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HIV-STIs

Sexually transmitted infections and chlamydia screening in England, 2013

- In 2013, there were approximately 450,000 diagnoses of sexually transmitted infections (STIs) made in England.
- The impact of STIs remains greatest in young heterosexuals under the age of 25 years and in men who have sex with men (MSM).
- The most commonly diagnosed STI was chlamydia, with 208,755 diagnoses made in 2013.
- The number of gonorrhoea diagnoses increased by 15% between 2012 and 2013.
- Large increases in STI diagnoses were seen in MSM, including a 26% increase in gonorrhoea diagnoses. Although partly due to increased testing in this population, ongoing high levels of unsafe sexual behaviour probably contributed to this rise.
- During the year, over 1.7 million chlamydia tests were carried out in England among young people aged 15 to 24 years old, with over 139,000 chlamydia diagnoses made.
- Thirty percent of Upper Tier Local Authorities (UTLAs) achieved a chlamydia diagnosis rate of at least 2,300 per 100,000 among 15 to 24 year olds, the recommended level for this Public Health Outcome Framework (PHOF) indicator. There was a strong relationship between chlamydia testing coverage and chlamydia diagnosis rates in UTLAs.

Recommendations:

- Prevention efforts, such as greater STI screening coverage and easier access to sexual health services, should be sustained and continue to focus on groups at highest risk.
- Individuals can significantly reduce their risk of catching or passing on an STI by:
    - Consistently and correctly using condoms until all partners have had a sexual health screen.
    - If in one of the highest risk groups, getting screened regularly will lead to early identification and treatment, as these infections are frequently asymptomatic:
        - Sexually active under 25 year olds should be screened for chlamydia every year, and on change of sexual partner.
        - MSM should have an HIV/STI screen at least annually or every three months if having unprotected sex with new or casual partners.
        - Black African men and women should also have an HIV test and a regular HIV/STI screen if having unprotected sex with new or casual partners.
    - Reducing the number of sexual partners and avoiding overlapping sexual relationships.

Introduction

This report presents data on the recent trends and epidemiology of STIs in England. It was compiled using data from genitourinary medicine (GUM) clinics collected in the GUM Clinic Activity Dataset (GUMCADv2) and, for chlamydia screening, from other community-based settings using the Chlamydia Testing Activity Dataset (CTAD), which is collected from laboratories. Data from both datasets are used by the National Chlamydia Screening Programme (NCSP), which aims to control chlamydia and reduce the sequelae of infection through the opportunistic screening of sexually active young people aged 15 to 24 years in England. Chlamydia screening is recommended annually and on change of sexual partner for sexually active young people, and is mainly delivered through primary care (general practices and pharmacies), community sexual and reproductive health (SRH) services (including termination of pregnancy services) and GUM clinics. Tests performed in community-based settings are assumed to be largely asymptomatic screens; tests performed in GUM clinics are assumed to be a combination of symptomatic tests and asymptomatic screens. The term 'test' is used herein to signify both asymptomatic screens and symptomatic tests. Local areas should work towards a chlamydia diagnosis rate of at least 2,300 per 100,000 population among 15 to 24 year olds, the recommended level for this Public Health Outcomes Framework (PHOF) indicator [1].

