



Public Health
England

Spotlight on sexually transmitted infections in London

2016 data

About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. We do this through world-class science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. We are an executive agency of the Department of Health, and are a distinct delivery organisation with operational autonomy to advise and support government, local authorities and the NHS in a professionally independent manner.

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1. Summary

Sexually transmitted infections (STIs) represent an important public health problem in London. Out of all the Public Health England centres it has the highest rate of new STIs in England, 79% higher than any other centre.

More than 117,500 new STIs were diagnosed in London residents in 2016, representing a rate of 1,355 diagnoses per 100,000 population. Rates by upper tier local authority ranged from 596 new STI diagnoses per 100,000 population in Redbridge to 3,057 new STI diagnoses per 100,000 population in Lambeth. Of the top 20 local authorities in England with the highest rates of new STI diagnoses, 17 were in London.

The number of new STIs diagnosed in London residents fell by 5% between 2015 and 2016. Falls were seen in the numbers of most of the five major STIs: gonorrhoea decreased by 19%, genital herpes by 2% and genital warts by 5%. Syphilis increased by 2% and chlamydia by <1%. The number of syphilis diagnoses reported in 2016 was double the number reported in 2012.

In 2016 the chlamydia diagnosis rate among London residents aged 15 to 24 years was 2,309 per 100,000 residents. PHE recommends that local areas should be working towards achieving a chlamydia detection rate of at least 2,300 per 100,000 among individuals aged 15 to 24 years and this is an indicator in the Public Health Outcomes Framework.

Rates of new STIs vary widely between men and women (1,623 and 1,069 per 100,000 residents respectively).

Where gender and sexual orientation are known, men who have sex with men (MSM) account for 27% of London residents diagnosed with a new STI in a specialist sexual health clinic (SHC) (90% of those diagnosed with syphilis and 64% of those diagnosed with gonorrhoea). Gonorrhoea diagnoses in MSM fell by 25%, however, syphilis diagnoses in MSM rose by 5% between 2015 and 2016. There were 11 cases of high-level azithromycin resistant gonorrhoea reported in MSM resident in London in 2016.

STIs disproportionately affect young people. London residents aged between 15 and 24 years accounted for 37% of all new STI diagnoses in 2016.

The white ethnic group has the highest number of new STI diagnoses: over 58,300 (57%). Although only 9% of new STIs are in black Caribbeans, they have the highest rate: 2,815 per 100,000, which is 2 times the rate seen in the white ethnic group. Where country of birth was known, 57% of London residents diagnosed in a specialist SHC in 2016 with a new STI were UK-born.

While the number of new STIs has stabilised in London, with a welcome decline in gonorrhoea, concern remains over the persistent high rates relative to the rest of the country and a continued increase in syphilis. Londoners continue to put themselves at risk through unsafe sex.

This summary does not report on all infections which can be acquired sexually eg it does not include data on HIV, hepatitis B, hepatitis A and *Shigella*. HIV data will be released in October 2017 and previous reports are available online.¹ Of particular note is the large UK and international outbreak of hepatitis A predominantly affecting MSM which began in 2016 and where the majority of UK cases have been in London.² In 2016 there was also evidence of continued transmission of *Shigella* among MSM in London, albeit with smaller numbers than seen in recent years.³

Implications for prevention

The impact of STIs remains greatest in young heterosexuals 15 to 24 years, black ethnic minorities and MSM, and Public Health England (PHE) is conducting and managing a number of initiatives to address this inequality.

To improve the sexual health of young people, PHE is undertaking formative research for a health promotion campaign to promote condom use and positive sexual relationships among this population. Additionally, statutory, high-quality relationship and sex education at secondary schools will equip young people with the information and skills to improve their sexual health.

There is a notable variation in the chlamydia detection rate among 15 to 24 year olds by geographic area, often reflecting rates of testing. Local authorities with detection rates below the PHOF recommended indicator of 2,300 per 100,000 population should consider means to promote chlamydia screening to most effectively detect and control chlamydia infections.

Local areas should focus on embedding chlamydia screening for 15 to 24 year olds into a variety of non-specialist SHCs and community-based settings, focusing on those which serve the populations with the highest need based on positivity. They should also emphasise the need for repeat screening annually and on change of sexual partner, as well as the need for re-testing after a positive diagnosis within three months of initial diagnosis; and ensure treatment and partner notification standards are met. To help

¹ Annual epidemiological spotlight on HIV in London: 2015 data. PHE

<https://www.gov.uk/government/publications/hiv-london-annual-data-spotlight>

² Hepatitis A outbreak in England under investigation. Health Protection Report, Vol 11, no. 17, 12 May 2017. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/613909/hpr1717_hepA.pdf

³ Update on the epidemiology of shigella in adults in London: 2012 to 2016, PHE.

<https://www.gov.uk/government/publications/shigella-epidemiology-in-adults-in-london>

local areas improve their chlamydia detection rate in 15 to 24 year olds, PHE developed the chlamydia care pathway to outline comprehensive case management for an episode of chlamydia testing, diagnosis and treatment.

Of particular concern is the continuing rise of syphilis nationally among MSM. There is evidence that condomless sex associated with HIV sero-adaptive behaviours (which include selecting partners perceived to be of the same HIV sero-status), is leading to increased STI transmission.

Nationally, the rate of acute bacterial STIs in HIV-positive MSM is up to four times that of MSM who were HIV-negative or of unknown HIV status. This suggests that rapid STI transmission is occurring in dense sexual networks of HIV-positive MSM. Sero-adaptive behaviour increases the risk of infection with STIs, hepatitis B and C, and sexually transmissible enteric infections like *Shigella* spp. For those who are HIV negative, sero-adaptive behaviour increases the risk of HIV seroconversion as 13% of MSM nationally are unaware of their infection.

Chemsex, a term describing sex that occurs under the influence of drugs, has also been identified as a particular risk factor among MSM in STI outbreaks. Providers of drug and alcohol services should aim to meet the specific needs of MSM and sexual health services should aim to identify those clients who would benefit from support.

