Annual Epidemiological Spotlight on Sexually Transmitted Infections in London
2015 data
About Public Health England

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Public Health England
133-155 Waterloo Road
Wellington House
London SE1 8UG
Tel: 020 7654 8000
www.gov.uk/phe
Twitter: @PHE_uk
Facebook: www.facebook.com/PublicHealthEngland

Prepared by: Josh Forde and Paul Crook, Field Epidemiology Services, Rosalind Louth and Deborah Turbitt, PHE London Region and Centre.
Enquiries relating to this document should be sent to josh.forde@phe.gov.uk.

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Published: September 2016
PHE publications gateway number: 2016282
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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, London has the highest rate of new STIs in England.

More than 118,700 new STIs were diagnosed in London residents in 2015, representing a rate of 1,391 diagnoses per 100,000 adults. Rates by local authority ranged from 564 new STI diagnoses per 100,000 population in Bexley to 2,943 new STI diagnoses per 100,000 population in Lambeth.

The numbers and rates above represent diagnoses made in Level 3 services (genitourinary medicine (GUM) or specialist sexual health clinics (SHCs)) and for chlamydia in the community (Chlamydia Testing Activity Dataset). An additional 7,500 diagnoses of new STIs in London residents were reported to have been made in Level 2 services (non-specialist services, excluding enhanced GP services). The analyses in this report are based only on the Level 3 and CTAD diagnoses.

The number of new STIs diagnosed in London residents rose by 2% between 2014 and 2015. Rises were seen in the numbers of most of the five major STIs: syphilis increased by 22%, gonorrhoea by 15%, chlamydia by 2% and genital herpes by 3%. Genital warts decreased by 2%. Of the top 20 local authorities in England with the highest rates of new STI diagnoses, 18 were in London.

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 Outcome Framework (PHOF). In 2015 the chlamydia diagnosis rate among London residents aged 15 to 24 years was 2,200 per 100,000 residents.

Rates of new STIs vary widely between men and women (1,725 and 1,047 per 100,000 residents, respectively).

Where gender and sexual orientation are known, men who have sex with men (MSM) account for 30% of London residents diagnosed with a new STI in a GUM clinic (90% of those diagnosed with syphilis and 71% of those diagnosed with gonorrhoea). Syphilis and gonorrhoea diagnoses in MSM rose by 18% and 22%, respectively between 2014 and 2015.

STIs disproportionately affect young people. London residents aged between 15 and 24 years accounted for 36% of all new STI diagnoses in 2015.
Black ethnic groups are more affected by STIs than other ethnic groups. Ten per cent of new STIs are in black Caribbeans, who have the highest rate of new STIs: 2,961 per 100,000. This is 2.3 times the rate seen in the white ethnic group. However, the white ethnic group has the highest number of new STI diagnoses: almost 61,800 (59%). Where country of birth was known, 57% of London residents diagnosed in a GUM clinic in 2015 with a new STI were UK-born.

Three cases of high-level azithromycin resistant gonorrhoea were reported in MSM in London in the last quarter of 2015.

These figures signify a worsening of sexual health in London, especially among MSM, which is due to Londoners putting themselves at risk through unsafe sex.

Implications for prevention

There was notable variation in the chlamydia detection rate among 15 to 24 year olds by geographic area, largely 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.

Of particular concern is the continuing and rapid rise in syphilis and gonorrhoea among MSM. Reversing this trend is a priority given the spread of resistance to frontline antimicrobials used for treating gonorrhoea and the depletion of effective treatment options.