Overall trends in diagnoses in England

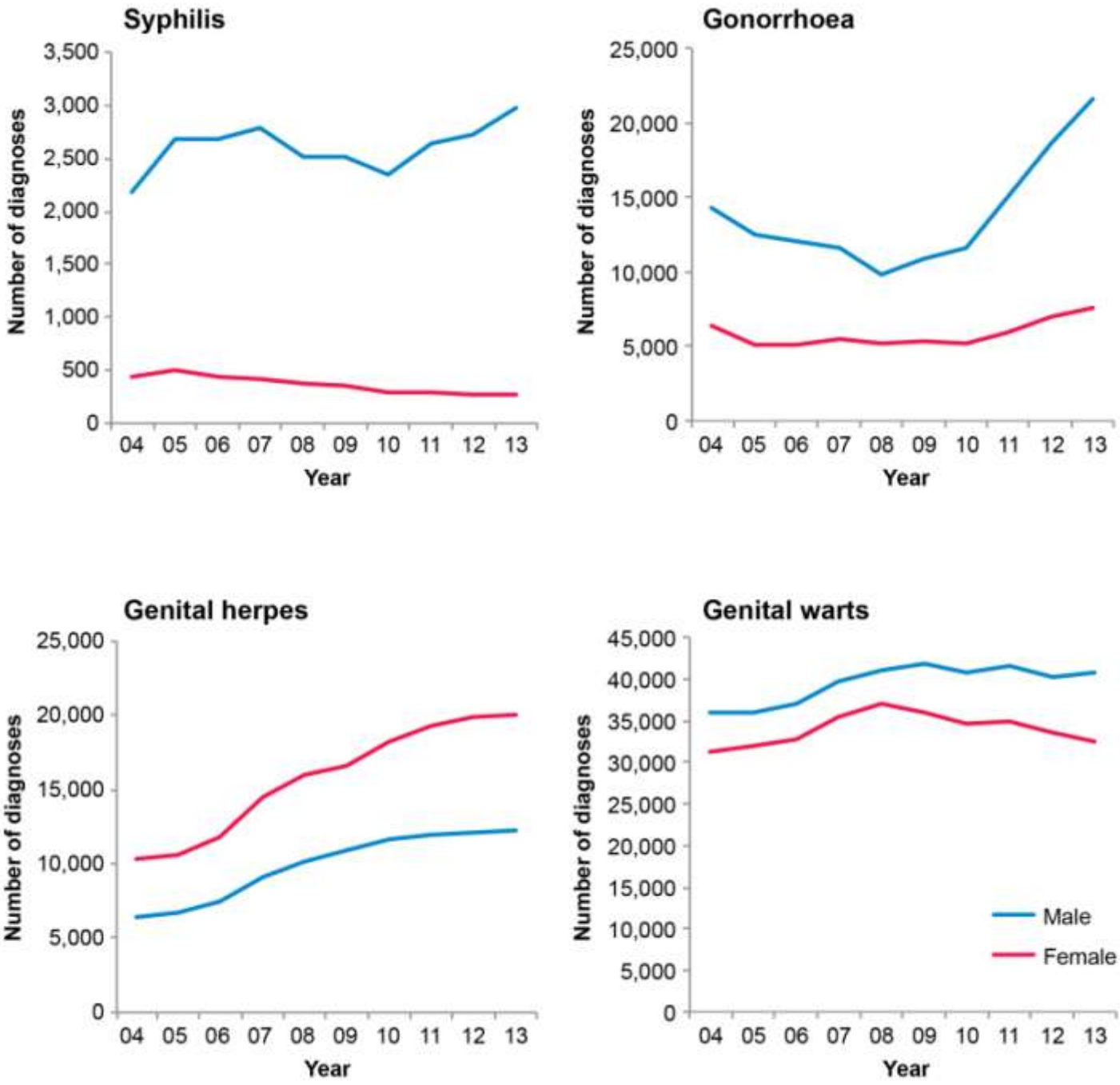
In 2013, the total number of new cases of STIs diagnosed in GUM clinics and, for chlamydia, in GUM and other community-based settings, decreased by 0.6% when compared to 2012 (446,253 vs. 448,775). Of the 446,253 new STI diagnoses made in 2013, the most commonly diagnosed STIs were chlamydia (208,755; 47%), genital warts (73,418; 17%), genital herpes (32,279; 7%), and gonorrhoea (29,291; 7%).

Between 2012 and 2013, there was an increase in diagnoses of gonorrhoea (15%; 25,577 to 29,291), and infectious syphilis (9%; 2,981 to 3,249). During the same period, diagnoses of non-specific genital infection (NSGI) fell by 10% (59,930 to 53,962).

Over the past decade, diagnoses of gonorrhoea, syphilis, genital warts and genital herpes have increased considerably, most notably in males [2] (figure 1; chlamydia is discussed in a later section). More STI testing in GUM clinics and through the NCSP [3] and routine use of more sensitive diagnostic tests will partly explain these increases, although ongoing unsafe sexual behaviour will have played an additional role. The increasing usage of nucleic acid amplification tests (NAATs) may also have contributed to the decreasing number of NSGI diagnoses.

Reliable data on the sexual orientation of patients is available from GUM clinics' GUMCADv2 data returns. Among diagnoses made at GUM clinics, there is substantial variation in the distribution of the most commonly diagnosed STIs by gender and sexual orientation. The most frequently reported gender/sexual orientation was MSM for diagnoses of syphilis (74%) and gonorrhoea (46%), heterosexual men for diagnoses of genital warts (49%), and heterosexual females for diagnoses of genital herpes (60%) and chlamydia (46%).