As MSM continue to experience high rates of STIs they remain a priority for targeted STI prevention and health promotion work. The London HIV Prevention Programme, a London-wide sexual health promotion initiative supported by London local authorities, delivers the 'Do It London' sexual health campaigns aimed at promoting safer sex to all residents in the capital and especially MSM.⁴ HIV Prevention England have been contracted to deliver, on behalf of PHE, a range of activities which include promoting condom use and awareness of STIs, which are particularly aimed at MSM.

The continued reduction in genital warts is associated with the high coverage of HPV vaccination in adolescent girls through the National HPV Vaccination Programme. While young heterosexual men stand to benefit from female only HPV vaccination through herd protection, this is not necessarily the case for MSM. As a result, a targeted HPV vaccination pilot programme for MSM was introduced in England in 2016 to inform the potential national rollout of vaccination of MSM attending specialist SHCs and HIV clinics.⁵ HPV vaccination of MSM will provide direct protection against HPV infection with the aim of reducing the incidence of genital warts and HPV-related cancers.

⁴ <http://doitlondon.org/>

⁵ <https://www.gov.uk/government/publications/hpv-vaccination-pilot-for-men-who-have-sex-with-men-msm>

The high rate of STI diagnoses among black ethnic communities is most likely the consequence of a complex interplay of cultural, economic and behavioural factors. HIV Prevention England also delivers, on behalf of PHE, prevention activity targeted at these groups. PHE is collaborating with academic institutions to improve understanding of the behaviours, attitudes, and other factors influencing their STI risk and support the delivery of timely interventions which maximise patient and public health benefit.

Health promotion and education remain vital for STI prevention, through improving risk awareness and encouraging safer sexual behaviour. Consistent and correct condom use substantially reduces the risk of being infected with an STI. Prevention efforts should include condom provision, ensuring open access to sexual health services with STI screening and robust contact tracing, and should focus on groups at highest risk such as young people, black ethnic minorities and MSM.

Effective commissioning of high quality sexual health services, as highlighted in the Framework for Sexual Health Improvement in England, will promote delivery of these key messages. Delivery of sexual health services in London is developing. The London Sexual Health Transformation Programme is a unique collaboration of 29 London Boroughs who have worked together to develop and transform the way sexual health services are organised and provided in London. The aim is to increase access for patients, respond to the changing way people want to communicate and improve the clinical outcomes achieved.⁶

⁶ <https://www.cityoflondon.gov.uk/services/health-and-wellbeing/Pages/sexual-health.aspx>

PHE's key messages

- statutory, high-quality relationship and sex education in secondary schools will equip young people with the skills to improve their sexual health and overall wellbeing⁷
- strengthened local and national prevention activities need to focus on groups at highest risk, including young adults, black ethnic minorities and MSM
- consistent and correct use of condoms can significantly reduce risk of STIs
- rapid, open access to treatment and partner notification can reduce the risk of complications and infection spread
- regular testing for HIV and STIs is essential for good sexual health:
 - anyone under 25 who is sexually active should be screened for chlamydia annually, and on change of sexual partner
 - MSM should test annually for HIV and STIs and every three months if having condomless sex with new or casual partners
 - black ethnic minority men and women should have a regular STI screen, including an HIV test, if having condomless sex with new or casual partners

⁷ <http://www.healthyschools.london.gov.uk/resources/healthy-take-aways/personal-social-health-and-economic>

2. Charts, tables and maps

Figure 1: New STI diagnoses by Public Health England centre (PHEC) of residence: England 2016. Data sources: GUMCAD, CTAD

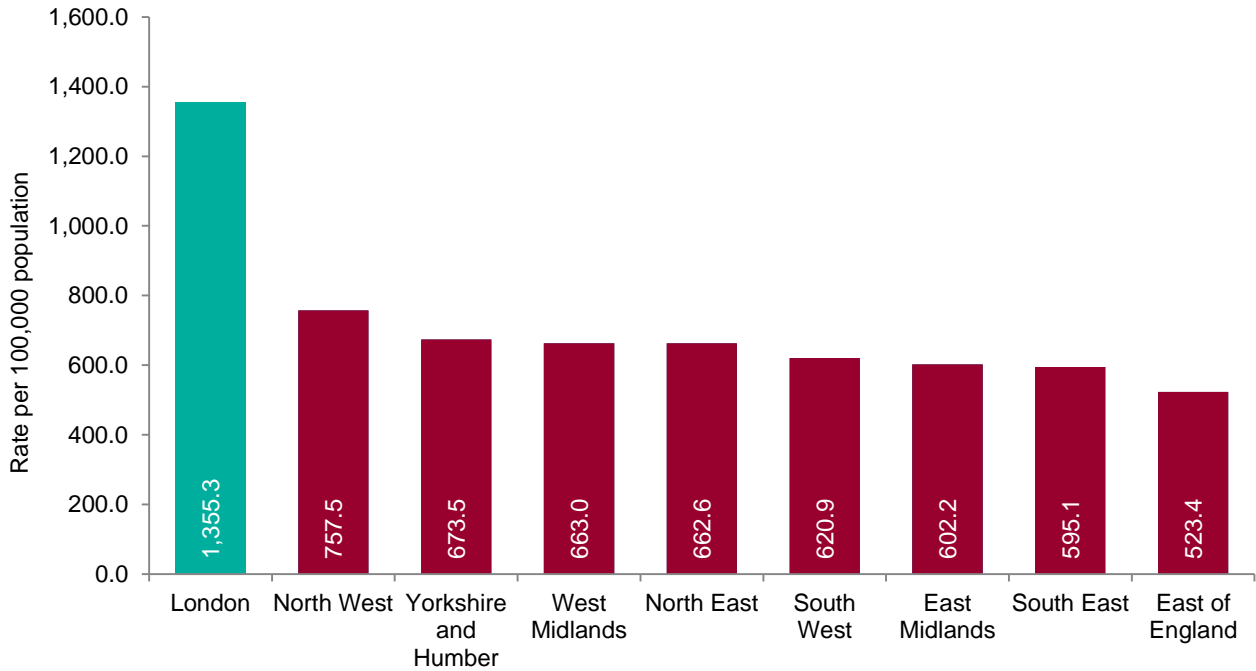
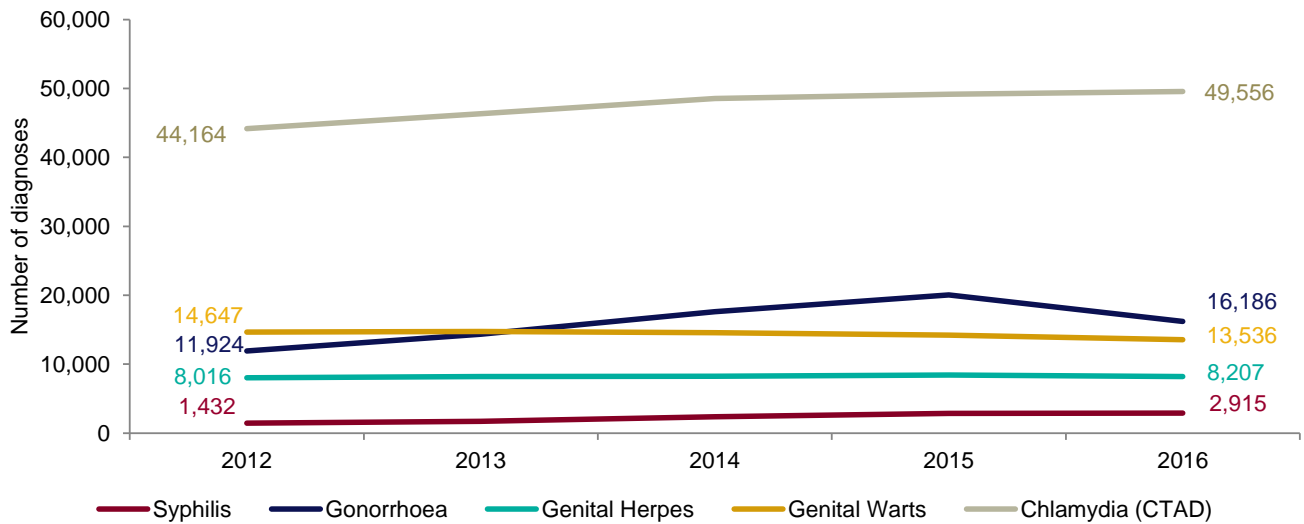


