ORIGINAL PAPER 1

Prescribing of oral contraceptives in Oxfordshire

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SUMMARY. With the primary objective of examining the practice of prescribing oral contraceptives, a questionnaire was sent to 180 general practitioners and 45 community health doctors involved in family planning. Six case histories were listed and the doctors were asked to report their prescribing practice in 36 different hypothetical situations. They could choose one of three options—to prescribe the combined pill, the progestogen-only pill or not to prescribe oral contraceptives. They were also asked about changes in their prescribing practice, the three oral contraceptives prescribed most often, when they would prescribe a progestogen-only pill in preference to the combined pill and their views on the role of others in prescribing oral contraceptives.

Completed questionnaires were returned by 124 (69 per cent) general practitioners and 45 (80 per cent) family planning doctors. All doctors were least likely to prescribe oral contraceptives in cases of hypertension or family history of ischaemic heart disease. Diabetes and headache were each seen as less of a contraindication, and few doctors saw either age or fibrocystic disease of the breast as increasing the risk. Within each case history, smoking emerged as the most important contraindication. Almost all doctors reported changes in their prescribing practice; these related to enhanced understanding of the risks of oral contraceptives and to the availability of newer preparations. The three most commonly used oral contraceptives were the 30 microgram oestrogen preparations (low and high progestogen) and the progestogen-only pill. Nearly all the doctors replied that they would prescribe the progestogen-only but not the combined pill in certain circumstances, the most commonly cited being when the woman was over 35 years of age, was breast feeding, had risk factors for cardiovascular disease, or smoked. The two groups of doctors showed different attitudes towards the role of other staff in prescribing oral contraceptives. Although two thirds of the general practitioner group felt that prescribing should be limited to doctors, this view was shared by only a quarter of the family planning group.

Introduction

GENERAL practitioners are now less likely to prescribe oral contraceptives for women with recognized risk factors for cardiovascular disease, according to the results of a case-control study (Adam *et al.*, 1981) when compared with similar data collected earlier (Mann and Inman, 1975). This change probably reflects an increased understanding on the part of both doctors and women of the contraindications of oral contraception. With the publication of epidemiological studies concerned with the safety of oral contraceptives, certain restrictions on prescribing have been recommended by authors (RCGP, 1977; Vessey *et al,* 1977;) and expert committees (DHSS, 1976; DHSS/SHHD/WO, 1979) and these have been well publicized in the medical literature. This growth in professional knowledge has received extensive coverage in the media, (*Daily Telegraph,* 1977; *Guardian,* 1977; *Times,* 1978; *Daily Mirror,* 1978; *New Society,* 1979; *Cosmopolitan,* 1978; *Woman's World,* 1981) and both doctors and consumers are increasingly informed about oral contraceptives and alternative methods of contraception.

In 1975 Johnson and Thorogood found that, in line with current recommendations, certain diseases, such as ischaemic heart disease and active liver disease, were regarded by a random sample of Oxfordshire general practitioners as contraindications to oral contraceptive use. In addition, other commoner conditions, such as diabetes mellitus, migraine and depression, were considered to be 'relative' contraindications. Similarly, mild