Figure 1. New diagnoses of syphilis (primary, secondary and early latent), gonorrhoea, genital herpes (first episode) and genital warts (first episode) at GUM clinics by gender, 2004–2013, England



Epidemiology of STIs in England

Men who have sex with men

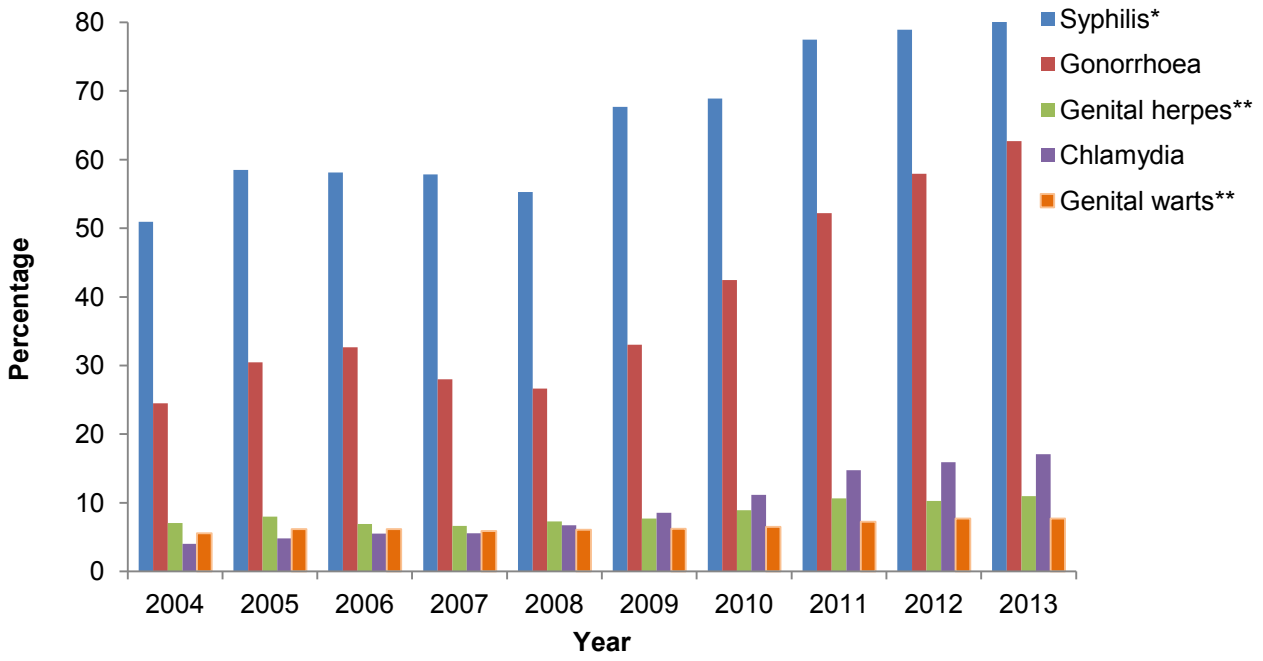
In England in 2013, among male GUM clinic attendees, 81% (2,393/2,970) of syphilis diagnoses, 63% (13,570/21,649) of gonorrhoea diagnoses, 17% (9,077/53,143) of chlamydia diagnoses, 11% (1,343/12,258) of genital herpes diagnoses and 8% (3,139/40,796) of genital warts diagnoses were among MSM (figure 2a).

The number of diagnoses of STIs reported in MSM has risen sharply in recent years and accounts for the majority of increased diagnoses seen among men. Gonorrhoea diagnoses increased by 26% in the past year (10,764 to 13,570), syphilis diagnoses by 12% (2,144 to 2,393), chlamydia diagnoses (from GUM) by 11% (8,212 to 9,077), and genital herpes diagnoses by 7% (1,250 to 1,343) (figure 2b).

A number of different factors are likely to have contributed to the sharp rise in diagnoses among MSM. More screening of extra-genital (rectal and pharyngeal) sites in MSM using NAATs [4], in response to current gonorrhoea testing guidance [5] and the Lymphogranuloma venereum (LGV) epidemic [6], will have significantly improved detection of gonococcal and chlamydial infections respectively. However, it is also likely that ongoing high levels of unsafe sex are leading to more STI transmission in this population. These rises coincide with the ongoing LGV and *Shigella flexneri* epidemics [6,7,8] and outbreaks of *Shigella sonnei* and syphilis in this population, often associated with HIV sero-adaptive behaviours. Gonorrhoea was the most commonly diagnosed STI among MSM in 2013, and 25% (3,382) presented with rectal infections. High levels of gonorrhoea transmission are of particular concern, as data from the Gonoccocal Resistance to Antimicrobials Surveilllance Programme (GRASP) show the emergence of gonococcal isolates with decreased susceptibility to cefixime among MSM [9].