Figure 2: Number of diagnoses of the five main STIs: London residents, 2012-2016. Data sources: GUMCAD, CTAD



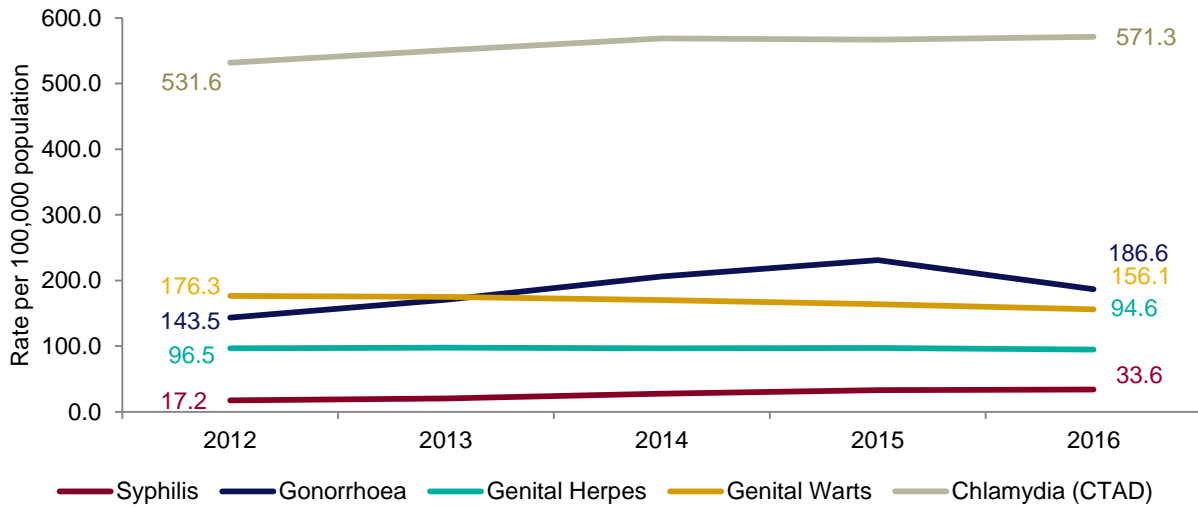
Any increase in gonorrhoea diagnoses may be due to the increased use of highly sensitive nucleic acid amplification tests (NAATs) and additional screening of extra-genital sites in MSM.

Any decrease in genital wart diagnoses may be due to a moderately protective effect of HPV-16/18 vaccination.

Any increase in genital herpes diagnoses may be due to the use of more sensitive NAATs.

Increases or decreases may also reflect changes in testing practices.

Figure 3: Diagnosis rates of the five main STIs: London residents, 2012-2016. Data sources: GUMCAD, CTAD



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 Increases or decreases may also reflect changes in testing practices.

Table 1: Percentage change in new STI diagnoses: London residents. Data sources: GUMCAD, CTAD

Diagnoses	2016	% change 2012-2016	% change 2015-2016
New STIs	117,552	3%	-5%
Syphilis	2,915	104%	2%
Gonorrhoea	16,186	36%	-19%
Chlamydia	49,556	12%	1%
Genital Herpes	8,207	2%	-2%
Genital Warts	13,536	-8%	-5%

Please see notes for Figure 3.