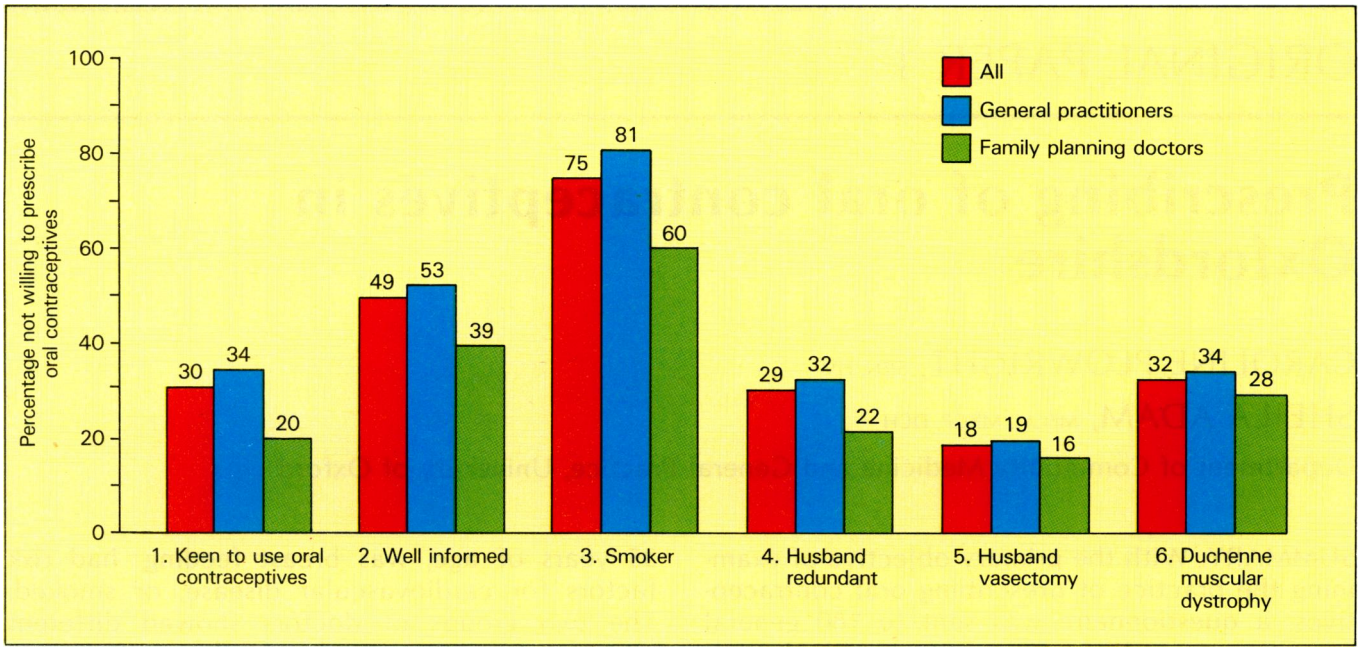


Figure 1. *Questionnaire replies to case 1.*

or moderate hypertension or a family history of ischaemic heart disease appeared to reduce the likelihood of general practitioners prescribing oral contraceptives (Adam *et al.*, 1981). When contraindications are relative rather than absolute, the woman and her doctor must weigh the medical risks against the benefit derived from contraceptive efficacy. Howie (1976) has shown that social factors appear to influence the treatment of sore throats in general practice. Corresponding factors are likely to affect the doctor's decision about oral contraceptive prescribing—for example, the woman's social circumstances, the extent of her desire to avoid pregnancy and her attitudes to abortion. The primary objective of this study was to examine the practice of prescribing oral contraceptives in circumstances in which there are no clear-cut 'correct' decisions.

Method

A postal questionnaire was sent in November 1980 to a one-in-two sample of Oxfordshire general practitioners (180 doctors) and to each Oxfordshire community health doctor involved in family planning work (56 doctors). One further questionnaire was sent six weeks later to those doctors who had not replied.

In the first part of the questionnaire, the case histories of six women were given:

Case 1: 34-year old, with blood pressure 160/95 on arrival and 150/90 after resting for 10 minutes.

Case 2: 39-year-old, has been on the combined pill for 11 years.

Case 3: 28-year-old, newly diagnosed insulin-dependent diabetic.

Case 4: 32-year-old whose mother died of a myocardial infarction aged 49 years and whose elder sister, aged 41 years, has hypertension and angina.

Case 5: 31-year-old who was in hospital last month for excision of breast lump, with histological diagnosis of fibrocystic disease (cystic mastitis).

Case 6: 26-year-old who has had increasingly severe and frequent headaches over the past 12 months, for which you can find no organic explanation.

For each of these women a further six items of information were listed:

1. She is very keen to use oral contraceptives, and reluctant to consider other methods.
2. She is a well-informed woman who asks you specifically about the risks of the pill.
3. She smokes 30 cigarettes a day despite many attempts to give up smoking.
4. Her husband has recently been made redundant, and the family (including two children) relies on her income.
5. Her husband is willing to have a vasectomy but alternative contraception is required meanwhile.
6. She has three children, the youngest of whom has Duchenne muscular dystrophy.

Thus the doctors were asked to report their prescribing practice in each of 36 different hypothetical situations. They were given only three options—to prescribe the combined pill, to prescribe the progestogen-only pill, or not to prescribe oral contraceptives—of which they could select one only. In each case the doctors were asked to assume that the woman had approached them for the first time for contraceptive advice, had herself raised the possibility of oral contraception, and that there were no additional 'positive' findings. It was also emphasized that the aim of the study was not to test knowledge, but to look at decisions made in circumstances which were not intended to be straightforward.

The second part of the questionnaire asked about changes in prescribing practice, the three oral contraceptives which the doctor prescribed most often, the circumstances in which the progestogen-only pill would be used in preference to the combined pill, and sought the doctor's views on the role of others in prescribing oral contraceptives.

Results

Completed questionnaires were returned by 124 (69 per cent) general practitioners and 45 (80 per cent) family planning doctors. Of the respondents, 85 per cent of the general practitioner group and 4 per cent of the family planning group were male. Replies to the questionnaires are shown in Figures 1–6.