Men who have sex with men continue to experience high rates of STIs and remain a priority for targeted HIV and STI prevention and health promotion work. This summer, PHE will publish a strategic framework to promote the health and wellbeing of gay, bisexual and other MSM. The vision of this framework is for all MSM to enjoy long healthy lives, and create and sustain respectful and fulfilling social and sexual relationships.

Figure 2a. Proportion of all male STI diagnoses which are among men who have sex with men, GUM clinics, 2004–2013, England



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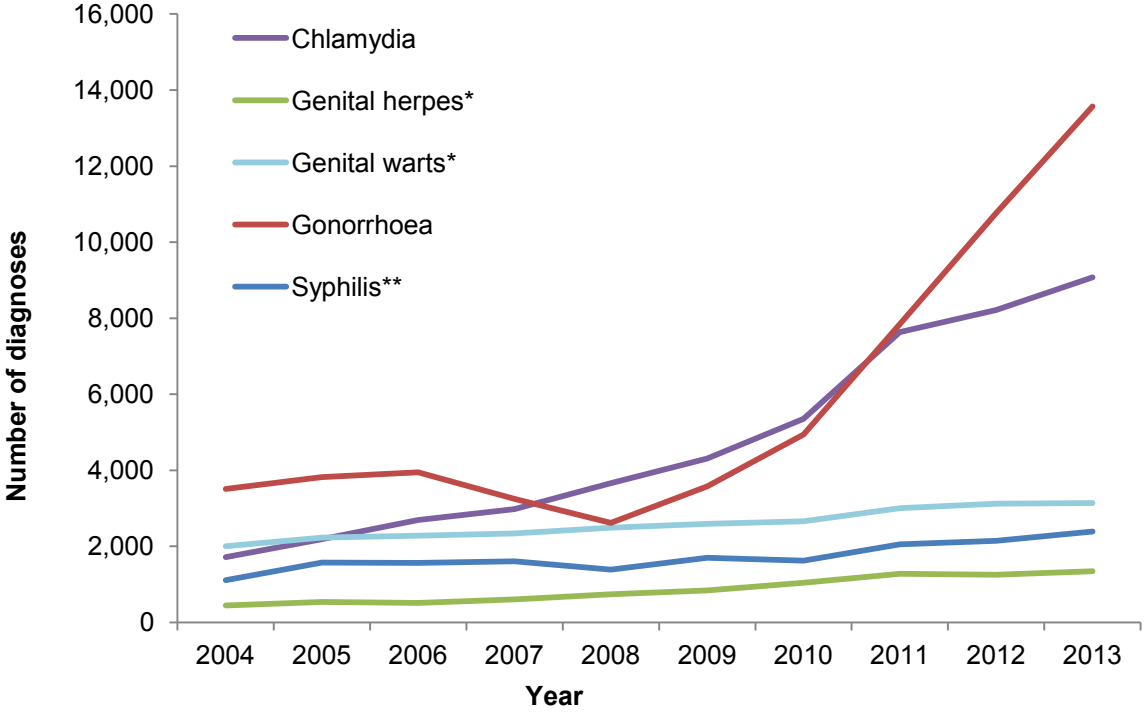
* Primary, secondary and early latent

** First episode

Figure 2b. Number of new diagnoses of selected STIs in men who have sex with men, GUM clinics, 2004–2013, England