Figure 4: Rate of new STIs per 100,000 residents by age group in London, 2016.
Data sources: GUMCAD, CTAD

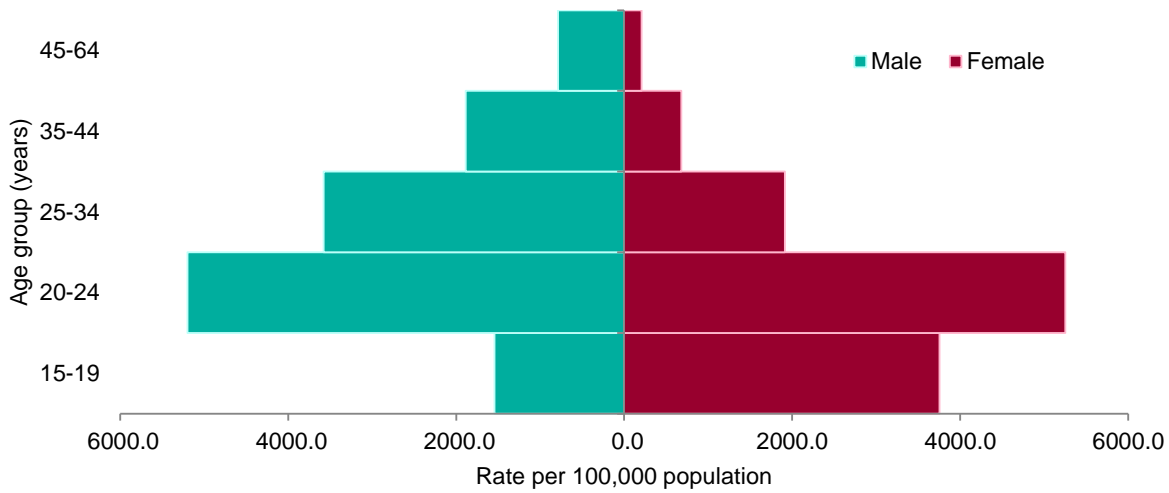


Figure 5: Rates by ethnicity per 100,000 population of London residents diagnosed with a new STI: 2016. Data sources: GUMCAD, CTAD

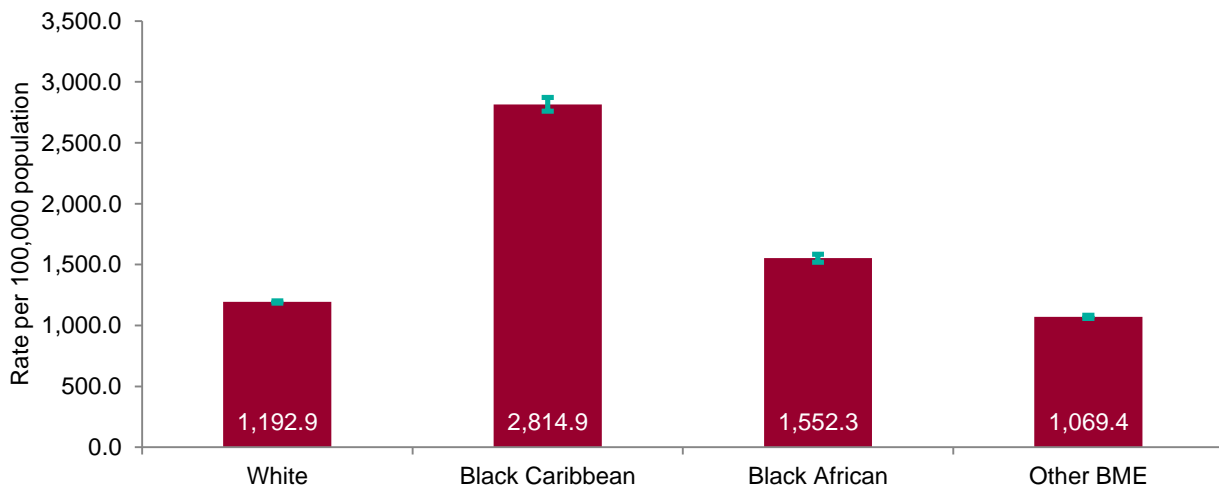


Table 2: Proportion of London residents diagnosed with a new STI by ethnicity: 2016
Data sources: GUMCAD, CTAD

Ethnic group	Number	Percentage excluding unknown
White	58,300	57%
Black Caribbean	9,700	9%
Black African	8,909	9%
Other BME	25,324	25%
Unknown	15,319	

Figure 6: Proportions of London residents diagnosed with a new STI by world region of birth: 2016. Data sources: GUMCAD data only

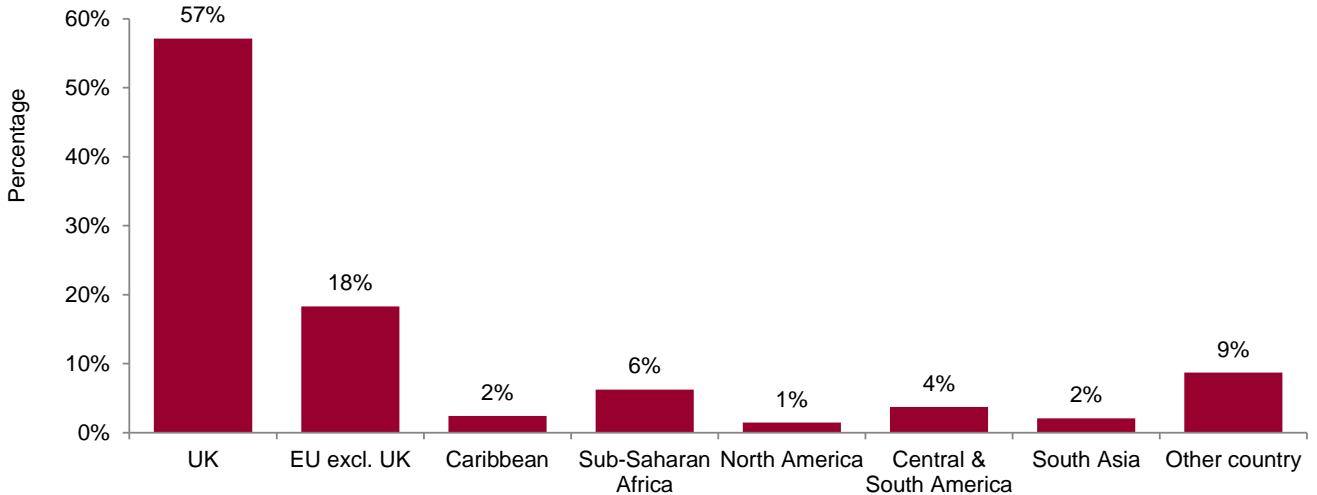
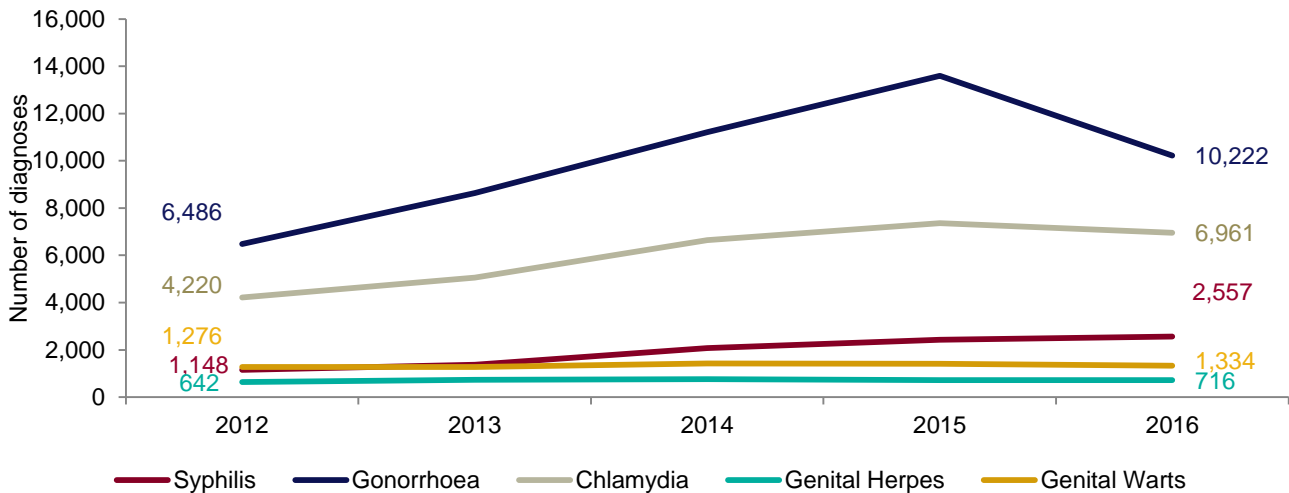