Case histories

Doctors were least likely to be willing to prescribe oral contraceptives for women with moderate hypertension (Figure 1) or a family history of ischaemic heart disease (Figure 4). Newly diagnosed insulin-dependent diabetes mellitus (Figure 3) and severe headaches (Figure 6) were seen as less of a contraindication while, unless the woman smoked, relatively few doctors saw age (Figure 2) or fibrocystic disease of the breast (Figure 5) as increasing the risk of oral contraceptive use. Smoking emerged as the most important contraindication. For example, women considered to be at relatively low risk were three times more likely to receive oral contraceptives if they did not smoke (cases 2 and 5). Among the women who were seen as being at higher risk, smoking further reduced the likelihood of oral contraceptives being prescribed.

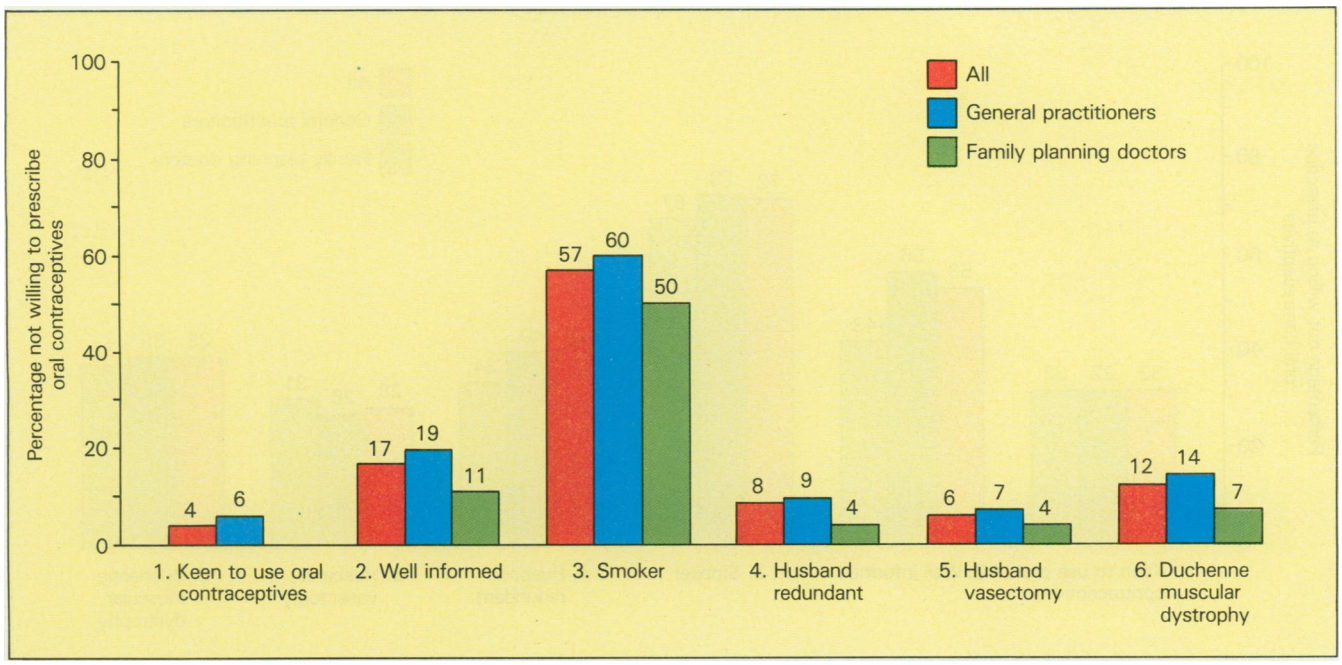
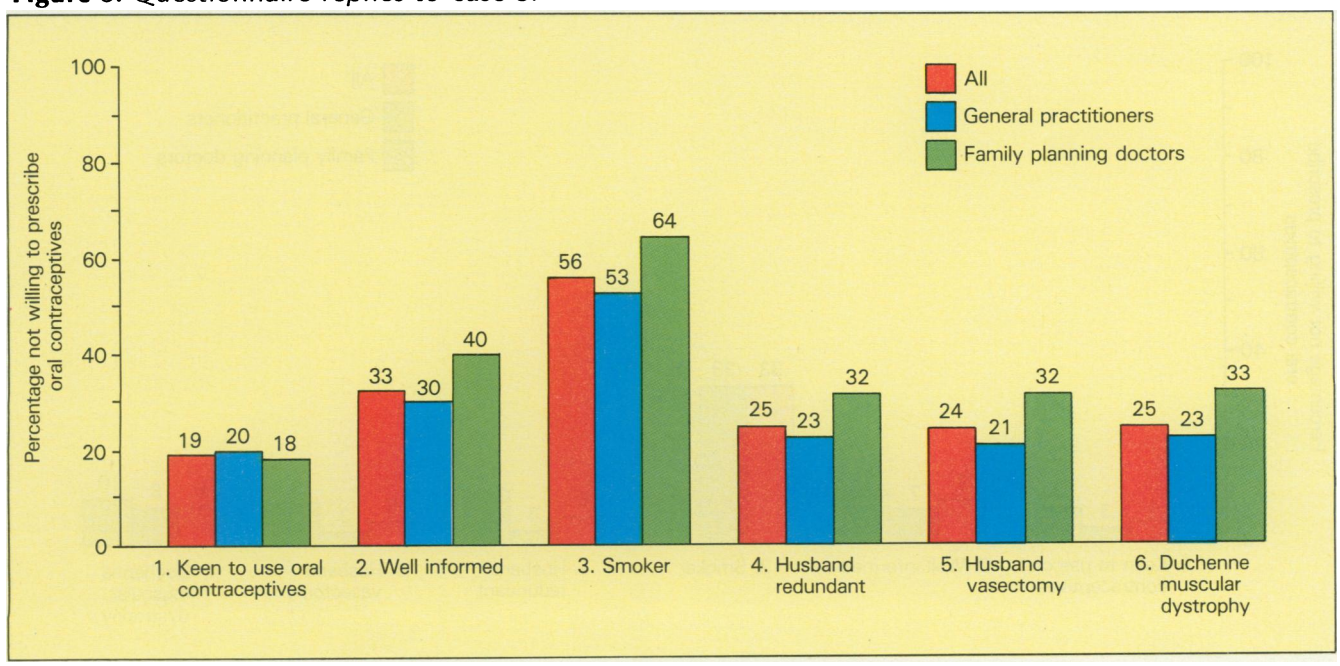