Some of the increase in gonorrhoea and chlamydia diagnoses in MSM may be due to better detection through increased screening of extra-genital (rectal and pharyngeal) sites using nucleic acid amplification tests. However, there is growing evidence that condomless sex associated with HIV sero-adaptive behaviours (which includes the selection of partners perceived to be of the same HIV sero-status), is leading to more 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 14% 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 funded by every London local authority, delivers the ‘Do It London’ sexual health campaigns aimed at promoting safer sex to all residents in the capital http://doitlondon.org/ and especially MSM. 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, particularly aimed at MSM. A recent cluster of hepatitis B in MSM, who identify as heterosexual, highlights the diversity of the MSM population and the need for culturally appropriate and sensitive targeting of health promotion messages, including at cruising sites and sex on premises venues. A targeted HPV vaccination pilot programme for MSM is being introduced in England this year (2016) to evaluate whether a national programme can be rolled out across the country.

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. PHE is collaborating with University College London and the London School of Hygiene and Tropical Medicine 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.

Personal, social and health education that addresses self-esteem is crucial to all children’s confidence and in building confident adults who take fewer risks. Education should include information on how alcohol and drug use impacts on decisions about sex, negotiation of safer sex and non-judgemental discussions of same-sex relationships.

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 recently published Framework for Sexual Health Improvement in England, will promote delivery of these key messages.
PHE’s key messages

- Prevention should focus on groups at highest risk, including young adults, MSM and black ethnic minorities

- Consistent and correct use of condoms can significantly reduce risk of infection

- 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 3 months if having condomless sex with new or casual partners
2 Charts, tables and maps

Figure 1: New STI diagnoses by public health centre (PHEC) of residence: England 2015. Data source: GUMCAD (level 3 services) and CTAD

Figure 2: Diagnoses of the five main STIs: London residents, 2011-2015. Data sources: GUMCAD (level 3 services), CTAD, NCSP and laboratory chlamydia data

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.

Due to changes in 2012 to the surveillance of chlamydia, comparisons to previous years are not robust.
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Due to changes in 2012 to the surveillance of chlamydia, comparisons to previous years are not robust.

Table 1: Percentage change in new STI diagnoses: London residents. Data sources: GUMCAD (level 3 services), CTAD, NCSP and laboratory chlamydia data

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>New STIs</td>
<td>118,774</td>
<td>-</td>
<td>2%</td>
</tr>
<tr>
<td>Syphilis</td>
<td>2,811</td>
<td>108%</td>
<td>22%</td>
</tr>
<tr>
<td>Gonorrhoea</td>
<td>18,945</td>
<td>123%</td>
<td>15%</td>
</tr>
<tr>
<td>Chlamydia</td>
<td>47,291</td>
<td>-</td>
<td>2%</td>
</tr>
<tr>
<td>Genital Herpes</td>
<td>8,007</td>
<td>12%</td>
<td>3%</td>
</tr>
<tr>
<td>Genital Warts</td>
<td>13,605</td>
<td>1%</td>
<td>-2%</td>
</tr>
</tbody>
</table>

Please see notes for Figure 3.

Due to changes in 2012 to the surveillance of chlamydia diagnosed outside GUM, comparisons for chlamydia and for new STIs before and after 2012 are not robust and, therefore, have not been presented.
Annual Epidemiological Spotlight on STIs in London

Figure 4: Rate of new STIs per 100,000 residents by age group in London, 2015. Data sources: GUMCAD (level 3 services) and CTAD

Figure 5: Rates by ethnicity per 100,000 population of London residents diagnosed with a new STI: 2015. Data sources: GUMCAD (level 3 services) and CTAD

Table 2: Proportion of London residents diagnosed with a new STI by ethnicity: 2015
Data sources: GUMCAD (level 3 services), CTAD

<table>
<thead>
<tr>
<th>Ethnic group</th>
<th>Number</th>
<th>Percentage excluding unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>61,799</td>
<td>59%</td>
</tr>
<tr>
<td>Black Caribbean</td>
<td>10,203</td>
<td>10%</td>
</tr>
<tr>
<td>Black African</td>
<td>8,674</td>
<td>8%</td>
</tr>
<tr>
<td>Other BME</td>
<td>24,500</td>
<td>23%</td>
</tr>
<tr>
<td>Unknown</td>
<td>13,598</td>
<td></td>
</tr>
</tbody>
</table>
Figure 6: Proportions of London residents diagnosed with a new STI by world region of birth: 2015. Data sources: GUMCAD (level 3 services), CTAD