Figure 7: Diagnoses of the five main STIs among MSM in specialist SHCs: London residents, 2012-2016. Data source: GUMCAD data only



GUMCAD started in 2009. Reporting of sexual orientation is less likely to be complete for earlier years, so rises seen may be partly artefactual.

Any increase in gonorrhoea diagnoses may be due to the increased use of highly sensitive nucleic acid amplification tests (NAATs) and additional screening of extra-genital sites in MSM.

Any decrease in genital wart diagnoses may be due to a moderately protective effect of HPV-16/18 vaccination.

Any increase in genital herpes diagnoses may be due to the use of more sensitive NAATs.

Any increase or decrease may reflect changes in testing.

Table 3: Percentage change in new STI diagnoses in MSM diagnosed in specialist SHCs: London residents. Data sources: GUMCAD data only

Diagnoses	2016	% change 2012-2016	% change 2015-2016
New STIs	26,204	41%	-13%
Syphilis	2,557	123%	5%
Gonorrhoea	10,222	58%	-25%
Chlamydia	6,961	65%	-5%
Genital Herpes	716	12%	0%
Genital Warts	1,334	5%	-6%

Please see notes for Figure 7.

Figure 8a: Rate of new STI diagnoses per 100,000 population among London residents by upper tier local authority of residence: 2016. Data sources: GUMCAD, CTAD

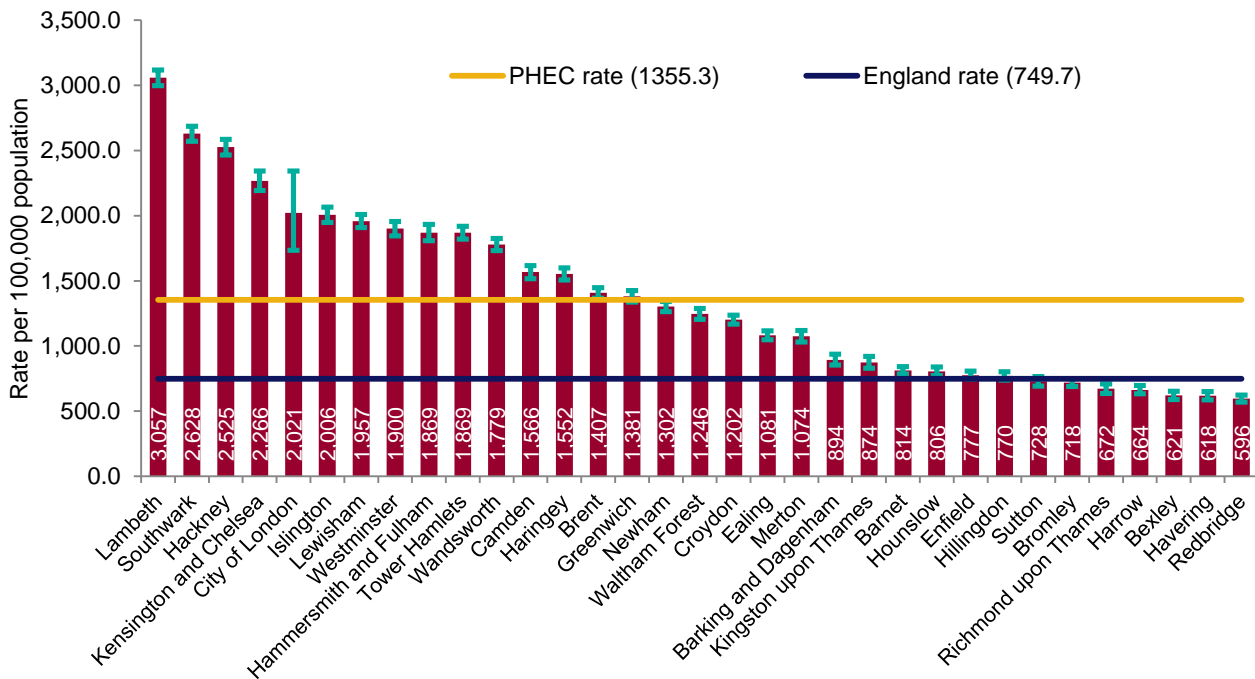


Figure 8b: Rate of new STI diagnoses (excluding chlamydia diagnoses in persons aged 15-24 years) per 100,000 population aged 15-64 years among London residents by upper tier local authority of residence: 2016. Data sources: GUMCAD, CTAD