Figure 2. *Questionnaire replies to case 2.*

Figure 3. *Questionnaire replies to case 3.*



The prescribing practices of the doctors appeared, not surprisingly, to be influenced by the likely duration of oral contraception. Oral contraceptives were more likely to be prescribed as an interim method of contraception before the husband's vasectomy, and this was particularly noticeable when the women were seen as being at higher risk (cases 1 and 4). The attitude of the woman also seemed to affect the doctors' decisions. For each of the six case histories, the doctors were more reluctant to prescribe oral contraceptives for women who were described as 'well informed' about the risks than for women who were 'keen to use oral contraceptives and reluctant to consider any other method'. Additional information, which was intended to emphasize the difficulties for the woman if she became pregnant, did not appear to influence prescribing practices.

The responses of general practitioners and family planning doctors were similar, indicating a fairly consistent perception of differential risk. Overall, the latter group were slightly more reluctant to prescribe oral contraceptives, with the differences least marked in the higher-risk (cases 1 and 4) and lower-risk (cases 2 and 5) women, and greatest in the women at intermediate risk (cases 3 and 6).

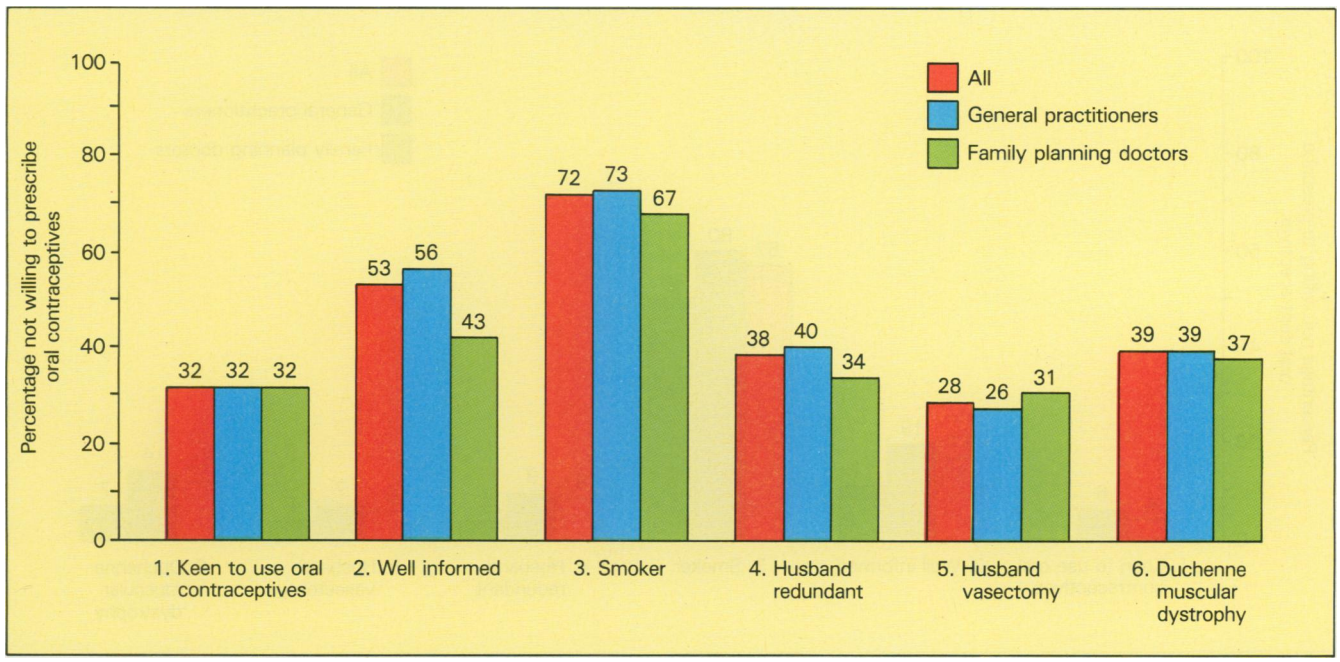
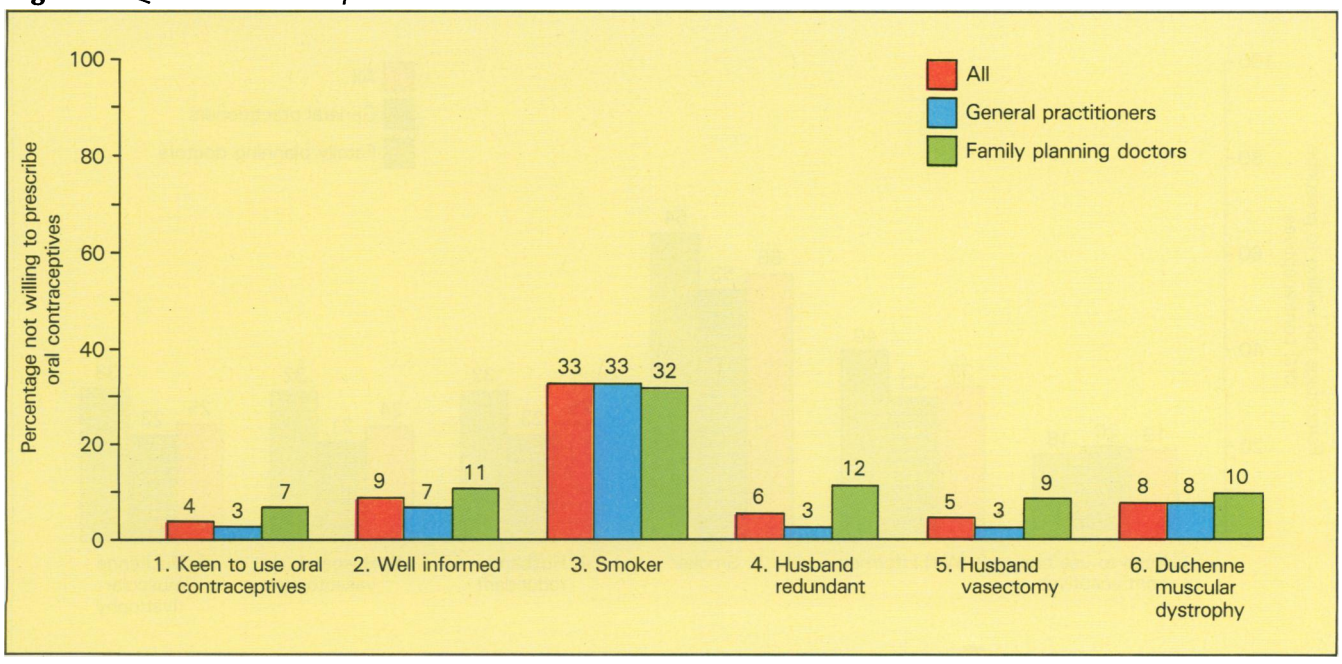


Figure 4. *Questionnaire replies to case 4.*

Figure 5. *Questionnaire replies to case 5.*



The main indications for prescribing the progestogen-only rather than the combined pill appeared to be increasing age, moderate hypertension and a family history of ischaemic heart disease, with about half of the doctors prescribing the progestogen-only pill as a temporary method of contraception to these women. Although the family planning doctors prescribed the progestogen-only pill to a small proportion of the low-risk women, they made greater use of it for women considered to be at higher risk (cases 1, 2 and 4) than did general practitioners. Overall, in 62 per cent of the instances in which they would prescribe oral contraceptives, family planning doctors used the progestogen-only pill; in only 44 per cent of the instances in which general practitioners would prescribe oral contraceptives did they select the progestogen-only pill.

