Adolescent use of the combined oral contraceptive pill: a retrospective observational study

N Krishnamoorthy, S Ekins-Daukes, C R Simpson, R M Milne, P J Helms, J S McLay

Aims: To determine the extent of combined oral contraceptive use by girls aged 10–16 years in Scotland.

Methods: Assessment of combined oral contraceptive prescribing in 35 414 girls for the year 1 November 1999–31 October 2000 from data retrieved from 161 primary care practices taking part in the Scottish Programme for Improving Clinical Effectiveness in Primary Care, and from national aggregated data from family planning clinics.

Results: During the study period the oral contraceptive pill (OCP) was prescribed by a primary care physician to 1531 girls (4.3%) aged 10–16 years. The age specific prevalence rates per 1000 girls registered with their family doctor rose from 0.9/1000 girls aged 12 years or younger, to 6.9, 30, 86.3, and 174.8/1000 for girls aged 13, 14, 15, and 16 years respectively. The overall prevalence of combined oral contraceptive prescribing by primary care physicians was 43.2/1000 girls aged 10–16 years. A further 1765 girls aged 13–16 years obtained a prescription for the OCP from a Scottish family planning clinic, giving an overall prevalence rate for family planning clinic prescribing of 8.0/1000 girls aged 10–16 years. Despite reportedly high levels of sexual activity and teenage pregnancy in this age group, these results confirm that OCP use is relatively low.

Conclusions: The UK has the highest rate of teenage pregnancy in Western Europe, but despite the medical and social concerns about the sexual health of teenagers, the level of oral contraceptive use in this young age group remains low.
Table 1  The prevalence of oral contraceptive pill prescribing in Scottish primary care practices contributing to GPASS

<table>
<thead>
<tr>
<th>Age (y)</th>
<th>No. prescribed the OCP by a primary care physician</th>
<th>No. of females registered with the SPICE-pc practices</th>
<th>Annual prevalence/1000 girls (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;13</td>
<td>14</td>
<td>15095</td>
<td>0.9 (0.6 to 2.0)</td>
</tr>
<tr>
<td>13</td>
<td>35</td>
<td>5075</td>
<td>6.9 (5.00 to 9.6)</td>
</tr>
<tr>
<td>14</td>
<td>150</td>
<td>5005</td>
<td>30.0 (15.6 to 35.1)</td>
</tr>
<tr>
<td>15</td>
<td>447</td>
<td>5177</td>
<td>86.3 (79.0 to 94.3)</td>
</tr>
<tr>
<td>16</td>
<td>885</td>
<td>5062</td>
<td>174.8 (164.6 to 185.5)</td>
</tr>
</tbody>
</table>

Family planning clinic
The only other possible source for an OCP prescription in Scotland is from an FPC. Anonymised data, including gender, age, reason for consult, and prescription is collected annually by the Scottish Executive’s Information and Statistics Division (ISD) from all FPCs located throughout Scotland. Fully anonymised data for OCP prescriptions supplied by FPCs during the study year for girls aged 10–16 years was supplied by ISD Scotland. Because the ISD data reports national FPC prescribing of the OCP, prevalence rates were estimated using Scottish 1999–2000 Census data for girls aged 10–16 years of age.

Because an individual is always registered with a GP, the two databases interrogated were not mutually exclusive; however, because of the anonymisation process it was not possible to remove duplicated individuals and consequently the data presented would tend to overestimate the current level of prescribing. Our results however would suggest that the level of duplication is small.

RESULTS
Primary care (table 1)
A total of 35 414 girls aged 16 years or younger were registered with the 161 primary care practices during the study year, of whom 1531 (4.3%) were issued with a prescription for the OCP. The age specific rates for OCP prescribing in the primary care practices increased from 0.9/1000 girls aged 12 years or younger registered with a primary care physician, to 6.9, 30, 86.3, and 174.8/1000 for girls aged 13, 14, 15, and 16 years respectively (table 1). The overall prevalence rate for OCP prescribing in primary care was 43.2/1000 girls 10–16 years of age.

Family planning clinic data (table 2)
Using Scottish census data for 1999–2000, and OCP prescribing figures for all Scottish FPCs obtained from ISD Scotland, the OCP was prescribed to 1.0/1000 girls aged 13 years, 5.9/1000 aged 14 years, 15.7/1000 aged 15 years, and 34.1/1000 girls aged 16 years. Throughout Scotland only nine children aged under 13 years were prescribed the OCP from an FPC, giving a prevalence rate of 0.1/1000 girls 10–12 years of age. The overall prevalence rate for OCP prescribing by Scottish FPCs was 8/1000 girls aged 10–16 years of age.