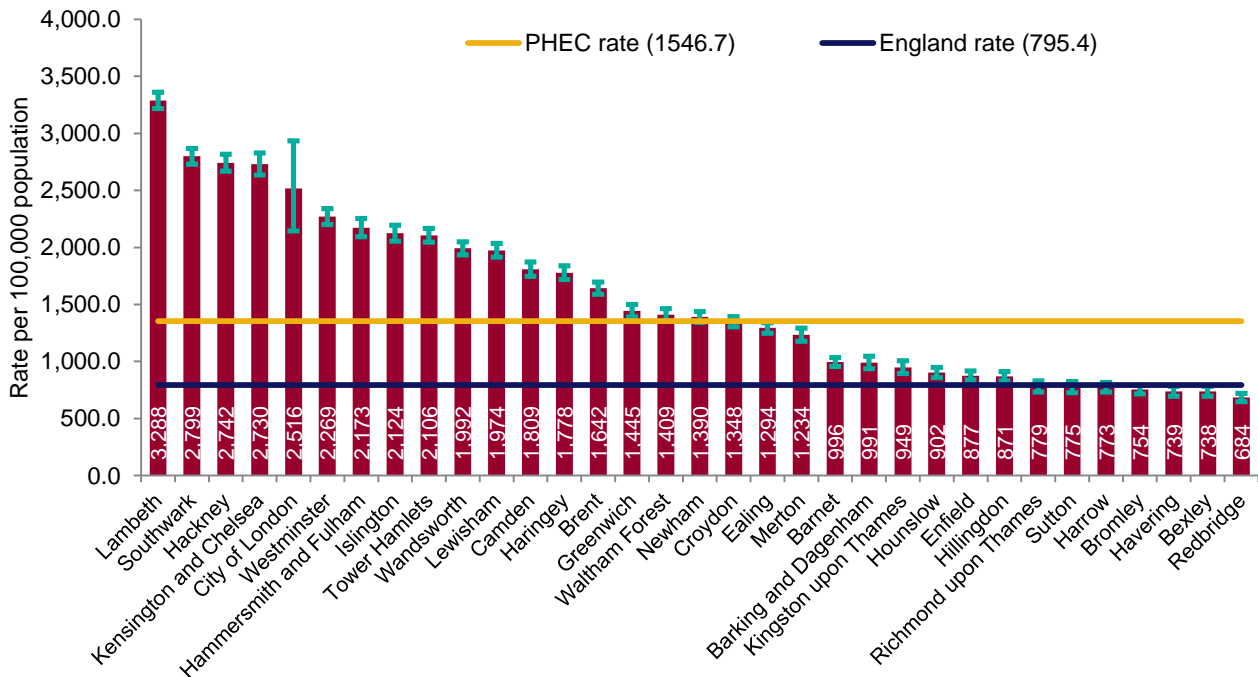


Figure 9: Chlamydia detection rate per 100,000 population aged 15-24 years in London residents by upper tier local authority of residence: 2016. Data sources: GUMCAD, CTAD

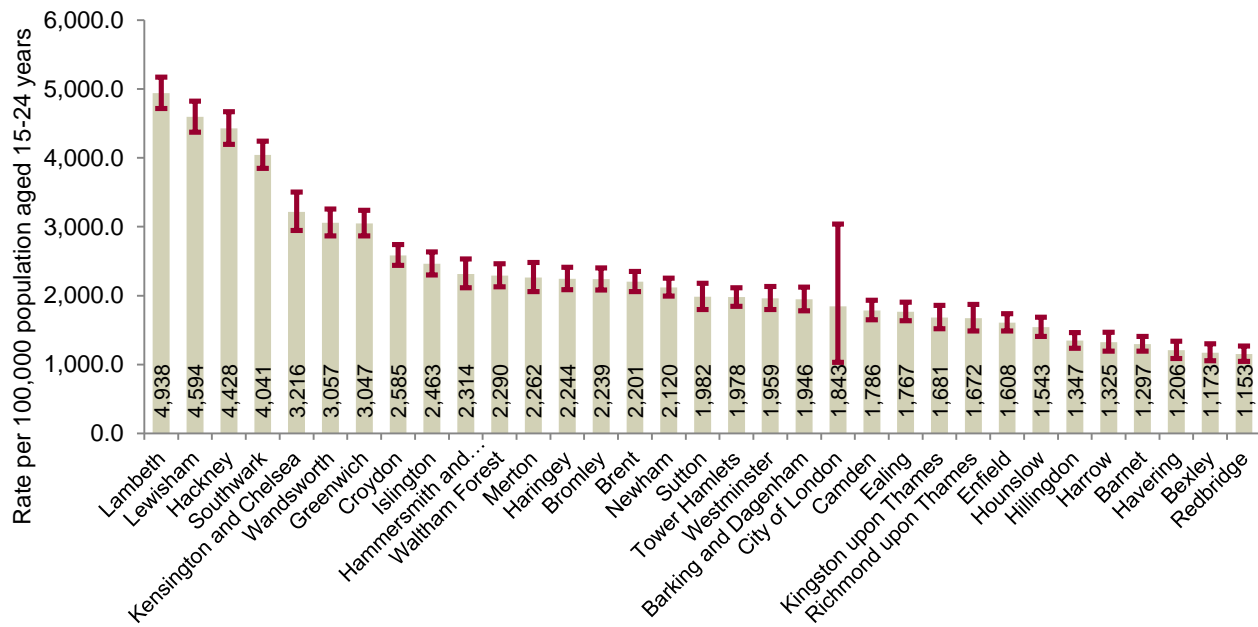


Figure 10: Rate of gonorrhoea diagnoses per 100,000 population in London residents by upper tier local authority of residence: 2016. Data source: GUMCAD