It is possible that the apparent prescribing differences between general practitioners and family planning doctors may in fact represent a difference between male and female doctors, as the majority of general practitioners were male, while the majority of family planning doctors were female. Some differences were found between male and female doctors. For example, in 35 of the 36 situations, male general practitioners were more likely than female general practitioners to prescribe oral contraceptives, the greatest differences being seen when the patient was described as a smoker. Because of the small numbers, however, none of these differences is statistically significant.

Other findings

Changes in prescribing practices

Changes in their prescribing practices 'during the past few years' were reported by over 90 per cent of the doctors in both groups. The changes related both to an enhanced understanding of the risks of oral contraceptive use, especially with age and smoking, and to changes in the preparations used, with increased prescribing of the progestogen-only, lower oestrogen and triphasic oral contraceptives. Although nearly a fifth of the family planning doctors mentioned hypertension as a lately perceived risk, only one fiftieth of the general practitioners did so. A variety of explanations were given. Both groups of doctors mentioned family planning courses, changes in policies within the family planning service, and the availability of safer preparations. The influences on general practitioners appeared to be more varied, included discussions with colleagues and representatives of drug companies, and changes in general opinion and the literature.

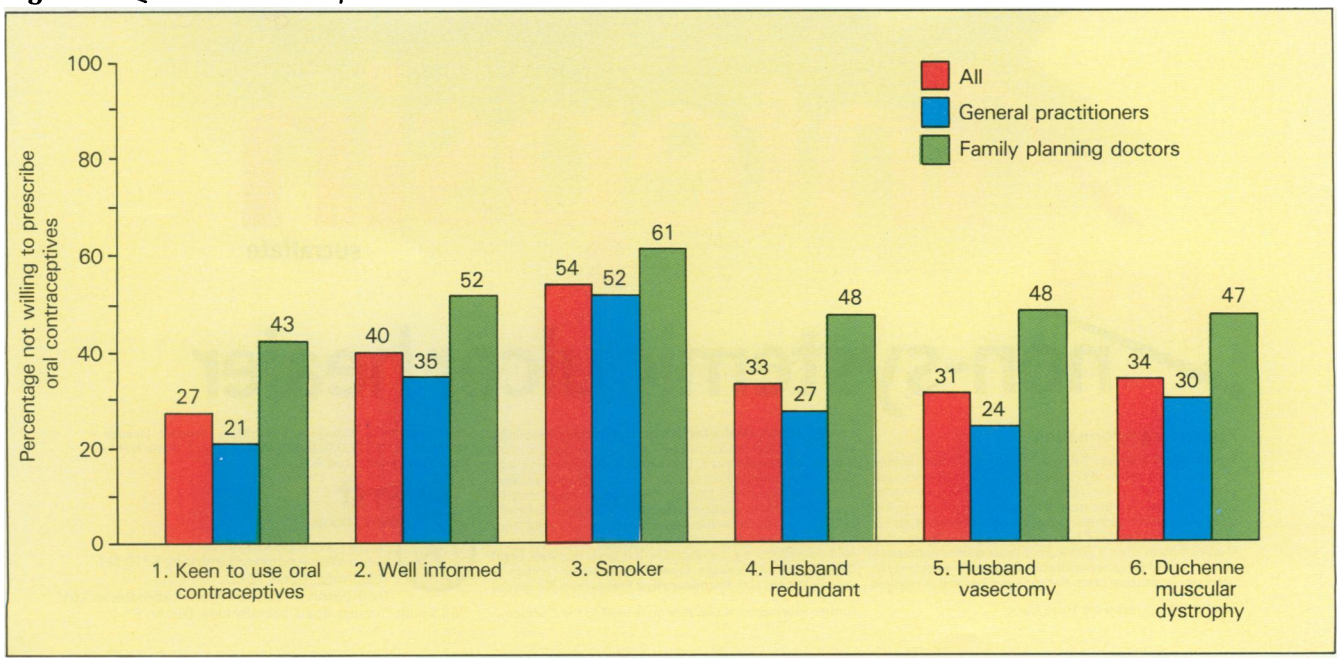
Most commonly prescribed oral contraceptives

Doctors were asked to list the three preparations which they prescribed most commonly, and Table 1 shows that the most commonly cited were the 30 μg oestrogen preparations (low and high progestogen) and the progestogen-only pill. Triphasic preparations were the fourth most commonly named, despite the fact that they had been generally available for only a few months when the study was carried out. Only 17 (10 per cent) doctors, all general practitioners, included an oral contraceptive containing 50 μg oestrogen, and none named any preparations with higher doses of oestrogen.