DISCUSSION
The twin problems of sexually transmitted disease and teenage pregnancy due to the early age of sexual debut have raised both social and health concerns among policy makers. Epidemiological studies have shed some light on teenage attitudes towards sexual activity and the level of teenage sexuality in the United Kingdom, and it is now widely acknowledged that teenagers are engaging in sexual activity at an increasingly early age.1–5

In this study the estimated overall prevalence for primary care OCP prescribing to 10–16 year old girls was 4.3%, a figure similar to the 4.2% reported for England and Wales by Rowlands and colleagues.11 The figure of 4.2% reported by Rowlands et al however also took into account prescribing from FPC outlets, and when OCP prescribing rates from Scottish FPCs are added to our figure of 4.3% (assuming that the two databases are mutually exclusive), the OCP was prescribed to at best 6.6% of Scottish girls 10–16 years of age during the study year. Although in Scotland it is estimated that 15.4% of 14 year old girls and 38% of 15 year old girls are sexually active,1 2 3 4 summing the primary care and FPC results obtained in this study would suggest that even in the very best case scenario, only approximately 4% of 14 year olds, and 10% of 15 year olds are prescribed the OCP, indicating a significant shortfall between those partaking in sexual activity and those prescribed oral contraception. The fact that young women use their primary care physician, rather than an FPC to obtain a prescription/advice for the OCP is not surprising. In the UK the primary care physician acts as the gatekeeper for the healthcare system, and most are qualified to give contraceptive and gynaecological advice. Furthermore, unlike FPCs which tend to function in a manner similar to drop-in clinics, the population is registered with a primary care practice from early childhood, and such practices are readily accessible, situated locally, and so more accessible to young adolescents.

The relatively low overall uptake of the OCP by sexually active teenagers may be indicative of the fact that few teenagers of this age are aware of the sexual health services provided by primary care physicians or FPCs, or in a position to approach their primary care physician or FPC for contraceptive advice on their own, or are reluctant/embarrassed to do so.14 It may also reflect the sporadic nature of sexual activity in this age group and risk taking behaviour,19 20 concern about confidentiality,21 22 or confusion on the part of the adolescent or primary care physician regarding the law as it applies to young children and teenagers.23 The importance of these issues has been highlighted by the results of a questionnaire survey of 1045 adolescents 13–15 years of age in which only 68% of adolescents reported awareness of the sexual health services offered by their primary care physician. Furthermore, 54% of adolescents believed that they had to be over 16 years of age to access sexual health services and 58% expressed concerns about a possible lack of confidentiality.22 A non-judgmental parental attitude and a good child-parent relationship also appears to be important, both being associated with higher birth control use and a lower probability of both sexual intercourse and pregnancy.23 Whatever the reason for not using the OCP there is a clear need to improve adolescent participation, awareness, and access to primary care sexual health services.
The estimate of contraceptive use made in this study is not fully comprehensive since it does not include information on condom use, which is reportedly used by approximately 50–60% of 16 year olds, and the use of depot contraceptive preparations, which are reportedly used by 1.9% of sexually active Scottish girls aged 15 years.

A further important problem when estimating the level of combined oral contraceptive pill use in teenagers is the high discontinuation rate and low levels of compliance. Among adolescents compliance has been reported to be as low as 44–55%, with less than 20% compliant for a full year. In the present study, only the first prescription for the OCP was used to estimate the prevalence rate for OCP use. This methodology, which has been previously reported and is used to estimate the prevalence rate for OCP use, this present study, only the first prescription for the OCP was used to estimate the prevalence rate for OCP use. This methodology, which has been previously reported and is considered to provide a reasonable estimate of OCP use in teenagers, identifies those individuals who are contemplating or are partaking in sexual activity and who have overcome the major hurdle of seeking advice in relation to their sexual activity and health.

A further important consideration is that the OCP may be prescribed for medical reasons other than contraception, such as the treatment of acne and menstrual irregularities. Consequently it is not safe to assume that all OCP prescribing, identified in this study, was for contraception, although prescriptions from an FPC are more likely to be for this indication alone.

Conclusion
The level of combined oral contraceptive prescribing to teenagers by primary care physicians is likely to be similar throughout Great Britain, and is low when compared with the high degree of sexual activity in young people. The apparent wide disparity between reported sexual activity in young teenagers and low rates of OCP prescribing point to real challenges in sex and relationship education. Cultural attitudes to childhood, and early sexual activity in the context of the current legal framework also confound medical practice in this area.

What is already known on this topic
- A significant number of under 16 year old teenagers are sexually active; the UK has the highest teenage pregnancy rate in Europe
- Contraception is prescribed/supplied by both primary care physicians and family planning clinics

What this study adds
- 4.3% of girls aged 10–16 are prescribed the OCP by their G; 0.8% of girls aged 10–16 are prescribed the OCP by an FPC
- There is a significant shortfall between the number of girls who are sexually active and those prescribed the OCP

REFERENCES

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