News from the frontline: sexually transmitted infections in teenagers attending a genitourinary clinic in south east London

S Creighton, S Edwards, J Welch, R Miller

**Aims:** To define the incidence and characterise the clinical presentation of sexually transmitted infections (STI) in people aged <16 years old attending a genitourinary clinic in south east London.

**Methods:** Cross sectional analysis of clients aged <16 years attending one genitourinary clinic. A subgroup was identified for priority treatment. Data collected included age, reason for presentation, diagnosis, contraceptive use, and adherence to therapy. Diagnoses were compared to the KC60 codes for female attendances of all ages.

**Results:** 144 females and 18 males with a mean age of 15.4 years attended, of whom 49% were symptomatic. Compared to other attenders, clients aged <16 years were significantly more likely to have an STI (64% versus 22%, p <0.00000001); 27 were pregnant (of whom 96% requested a termination of pregnancy); 47% did not return for follow up; and 12% did not adhere to treatment plan. Those diagnosed with an STI were significantly less likely to reattend (p<0.001).

**Conclusions:** There is a high rate of STIs in 16 year olds compared to national figures and to general clinic attenders. Poor contraception is often overlooked within the genitourinary medicine clinic. Young attenders frequently fail to reattend for follow up. Priority treatment did not affect outcome. Further strategies are needed to identify ways to improve young people’s access to genitourinary medicine clinics.

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Rates of infection with *Chlamydia trachomatis* and *Neisseria gonorrhoeae* peak among women aged 16–19 years and teenagers with sexually transmitted infections (STI) are more likely than older groups to be reinfected after initial presentation. Twenty eight per cent of 16 year olds use no contraception, resulting in the United Kingdom having the highest teenage pregnancy rate in western Europe. These issues are prioritised in the national strategy for sexual health and HIV.

South east London has the highest abortion rate in England and treats 14% of the nation’s gonorrhoea. The present study is a cross sectional analysis of clients aged <16 years attending a genitourinary medicine clinic in south east London which offers treatment for all sexually transmitted infections (STIs), contraception, and forensic screening.

The aims of the study were to define the incidence of STI in clients aged <16 years in south east London, characterise behavioural variables (for example, reason for accessing the clinic, contraceptive use, and adherence to treatment), and observe treatment received in the clinic.

**METHODS**

This is a cross sectional survey of all clients aged <16 years attending the genitourinary medicine clinic at King’s College Hospital in March and October 1998. Two separate months were chosen to minimise effects of individual staff members on client treatment. Clients attending repeatedly in this time period were counted once. Cases were identified retrospectively from the clinic database. Data were abstracted from the medical records using a standardised proforma by one investigator. Variables collected included age, sex, reason for presentation, obstetric history, contraceptive practice, diagnosis, follow up, and adherence to treatment. Adherence was defined as completing 90% of medications, refraining from unprotected sexual intercourse and undertaking appropriate partner notification. Of note, in April 1998 clinic policy was changed so that all clients aged <16 received priority treatment. In summary, a health adviser saw clients within 10 (range 1–21) minutes to assess Gillick competency, discuss the clinic procedure and explain the importance of treatment, and afterwards ensured that they were seen immediately in the conventional clinic setting. At this time, medical staff were primed as to the importance of prioritising these clients and of ensuring adequate treatment, including contraception.

Diagnoses and adherence to therapy were compared to case and sex matched controls chosen at random from clients age >20 years attending the clinic in the same 2 months. These controls faced a median waiting time of 47 minutes and spent an average of 4.5 hours in clinic.

Data were compared using $\chi^2$ analysis with Yates’s correction.

**RESULTS**

The database identified 172 clients; 10 of whom left before being seen. The remainder included 144 females and 18 males aged <16 years. The small number of males precluded their detailed analysis. Of the females, median age was 15.4 years (range 12–15.9) years and median parity was 0.85 (range 0–10).

**Reasons for attendance**

Forty nine per cent of <16 year olds attended with symptoms suggestive of an STI; 43% of 12–16 year olds and 18% of controls attended for a routine check up ($\chi^2 =21.2; p <0.001$). Cases were significantly less likely than controls to attend as contacts (8% versus 40%, $\chi^2 = 42.1; p <0.00000001$).

**Contraception**  
Twenty seven of 144 (19%) were pregnant, of whom 26 requested a termination of pregnancy. Among the remaining 117 females, 89 (76%) were not using contraception at the time of consultation and 47 (53%) left the clinic without documentation of contraceptive advice.