Preferential use of the progestogen-only pill

Nearly all the doctors replied that there were circumstances in which they would prescribe the progestogen-only but not the combined pill. The most commonly

Figure 6. *Questionnaire replies to case 6.*



cited circumstances were when the woman was aged 35 years or more, was breast feeding, had risk factors for cardiovascular disease or smoked. However, comparison of some of these answers with those given in the case history section showed that these were not inflexible rules, merely guidelines which were interpreted in the context of other information.

Role of others in prescribing oral contraceptives

The two groups of doctors showed different attitudes towards the role of other staff in prescribing oral contraceptives (Table 2). Overall, family planning nurses were seen as the most acceptable alternative to doctors; 35 per cent of the general practitioner group and 73 per cent of the family planning group thought that oral contraceptives might be obtained from a family planning nurse with a doctor present elsewhere in the clinic, and 17 (14 per cent) of the general practitioners against 13 (29 per cent) of the family planning doctors said that family planning nurses might prescribe without a doctor on the clinic premises. A minority of these doctors felt that prescribing by family planning nurses should be limited to follow-up prescriptions. Smaller numbers of doctors considered that community nurses, community midwives and health visitors should prescribe oral contraceptives. Only a few doctors in each group agreed that pharmacists should prescribe, and no doctor replied that oral contraceptives should be obtained from any other shopkeeper. Although 80 per cent of the general practitioners felt that oral contraceptive prescribing should be limited to doctors, this view was shared by only 12 per cent of the family planning doctors.

Table 1. Numbers (percentages) of doctors who named the following preparations among their three most commonly prescribed oral contraceptives.

Preparation	General practitioners ($n=124$)	Family planning doctors ($n=45$)	All doctors ($n=169$)
Microgynon/Ovranette (ethinyloestradiol 30 μg, levonorgestrel 150 μg)	107 *(86)*	39 *(87)*	146 *(86)*
Eugynon 30/Ovran 30 (ethinyloestradiol 30 μg, levonorgestrel 250 μg)	84 *(68)*	19 *(42)*	103 *(61)*
Femulen/Micronor/ Microval/Neogest/ Noriday (various types and doses of progestogen; nil else)	64 *(52)*	34 *(76)*	98 *(58)*
Logynon/Trinordiol (triphasic preparations, with varying doses of ethinyloestradiol and levonorgestrel)	25 *(20)*	15 *(35)*	40 *(24)*

Discussion

There are obvious problems in collecting data about a complex area of decision-making by means of a postal questionnaire. In particular, the first section of the questionnaire was deliberately brief and simplified and the doctor was asked to choose one of only three courses of action. Many of the respondents commented on their difficulties in making such a choice and stressed the importance of counselling and discussion to enable each woman to reach her own decision. In addition, our findings can reflect only what doctors said that they would do, not what they necessarily would do.

Our results support previous evidence *(Daily Telegraph,* 1977) of recent changes in oral contraceptive

Table 2. Numbers (percentages) of doctors who thought that other staff might prescribe oral contraceptives, either unconditionally or for follow-up only.

	General practitioners (n = 124)		Family planning doctors (n = 45)	
	Prescribe oral contraceptives unconditionally	Prescribe oral contraceptives follow-up only	Prescribe oral contraceptives unconditionally	Prescribe oral contraceptives follow-up only
Family planning nurse (with doctor in clinic)	42 *(34)*	1 *(1)*	26 *(58)*	7 *(16)*
Family planning nurse (no doctor in clinic)	14 *(11)*	3 *(2)*	8 *(18)*	5 *(11)*
Community/practice nurse	11 *(9)*	7 *(6)*	5 *(11)*	4 *(9)*
Community midwife	5 *(4)*	3 *(2)*	9 *(20)*	2 *(4)*
Health visitor	4 *(3)*	4 *(3)*	3 *(7)*	1 *(2)*
Pharmacist	2 *(2)*	1 *(1)*	1 *(2)*	—
Shopkeeper	—	—	—	—

prescribing patterns. The majority of general practitioners and family planning doctors recognized moderate hypertension, a family history of ischaemic heart disease and smoking as contraindications to oral contraceptive use. Fibrocystic disease of the breast was not seen by most doctors to increase the risks of oral contraceptive use, and, although relatively few were willing to prescribe the combined pill for a woman aged 39 years, the majority would prescribe the progestogen-only pill. Both groups gave similar replies in all these areas, and their agreement corresponds with recent recommendations. There was, however, less consistency between the general practitioners and family planning doctors concerning the woman with newly diagnosed insulin-dependent diabetes and the young woman with severe headaches for which no cause could be found. Both groups, but especially the family planning doctors, saw these women as being at increased risk if they used oral contraceptives, although there is little reliable evidence to support this caution, and careful monitoring of oral contraceptive use has been recommended (DHSS/SHHD/WO, 1979).