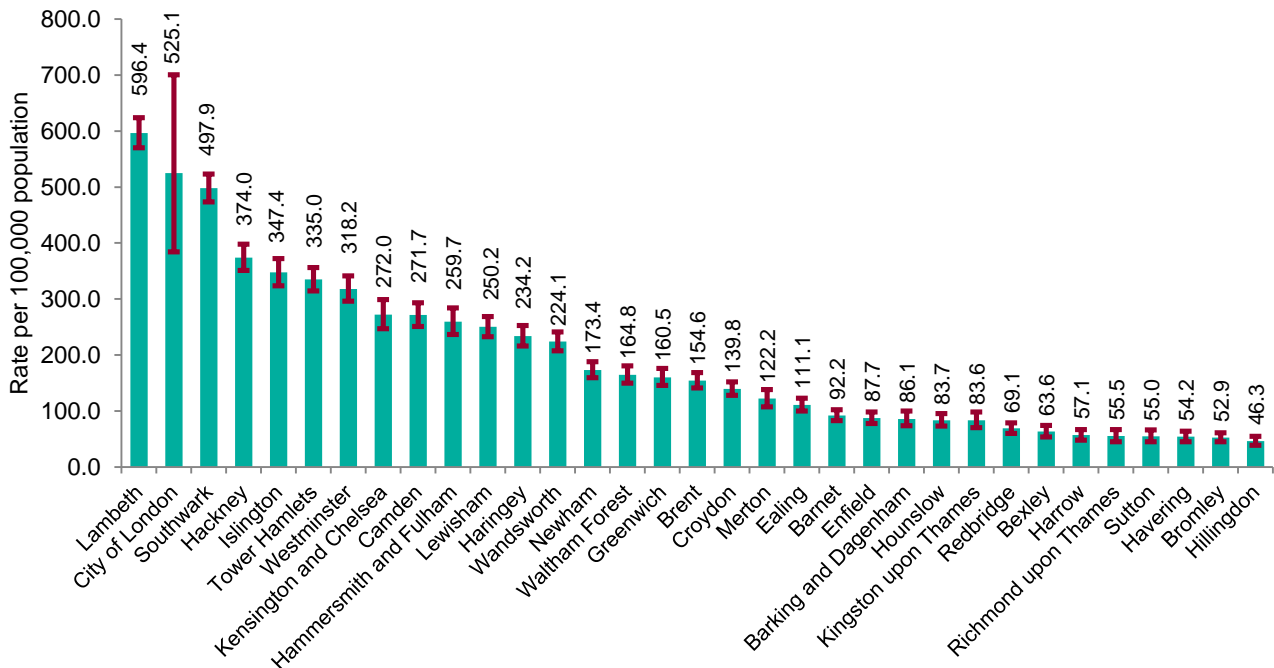
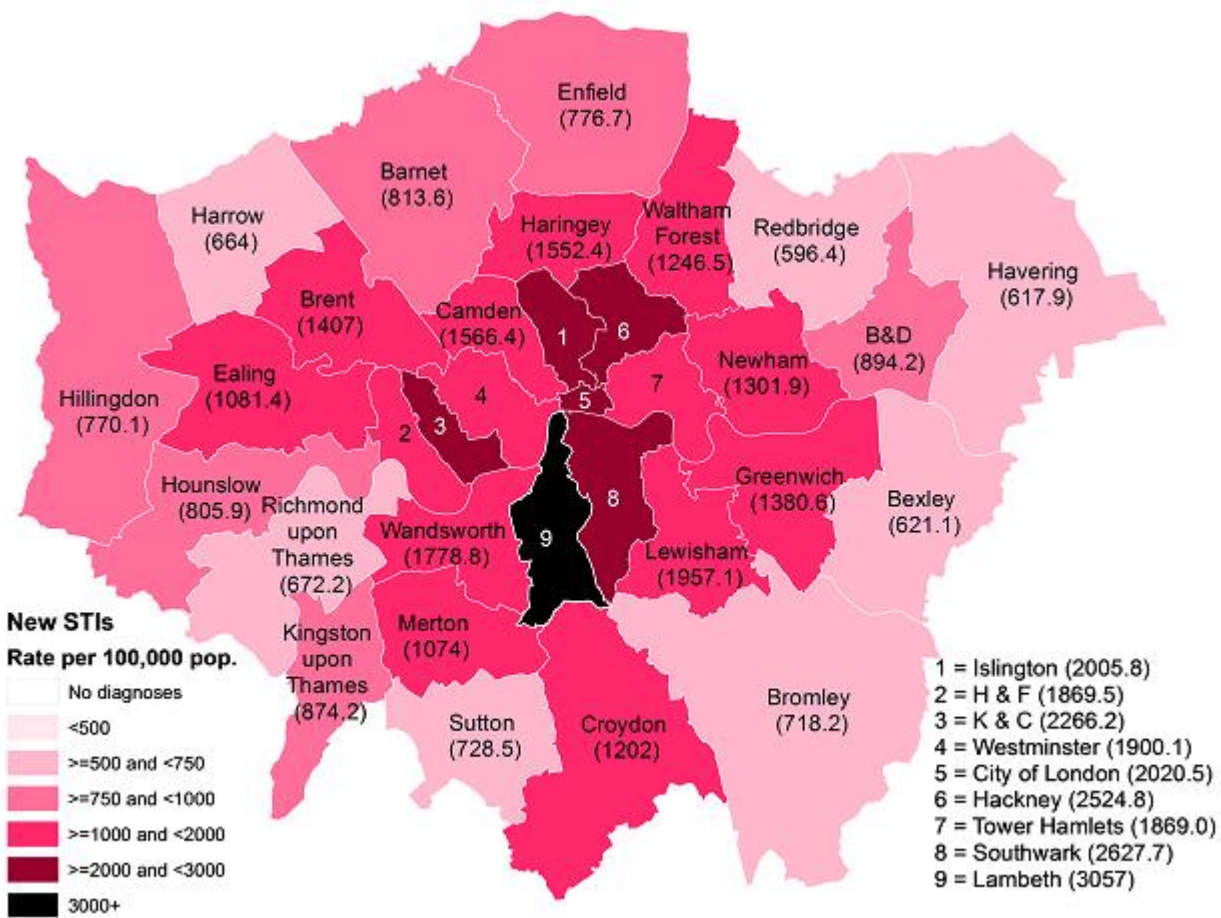


