contraceptive pill; the formulation of ethinylestradiol/levonorgestrel accounted for more than 50% of all contraceptive prescriptions for both groups from 2002 to 2011.

Etonorgestrel implant use increased significantly for both groups: from 0.3% in 2002 to 9.4% in 2011 in the 12-15 age group; and from 0.4% in 2002 to 6.8% in 2011 in the 16-18 age group. In the 12-15 age group use of the depot progestogen-only contraceptive increased from 4.7% in 2002 to 5.9% in 2011 but in the 16-18 age group, the proportion dropped from 9.3% in 2002 to 8.4% in 2011.

The authors suggested that the general increase in prevalence of prescribing hormonal contraceptives by GPs to girls aged 12-18 might have partly explained the decrease in conception rate in those under 18 as contraception was the main indication for prescribing hormonal contraceptives.

In 1998, the UK had the highest teenage birth rate (30.8 per 1,000 in the 15-19 age group) in Western Europe. The Government's ten-year national Teenage Pregnancy Strategy in 1999 was followed by a 34% reduction in the conception rate by 2011. However, despite this reduction, the UK ranking in Western Europe has not changed.

There is still a need to improve teenage access to contraception.

DR RICHARD MA

● **Rashed AN, Hsia Y, Wilton L et al. Trends and patterns of hormonal contraceptive prescribing for adolescents in primary care in the UK. *J Fam Plann Reprod Health Care* doi:10.1136/jfprhc-2013-100724 online first**

Gay men who use GSN apps to find partners at greater risk of STIs

Men who have sex with men (MSM) who use geosocial networking applications (GSN apps) to find partners may have a higher risk of chlamydia and gonorrhoea infection, findings from a US study suggest.

MSM, who identified themselves as HIV negative, were recruited from two STI testing and treatment sites in Los Angeles from August 2011 to January 2013.

Data for behaviour risk assessments were collected electronically in face-to-face interviews by STI/HIV testing counsellors. This included demographic information, drug use, types of social networking used to meet partners such as in person at venues, websites and GSN apps.

Three social networking strata were condensed from this information: MSM who exclusively networked in person to meet sexual partners; MSM who networked with partners via the internet alone or also in person; and MSM who reported at least one GSN app, regardless of whether they also networked in person or through internet sites to meet partners. Participants were tested for *Neisseria gonorrhoea*, *Chlamydia trachomatis*, syphilis and HIV.

There were 7,184 men in the analysis. Of these, 34% met partners only through social networking in person; 30% met partners using the internet alone or in combination with social networking in person; and 36% met partners using GSN apps alone or in combination with other methods.

Those who were under 40, described themselves as Caucasian, Asian or mixed race, or had higher education were more likely to use apps to meet sexual partners than those who were African-American or Hispanic, or were not graduates. App users also reported more drug use than those who met partners through the internet or in person.

After controlling for demographics and drug use, those who used GSN apps to meet sexual partners were at higher risk of gonorrhoea infection compared with those who only used social networking in person; adjusted odds ratio (OR) 1.25 (95% CI:1.06-1.48) and individuals who used internet or social networking in person OR 1.42 (95% CI:1.19-1.70).

MSM under 30 had substantially greater risk of gonorrhoea infection compared with those who were older. MSM who had used methamphetamine in the past year had a greater risk of gonorrhoea infection compared with non-users OR 1.84 (95% CI:1.45-2.34).

MSM who used GSN apps were also more likely to test positive for chlamydia infection compared with those who only used social networking in person OR 1.37 (95% CI:1.13-1.65). Younger MSM were more likely to test positive for chlamydia infection than older MSM. Those who used methamphetamine and/or cocaine in the past year had greater odds of chlamydia infection.

Social networking method was not a predictor of either syphilis or HIV prevalence.

GSN apps are increasingly being used by MSMs to meet anonymous partners. These applications enable men to use their smart phone's global positioning system to locate and network with men who are nearby.

The results of the study suggest that MSM who use GSN apps may be at greater risk of chlamydia and gonorrhoea infections. Technological advances which improve the efficiency of meeting anonymous sexual partners may have the unintended effect of creating networks of individuals where users may be more likely to have STIs than other relatively less efficient social networking methods.

I believe the results are just as generalisable to the UK MSM population, especially in urban areas where there are high concentrations of MSM, many of whom already use GSN apps, and a high prevalence of STIs.

The authors suggest that technology is redefining sex on demand and prevention programmes must learn how to exploit the same technology to keep pace.

DR RICHARD MA

● **Beymer MR, Weiss RE, Bolan RK et al. Sex on demand: geosocial networking phone apps and risk of sexually transmitted infections among a cross-sectional sample of men who have sex with men in Los Angeles county. *Sex Transm Infect* 2014;90:567-572**

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