Figure 7: Diagnoses of the five main STIs among MSM in GUM clinics: London residents, 2011-2015. Data source: GUMCAD (level 3 services)

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 men who have sex with men (MSM) diagnosed in GUM clinics: London residents. Data sources: GUMCAD (level 3 services) data only.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>New STIs</td>
<td>29,673</td>
<td>91%</td>
<td>11%</td>
</tr>
<tr>
<td>Syphilis</td>
<td>2,406</td>
<td>128%</td>
<td>18%</td>
</tr>
<tr>
<td>Gonorrhoea</td>
<td>13,229</td>
<td>210%</td>
<td>22%</td>
</tr>
<tr>
<td>Chlamydia</td>
<td>7,223</td>
<td>94%</td>
<td>12%</td>
</tr>
<tr>
<td>Genital Herpes</td>
<td>705</td>
<td>13%</td>
<td>-4%</td>
</tr>
<tr>
<td>Genital Warts</td>
<td>1,387</td>
<td>28%</td>
<td>-1%</td>
</tr>
</tbody>
</table>

Please see notes for Figure 6.

Figure 8a: Rate of new STI diagnoses per 100,000 population among London residents by local authority of residence: 2015. Data sources: GUMCAD (level 3 services) and CTAD.
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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 local authority of residence: 2015. Data sources: GUMCAD (level 3 services) and CTAD

Figure 9: Chlamydia detection rate per 100,000 population aged 15-24 years in London residents by local authority of residence: 2015. Data sources: GUMCAD (level 3 services) and CTAD
Figure 10: Rate of gonorrhoea diagnoses per 100,000 population in London residents by local authority of residence: 2015. Data source: GUMCAD (level 3 services)

Figure 11: Map of new STI rates per 100,000 residents by local authority in London: 2015. Data source: GUMCAD (level 3 services) & CTAD
3 Information on data sources


3.1 Genitourinary Medicine Clinic Activity Dataset (GUMCAD)

This disaggregate reporting system collects information about attendances and diagnoses at genitourinary (GUM) clinics (Level 3 services). It also collects data on attendances and diagnoses as Level 2 services. However, issues of data quality and completeness continue to exist for Level 2 data. The numbers in this report do not include Level 2 attendances or diagnoses except where stated otherwise. 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 provided in July 2016.

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 Chlamydia Testing Activity Dataset (CTAD)

The Chlamydia Testing Activity Dataset (CTAD) is a universal disaggregate dataset for the collection of data on all NHS and LA/NHS-commissioned chlamydia testing carried out in England. The CTAD dataset 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 diagnosis rates. The data extract used was provided in July 2016.

3.3 New STIs

New STI diagnoses comprise diagnoses of the following: chancre, 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

ONS mid-year population estimates for 2014 were used as a denominator for rates for 2015. ONS ceased producing estimates of population by ethnicity in 2011. Estimates for that year were used as a denominator for rates for 2015.
4 Further information

Please access the online ‘Sexual and Reproductive Health Profiles’ for further local information on a range of sexual health indicators:
http://fingertips.phe.org.uk/profile/sexualhealth

For more information on local sexual health data sources please access the PHE guide:

Local authorities have access to LA HIV, sexual and reproductive 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 a report on Syphilis epidemiology in London please access:

For reports on STIs and HIV in MSM in London please access:

For an Annual Epidemiological Spotlight on HIV in London: 2014 data please access:

For a report on the Epidemiology of Shigella in adults in London please access:

For a report on STIs and chlamydia screening in England, 2015 please access:
5 About Field Epidemiology Services

The Field Epidemiology Service (FES) supports PHE 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 sexual health clinics for supplying the GUM clinic 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.