clinics and general practitioners were the most popular choices of providers. Liaison and training across these four providers form a bedrock for a coordinated strategy for providing services for young people.

As this study was opportunistic and the subjects were self selected its conclusions cannot be extrapolated to young people in general. More market research is needed to help those providing sexual health care for young people to

Table 1—Students' choice of provider for different sexual health needs. Values are numbers (percentages)

Scenario	Family planning clinic	General practitioner	Sexual health clinic	Genitourinary medicine clinic	Other
You want advice on contraception (n = 960)	549 (57)	267 (28)	104 (11)	25 (3)	15 (2)
You want free condoms (n = 758)	536 (71)	59 (8)	112 (15)	42 (6)	9 (1)
You want advice on safer sex (n = 970)	481 (50)	233 (24)	198 (20)	32 (3)	26 (3)
You want an HIV test (n = 969)	85 (9)	357 (37)	418 (43)	97 (10)	12 (1)
You think you may have genital warts (n = 964)	81 (8)	444 (46)	265 (28)	168 (18)	6 (1)
You think you may have genital herpes (n = 959)	70 (7)	456 (48)	275 (29)	155 (16)	3 (1)
You are worried about discharge from your genitals (n = 943)	84 (9)	521 (55)	197 (21)	133 (14)	8 (1)
It hurts when you pass urine (n = 981)	24 (2)	750 (75)	72 (7)	130 (13)	5 (1)

harness their public image and work effectively towards the Health of the Nation's targets.⁵

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Teenagers can be helped to behave responsibly

EDITOR,—Sue Stuart-Smith's editorial on teenage sex contains several confusing statements.¹ Most of the editorial deals with underage sex, but conclusions are generalised to all teenagers. A prepubescent 13 year old is not the same as a physically mature 19 year old, yet they are both teenagers.

To explain the fact that young people fail to take preventive measures when they have intercourse Stuart-Smith suggests that they are cognitively immature, lacking in the capacity to reason abstractly or predict future consequences, and see things from a different perspective. While this may be the case for some younger adolescents, it has been shown that there is little or no difference in these respects between young people in mid and late adolescence and adults: for example, they reason equally well when it comes to making informed medical decisions.² In one study of perceived consequences of risky behaviour, which compared 12-18 year old adolescents with their parents, the authors concluded: "The strongest overall pattern in these results is how similarly the adolescents and adults responded."³ Furthermore, the suggestion in the editorial that late neural myelination in adolescence provides a biological basis for cognitive immaturity is controversial, with some studies that have used magnetic resonance imaging indicating that myelination is complete by early adolescence.⁴

The single most worrying feature of the editorial is the failure to recognise that teenagers can be helped to behave responsibly. Of course, some children, as they reach puberty, start sexual activity early because, for example, they are oversexualised after abuse or are seeking excitement to escape depressive feelings. But a controlled study has shown that many schoolchildren who are given adequate information and helped by older peers to

develop social skills delay sexual activity for longer than teenagers who do not receive such education.⁵ Surely the problem frequently lies not in cognitive immaturity but in the fact that responsible adults, parents, and teachers do not provide young people with the information they need and are capable of understanding, or with the relevant social skills so that they can make good life choices. In 1993 the abortion rate for 16-19 year olds was about a third of that for 20-34 year olds. Which is the irresponsible age?

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Screening to prevent renal failure in diabetic patients

Study's assumptions are unwarranted

EDITOR,—Bryce A Kiberd and Kailash K Jindal questioned the cost effectiveness of microalbuminuria surveillance in patients with insulin dependent diabetes mellitus¹ even though previous studies have shown that screening and intervention is likely to have cost benefits.² These were simulation studies based on a combination of epidemiological data and data from controlled clinical trials, and they were based on assumptions regarding incidence of complications, treatment effects, and the sensitivity and specificity of screening methods. In comparing screening for microalbuminuria with screening for hypertension and persistent proteinuria (both followed by treatment with an angiotensin converting enzyme inhibitor), Kiberd and Jindal made five critical assumptions that are not necessarily correct.

Firstly, they assume that diabetic patients with microalbuminuria usually develop hypertension before they develop nephropathy. However, blood pressure increases in parallel with increasing urinary albumin excretion rate,³ and hypertension is rare in the microalbuminuric stage, even on the basis of the 1993 WHO recommendations (140/90), and is not present in all patients with persistent proteinuria. Kiberd and Jindal did not define hypertension, so it is impossible to estimate its prevalence from the data.

Secondly, the low predictive value of microalbuminuria for development of nephropathy

claimed by the authors (0.3) is based on a Finnish study that included only patients with diabetes of very long duration, in whom the progression rate of microalbuminuria is low ("slow track patients").⁴ The subsequent correspondence showed that the group of patients was not representative of all patients with insulin dependent diabetes who develop nephropathy and that the follow up was too short.

Thirdly, Kiberd and Jindal assume that hypertension is an easy and unbiased diagnosis, resulting in no false positives or false negatives. We have shown, by comparing traditional outpatient blood pressure recording (repetitive readings) with 24 hour or daytime ambulatory recording, that systolic blood pressure recorded at outpatient clinics is 16.0 mm Hg higher than ambulatory daytime blood pressure and diastolic pressure is 8.7 mm Hg higher. Thus standard blood pressure reading would overdiagnose hypertension (false positive diagnoses).

Fourthly, contrary to the authors' assumption, prevention of nephropathy is not the only reason for surveillance and intervention. Suggesting that screening for microalbuminuria could be replaced by blood pressure recordings ignores the fact that patients with microalbuminuria are at high risk for developing other complications later in diabetes. Blood pressure reading is not as precise as microalbuminuria in "flagging" the person as being at high risk.

Kiberd and Jindal's fifth assumption is that treatment effect is measured optimally by quality adjusted life years. In their analysis, 17 health care workers were asked to score six conditions, which included only a few of the problems related to diabetes. The scores were not objective measures but represent the mean of 17 highly subjective evaluations (not those of patients or relatives). Quality adjusted life years is one of many ways of analysing data and should at least be combined with an analysis using real life years.

We find that screening for microalbuminuria in diabetic patients helps to identify those at high risk, as suggested by six professional organisations.⁵ We recommend that any surveillance system should be carefully monitored for effects on outcome related to health status, prognosis, and economics.

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