Figure 11: Map of new STI rates per 100,000 residents by upper tier local authority in London: 2016. Data sources: GUMCAD, CTAD



Contains Genitrix Survey data © Crown copyright and database right 2014. Contains National Statistics data © Crown copyright and database right 2014. Map produced using PHEGIS. Contact GIS Team, ERDMIRA, Porton Down. 01980-616937 or gis@phe.gov.uk

Table 4: Number of diagnoses of new STIs by PHEC of residence, data source and data subset: 2016. Data sources: GUMCAD, CTAD

PHEC of residence	GUMCAD		CTAD*	Total
	Specialist SHCs	Non-specialist SHCs		
East Midlands	19,559	685	7,920	28,164
East of England	25,814	350	7,009	33,173
London	97,545	2,150	17,857	117,552
North East	14,036	39	3,315	17,390
North West	36,794	717	16,828	54,339
South East	41,059	1,003	9,633	51,695
South West	24,257	726	8,985	33,968
West Midlands	31,124	132	6,872	38,128
Yorkshire and Humber	25,685	866	9,755	36,306

* Including site type 12 chlamydia from GUMCAD

Table 5: Number of diagnoses of the 5 main STIs in London by STI, data source and data subset: 2016. Data sources: GUMCAD, CTAD

5 main STIs	GUMCAD		CTAD*	Total
	Specialist SHCs	Non-specialist SHCs		
Syphilis	2,876	39		2,915
Gonorrhoea	15,559	627		16,186
Chlamydia	31,699		17,857	49,556
Genital Herpes	7,838	369		8,207
Genital Warts	13,143	393		13,536

* Including site type 12 chlamydia from GUMCAD

3. Information on data sources

As of this year, all analyses for this report include data from non-specialist (Level 2) SHCs as well as specialist (Level 3) SHCs.

For more information on local sexual health data sources please access the PHE guide: <https://www.gov.uk/government/publications/sexual-and-reproductive-health-in-england-local-and-national-data>

3.1 GUMCAD surveillance system

This disaggregate reporting system collects information about attendances and diagnoses at specialist (Level 3) and non-specialist (Level 2) sexual health services. Information about the patient's area of residence is collected along with demographic data and other variables. GUMCAD superseded the earlier KC60 system and can provide data from 2009 onwards. GUMCAD is the main source of data for this report. The data extract used was produced in April 2017.

Due to limits on how much personally identifiable information sexual health clinics are able to share, it is not possible to deduplicate between different clinics. There is a possibility that some patients may be counted more than once if they are diagnosed with the same infection (for infection specific analyses) or a new STI of any type (for new STI analyses) at different clinics during the same calendar year.

3.2 CTAD surveillance system

The CTAD surveillance system collects data on all NHS and LA/NHS-commissioned chlamydia testing carried out in England. CTAD is comprised of all chlamydia (NAATs) tests for all ages (with the exception of conjunctival samples), from all venues and for all reasons. CTAD enables unified, comprehensive reporting of all chlamydia data, to effectively monitor the impact of the NCSP through estimation of the coverage of population screening, proportion of all tests that are positive and detection rates. The data extract used was produced in February 2017.

3.3 New STIs

New STI diagnoses comprise diagnoses of the following: chancroid, LGV, donovanosis, chlamydia, gonorrhoea, genital herpes (first episode), HIV (acute and AIDS defining), *Molluscum contagiosum*, non-specific genital infection (NSGI), non-specific pelvic inflammatory disease (PID) and epididymitis, chlamydial PID and epididymitis (presented in chlamydia total), gonococcal PID & epididymitis (presented in gonorrhoea

total), scabies, pediculosis pubis, syphilis (primary, secondary and early latent), trichomoniasis and genital warts (first episode), *Mycoplasma genitalium*, shigella.

3.4 Calculations

Confidence Intervals were calculated using Byar's method
http://www.erpho.org.uk/statistical_tools.aspx.

ONS mid-year population estimates for 2015 were used as a denominator for rates for 2016. ONS ceased producing estimates of population by ethnicity in 2011. Estimates for that year were used as a denominator for rates for 2016.

4. Further information

Please access the online 'Sexual and Reproductive Health Profiles' for further information: <http://fingertips.phe.org.uk/profile/sexualhealth>

For more information on local sexual health data sources please access the PHE guide: <https://www.gov.uk/government/publications/sexual-and-reproductive-health-in-england-local-and-national-data>

Local authorities have access to LA sexual health epidemiology reports (LASERs) and the HIV and STI portal. They should contact josh.forde@phe.gov.uk if they do not have access to this information.

For the annual epidemiological spotlight on HIV in London: 2015 data please access: <https://www.gov.uk/government/publications/hiv-london-annual-data-spotlight>

For a report on the fall in new HIV diagnoses among MSM at selected London sexual health clinics please access: <https://www.gov.uk/government/publications/hiv-and-stis-in-men-who-have-sex-with-men-in-london>

For a report on STIs and HIV in MSM in London please access: <https://www.gov.uk/government/publications/hiv-and-stis-in-men-who-have-sex-with-men-in-london>

For an update on the epidemiology of shigella in adults in London: 2012 to 2016 please access: <https://www.gov.uk/government/publications/shigella-epidemiology-in-adults-in-london>

5. About the Field Epidemiology Service

The Field Epidemiology Service (FES) supports Public Health England Centres and partner organisations through the application of epidemiological methods to inform public health action.

FES does this in two main ways, firstly by providing a flexible expert resource, available, as and when needed, to undertake epidemiological investigations for key health protection work and secondly through the expert analysis, interpretation and dissemination of surveillance information to PHE Centres, local health partners, service providers and commissioners of services.

Within the FES network, excellence and innovation is encouraged, we foster academic collaborations and take active part and lead in research, development and training.

You can contact your local FES team at fes.seal@phe.gov.uk

If you have any comments or feedback regarding this report or the FES service, please contact josh.forde@phe.gov.uk

6. Acknowledgements

We would like to thank the following:

- local SHCs for supplying the SHC data
- local laboratories for supplying the CTAD data
- PHE Centre for Infectious Disease Surveillance and Control (CIDSC) HIV and STI surveillance teams for collection, analysis and distribution of data