**Diagnosis**

Diagnoses were similar in both months of the study. Table 1 shows the diagnoses of <16 year olds compared to all females.
had been pregnant 10 times. A one stop sexual health clinic
of 12–16 year olds had been pregnant at least once and one
the genitourinary medicine clinic is of concern. The majority
checks than older counterparts.

might be more aware of the need for routine sexual health
The fact that 43% of teenagers were attending for a routine
representative of all teenagers and it would be interesting to
study. Attenders at a genitourinary medicine clinic are not

χ² (the first visit, compared to 29% of case matched controls
Sixty seven of 144 (47%) young women failed to attend after
controls. One in five requested a termination of pregnancy and
50% less likely to attend for follow up than case matched con-
medicine clinic had an STI. Teenagers were 2.5 times more
area of high sexual morbidity. The main findings were that
This is the first UK study looking at clients <16 years old in an
incidence of gonorrhoea and chlamydia compared to the already high
incidence of these diseases in the general clinic attenders. This
accords with data from urban genitourinary medicine clinics
in the United States, but contrasts with data from the United
Kingdom.

The low rate of follow up contrasts with a study, performed
in a family planning clinic in the United States with a low
incidence of STI. Their findings may represent the characteristics of the general population, rather than that of
teens in particular. Prioritisation did not reduce the number of clients leaving the clinic before being seen, nor did
it improve the clinical care received within the clinic. This may
be explained by the increasing workload of the clinic; there
was a 70% increase in the number of ≤16 year olds seen in
October compared to March. Although the time to initial
assessment by a health adviser improved, this did not
necessarily reduce total time spent in the clinic. Alternatively,
the results may indicate that the initial interview with a
health adviser failed to improve client education or treatment
by other health professionals.

Very few young men were seen. This cannot be explained
entirely by a later coitarche in men compared to women and
implies that young men fail to access genitourinary medicine
clinics. Ways of targeting this high risk group need to be
explored.

The success of young people’s sexual health clinics in
improving adherence to therapy has been demonstrated. However, total numbers of patients seen were lower in these
studies than in our population. Although the benefits of out-
reach studies and peer education are recognised, these are
costly alternatives. In combating STI and unwanted preg-
nancy, it is imperative to target those at highest risk—namely,
teens in south east London.

DISCUSSION
This is the first UK study looking at clients <16 years old in an
area of high sexual morbidity. The main findings were that
almost two thirds of 16 year olds seen in the genitourinary
medicine clinic had an STI. Teenagers were 2.5 times more
likely to have any STI than other attenders at the clinic, but
50% less likely to attend for follow up than case matched
controls. One in five requested a termination of pregnancy and
more than two thirds admitted to inadequate contraception.
Despite this, nearly half left the clinic without receiving docu-
mented contraceptive advice, compared to 71/103 (69%) of all other 16
year olds.

CONTRIBUTORS
SC performed the data collection, statistical analysis and with
RFM wrote the first and final drafts of the manuscript; SE contributed
to study design and with JW critically reviewed drafts of the
manuscript.

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Conflict of interests: None.

Table 1 Diagnoses in teenagers and all women attending clinic

<table>
<thead>
<tr>
<th>Diagnosis*</th>
<th>≤16 year olds</th>
<th>All women</th>
<th>χ²</th>
<th>p Value†</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlamydia</td>
<td>34 (23)</td>
<td>86 (6)</td>
<td>15.8</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Gonorrhoea</td>
<td>13 (9)</td>
<td>29 (3)</td>
<td>4.2</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>PID</td>
<td>15 (10)</td>
<td>87 (8)</td>
<td>0</td>
<td>0.29</td>
</tr>
<tr>
<td>Other STI‡</td>
<td>32 (22)</td>
<td>100 (9)</td>
<td>8.5</td>
<td>&lt;0.005</td>
</tr>
<tr>
<td>Any STI</td>
<td>94 (64)</td>
<td>302 (28)</td>
<td>36.2</td>
<td>&lt;0.000001</td>
</tr>
<tr>
<td>Non-STI†</td>
<td>52 (36)</td>
<td>772 (72)</td>
<td>53.3</td>
<td>&lt;0.01</td>
</tr>
</tbody>
</table>

*Total number of diagnoses is >144 as some clients had ≥1 diagnosis; †χ² analysis with Yates’s correction; ‡eg, genital warts, trichomonas vaginalis, herpes simplex and pediculosis pubis; §eg, candidiasis, bacterial vaginosis, urinary tract infection, family planning, and conditions not requiring treatment.
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