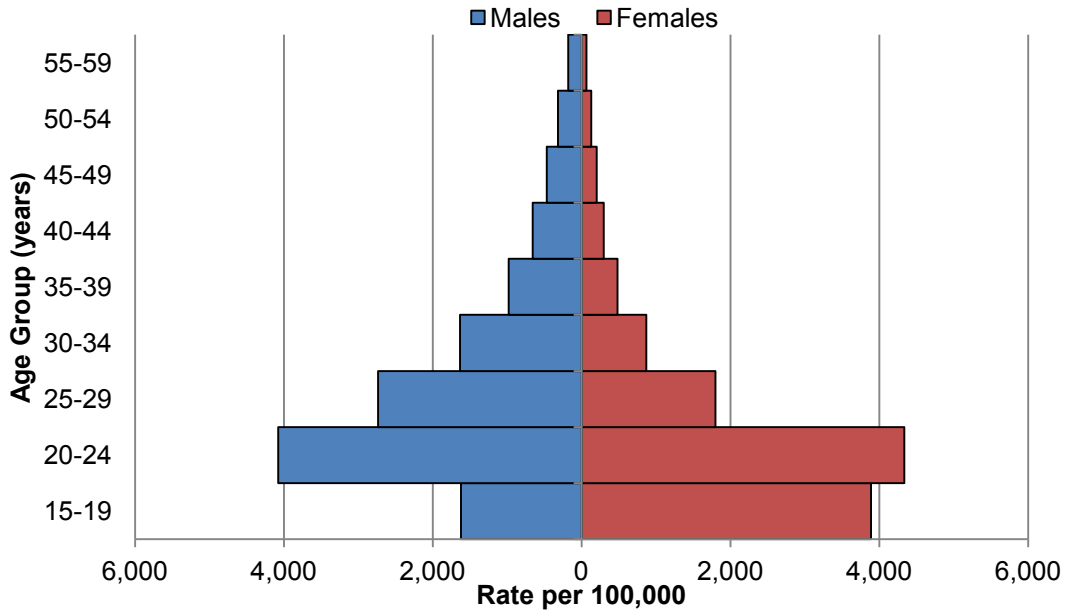
* First episode

** Primary, secondary and early latent

Young heterosexuals and STIs

Although there has been little change in the median number of lifetime sex partners in young persons aged 15 to 24 years in 2010–2012 relative to 1999–2001 [10], they continue to experience the highest rates of STIs (figures 3, 4a and 4b). In 2013, among heterosexuals diagnosed in GUM clinics, 63% (56,034/88,562) with chlamydia, 56% (8,122/14,647) with gonorrhoea, 54% (36,312/67,707) with genital warts, and 42% (12,450/29,871) with genital herpes were aged 15 to 24 years. Chlamydial infection in young people is discussed further in a following section. Although overall numbers of diagnoses in those aged 15 to 24 years have risen considerably in the last ten years, there has been some decline recently in cases of genital warts in young females (figure 4b). This decreasing trend is discussed in an accompanying article in this issue of the HPR [11].

Figure 3. Rates of new* STI diagnoses by age group and gender***, 2013, England**

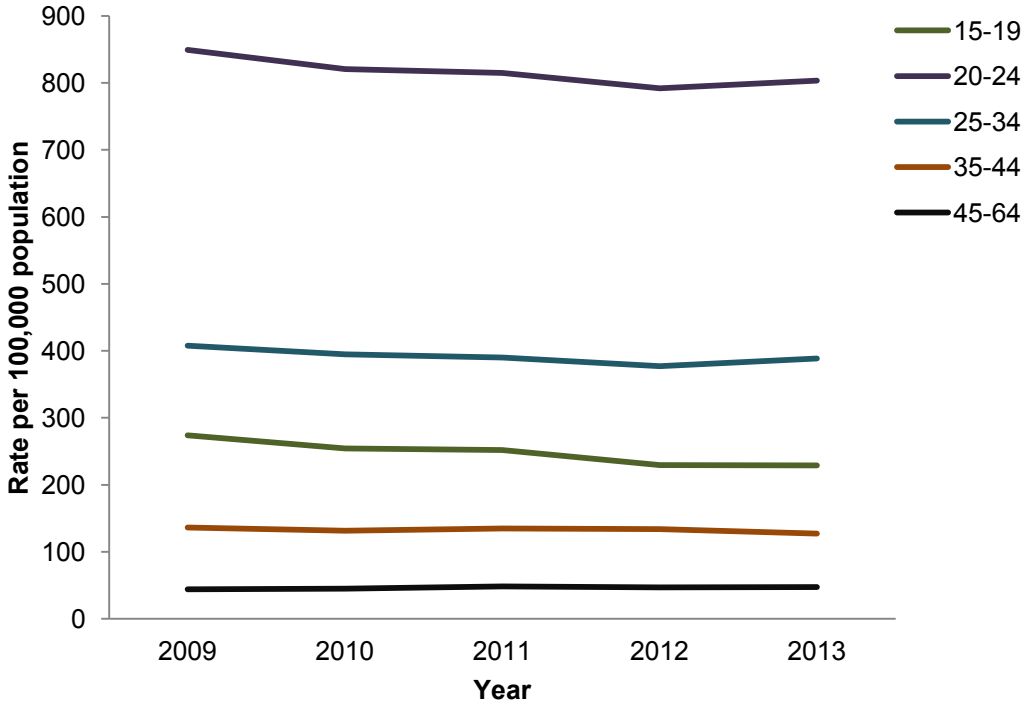


* New STIs include Chlamydia, Anogenital Warts (first episode), Non-Specific Genital Infection, Anogenital Herpes (first episode), Gonorrhoea, Syphilis (primary, secondary & early latent), new HIV diagnoses (acute infection and AIDS-defining illness), as well as Chancroid/LGV/Donovanosis, Molluscum contagiosum, Pelvic Inflammatory Disease & Epididymitis, Scabies/Pediculosis pubis, and Trichomoniasis