Many doctors emphasized the importance of helping the woman to reach her own decision, taking social as well as medical factors into account. On the other hand the additional information designed to stress the problems, either medical or financial, which an unplanned pregnancy would cause had little apparent effect on prescribing patterns. This may have been because the examples given were inappropriate, or may genuinely indicate a reluctance among some doctors to place what they consider to be a medical decision within a wider social context.

The general practitioners appeared to be rather ambivalent about the progestogen-only pill. Although, in theory, it was considered to have a variety of advantages, in practice it appeared to have a relatively limited role. The family planning doctors were more likely to use the progestogen-only pill, especially when they considered the woman to be at increased risk, although they too preferred the combined pill for the lower-risk woman. This is in line with the national picture, where the progestogen-only preparations made up only 7 per cent of all oral contraceptives prescribed by general practitioners during 1980 (E. J. H. Osmond, personal communication).

Female doctors were consistently less likely to prescribe oral contraceptives, an interesting finding at a time when the feminist literature is contrasting the convenience to the male with the dangers to the female of oral contraceptives *(New Society,* 1979). There may be various explanations for the differences between male and female doctors—for example, women may be naturally more cautious, or, because the majority work in family planning clinics, female doctors may have greater access to alternative methods of contraception. However, one explanation may lie in the potential for greater empathy between female patient and female doctor in the sphere of birth control, and a mutual reluctance to settle for what might appear superficially to be the easiest option.

One other puzzling finding in the case history section was the doctor's reaction to knowing that the woman was 'well informed' and that she enquired about the possible risks of oral contraception. Rather than see such a woman as more suitable for oral contraceptives, being likely to monitor her health and report any symptoms promptly, both groups of doctors were more reluctant to prescribe oral contraceptives for her than for any other subgroup other than the smokers. Although this might reflect medical anxiety about the possible consequences of any complications, other explanations are also possible—for example, such a woman might appear to be especially suitable for an alternative method, such as the cap or sheath, where reliability is important.

Changes in prescribing were attributed both to increased knowledge of the risks of oral contraceptives and to the marketing of new and apparently safer preparations. Postgraduate education, both formal and informal, appears to be a commonly quoted motivation to modify practice, and changes in local policy will obviously have an effect. General practitioners also referred to the role of drug companies, and this explanation is supported by the apparent popularity of the triphasic preparations. While these had been available for only a few months at the time of the study, there had been considerable publicity from the drug industry, which had emphasized their safety. Although the triphasic preparations cost almost twice as much as oral contraceptives containing a daily dose of 30 μg oestrogen, their advantages remain to be demonstrated.

Finally, whereas the general practitioners were conservative about the role of other staff in prescribing oral contraceptives, only one quarter of family planning doctors felt that oral contraceptives must always be obtained from a doctor. Three quarters of the family planning doctors (compared with one third of general practitioners) considered that family planning nurses, with doctors elsewhere in the clinic, could prescribe. There were doctors in both groups who recognized the possibility of other primary care staff and pharmacists prescribing oral contraceptives; general practitioners were more likely to favour community nurses or health visitors as prescribers, perhaps because they have direct experience of their abilities and expertise. However, as long as general practitioners receive item-of-service payments for family planning, it is impossible to exclude an economic explanation for their wishes to remain as the major prescribers of oral contraceptives.

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Asthma and infant diet

No significant association was demonstrated between rates of early childhood asthma and breast feeding or solid feeding practices in a prospective study of 1,110 children.

Source: Fergusson, D. M., Horwood, L. J. & Shannon, F. T. (1983). *Archives of Disease in Childhood,* **58,** 48-51.

Opioid peptides

Role of opioid peptides in human physiology and pain responsiveness was reviewed. Investigations are continuing into the role of opioids in acupuncture, narcotic dependence, schizophrenia and menopausal flushing.

Source: Clement-Jones, V. & Besser, G. M. (1983). *British Medical Bulletin,* **39,** 95-100.