** Data from routine GUM clinic returns; data from community services included for chlamydia only

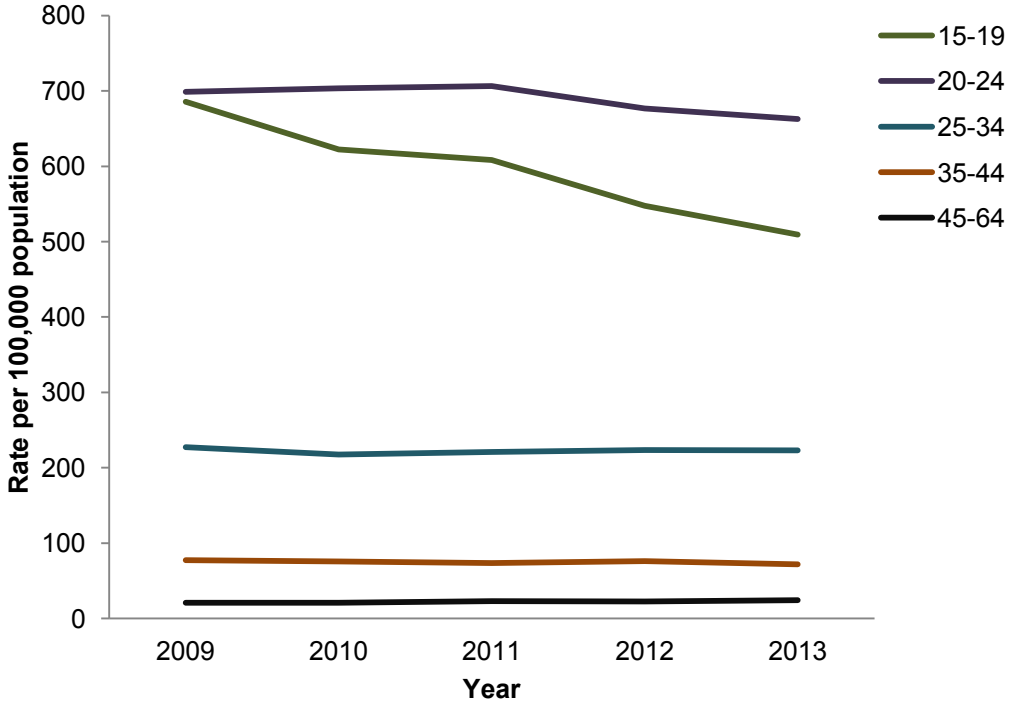
*** Excludes diagnoses where gender was reported as 'unknown'

Figure 4a. Rates of genital warts (first episode) diagnoses* in males by age group, 2009–2013, England**



* Data from routine GUM clinic returns; ** Years

Figure 4b. Rates of genital warts (first episode) diagnoses* in females by age group, 2009–2013, England**



* Data from routine GUM clinic returns; ** Years

STI distribution by local area of residence

There is considerable geographic variation in the distribution of STIs. To demonstrate this, in 2013, the rate of gonorrhoea diagnoses by lower-tier Local Authority (LA) ranged from 0 (Isles of Scilly) to 533 (Lambeth) per 100,000 population. Rates were highest in residents of urban areas, especially in London, reflecting, to a large extent, the distribution of core groups of the population who are at greatest risk of infection and areas of higher deprivation [15,16] (figures 5a and 5b).

To allow LAs and public heath leads to monitor the sexual and reproductive health of their population, PHE recently launched the Sexual and Reproductive Health Profiles. These profiles include interactive maps, charts and tables that provide a snapshot of sexual and reproductive health across a range of topics including teenage pregnancy, abortions, contraception, HIV, STIs and sexual offences. Wider influences on sexual health such as alcohol use, and other topics particularly relating to teenage conceptions such as education and deprivation level, are also included.

Figure 5. Rates of gonorrhoea diagnoses* by lower-tier Local Authority of residence, 2013