Spotlight on sexually transmitted infections in the South West

2015 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.
# Contents

1 Summary 4  
2 Charts, tables and maps 7  
3 Information on data sources 17  
4 Further information 19  
5 About Field Epidemiology Services and Acknowledgments 20
1 Summary

Sexually transmitted infections (STIs) represent an important public health problem in the South West. Out of all the Public Health England centres it has the seventh highest rate of new STIs in England.

Over 34,000 new STIs were diagnosed in South West residents in 2015, representing a rate of 629 diagnoses per 100,000 adults. Excluding the Isles of Scilly which have been merged with Cornwall for this report, rates by upper tier local authority ranged from 461 new STI diagnoses per 100,000 population in Somerset to 1,180 new STI diagnoses per 100,000 population in Plymouth. Plymouth, Bournemouth and Bristol had the highest rates of new STI diagnoses and were all above the average for England.

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 (CTAD). Around 1,000 diagnoses of New STIs in South West residents were reported to have been made in Level 2 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 South West residents fell by 2% between 2014 and 2015. Falls were seen in the numbers of most of the five major STIs: syphilis decreased by 2%, chlamydia by 3% and genital warts by 3%. Gonorrhoea increased by 9% and genital herpes by 3%. There were 29 high level azithromycin resistant gonorrhoea cases since November 2015 in England, mostly in men (23/29). In 2016 the highest number of cases was seen in London (10/22). The South West had only 1 case.

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. In 2015 the chlamydia diagnosis rate among South West residents aged 15 to 24 years was 1,716 per 100,000 residents.

Men and women have similar rates of new STIs (632 and 624 per 100,000 residents respectively).

Where gender and sexual orientation are known, men who have sex with men (MSM) account for 10% of South West residents diagnosed with a new STI in a GUM clinic (73% of those diagnosed with syphilis and 51% of those diagnosed with gonorrhoea). The number of new STIs increased in men who have sex with men, with highest increase in gonorrhoea, chlamydia and herpes.
STIs disproportionately affect young people. South West residents aged between 15 and 24 years accounted for 57% of all new STI diagnoses in 2015.

Black ethnic groups are more affected by STIs than other ethnic groups. Black Caribbeans have the highest rate of new STIs: 2,327 per 100,000. This is 4.4 times the rate seen in the white ethnic group. Where country of birth was known, 90% of South West residents diagnosed in a GUM clinic in 2015 with a new STI were UK-born.

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 Sexual Health Clinics (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 to ensure treatment and partner notification standards are met.

Of particular concern is the continuing and rapid rise in syphilis and gonorrhoea among MSM. 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 selecting 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, is also a particular risk factor for MSM.

As MSM continue to experience high rates of STIs they remain a priority for targeted STI prevention and health promotion work. 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, and are 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 to evaluate whether a national programme can be rolled out across the country at a later date.

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 benefit1,2.

Health promotion and education remain the cornerstones of STI prevention, through improving risk awareness and encouraging safer sexual behaviour, together with condom provision. Consistent and correct condom use substantially reduces the risk of being infected with an STI. Prevention efforts should include 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. MSM should have an HIV and STI screen at least annually, or every three months if having condomless sex with new or casual or partners. 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 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 and CTAD

Figure 1 shows that the rate of new STI diagnoses per 100,000 in the South West (628.7) is lower than 6 regions in England.

Figure 2: Diagnoses of the five main STIs: South West residents, 2011-2015. Data sources: GUMCAD, CTAD, NCSP and laboratory chlamydia data
Figure 2 presents the number of diagnoses for the five main STIs in South West residents from 2011 to 2015.

Chlamydia diagnoses peaked in 2012 and have since decreased with 16,206 in 2015. This trend might be seen due to the CTAD introduction in 2012. Genital herpes has slightly increased from 2,432 diagnoses in 2011 to 2,755 in 2015.

Genital warts have slightly decreased from 6,829 in 2011 to 6489 in 2015. Gonorrhoea increased from 727 in 2011 to 1,736 in 2015. Syphilis diagnoses were less common but increased from 100 to 154 from 2011 to 2015.

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.

Figure 3: Diagnosis rates of the five main STIs: South West residents, 2011-2015. Data sources: GUMCAD, CTAD, NCSP and laboratory chlamydia data

Please see caveats for figure 2.

The rates of the five main STIs follow the same trend as the STI diagnoses in figure 2. The rate of Chlamydia diagnoses per 100,000 population has peaked in 2012 and slightly decreased from 2011(303.9) to 2015 (298.8).This trend might be seen due to the CTAD introduction in 2012. Genital Herpes has seen an increase from 45.9 per 100,000 in 2011 to 50.8 per 100,000 in 2015. Genital warts have very slightly decreased from 2011 to 2015, from 128.8 per 100,000 to 119.7 per 100,000.
Gonorrhoea rates increased markedly from 13.7 per 100,000 in 2011 to 32 per 100,000 in 2015. Syphilis rates were lower than the other STIs but had a significant increase from 1.9 per 100,000 to 2.8 per 100,000.

Table 1: Percentage change in new STI diagnoses: South West residents.
Data sources: GUMCAD, CTAD, NCSP and laboratory chlamydia data

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>New STIs</td>
<td>34,095</td>
<td>-</td>
<td>-2%</td>
</tr>
<tr>
<td>Syphilis</td>
<td>154</td>
<td>54%</td>
<td>-2%</td>
</tr>
<tr>
<td>Gonorrhoea</td>
<td>1,736</td>
<td>139%</td>
<td>9%</td>
</tr>
<tr>
<td>Chlamydia</td>
<td>16,206</td>
<td>-</td>
<td>-3%</td>
</tr>
<tr>
<td>Genital Herpes</td>
<td>2,755</td>
<td>13%</td>
<td>3%</td>
</tr>
<tr>
<td>Genital Warts</td>
<td>6,489</td>
<td>-5%</td>
<td>-3%</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.

Chlamydia was the most commonly diagnosed STI at 16,206 diagnoses in 2015. The greatest proportional increase from 2011 to 2015 were seen in syphilis and gonorrhoea diagnoses with 54% and 139%, respectively.

Figure 4: Rate of new STIs per 100,000 residents by age group in the South West, 2015.
Data sources: GUMCAD and CTAD

The highest rates of STIs was seen in males and females between 20-24 years, followed by females in the 15-19 age group and males between 25-34 years.
Rates in Black Caribbeans (2,326.7 per 100,000) were significantly higher than rates in White (529.4 per 100,000) and Black African (1,296.1 per 100,000) and other ethnic groups (606.9 per 100,000).

Table 2: Proportion of South West residents diagnosed with a new STI by ethnicity: 2015
Data sources: GUMCAD, CTAD

<table>
<thead>
<tr>
<th>Ethnic group</th>
<th>Number</th>
<th>Percentage excluding unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>26,718</td>
<td>93%</td>
</tr>
<tr>
<td>Black Caribbean</td>
<td>352</td>
<td>1%</td>
</tr>
<tr>
<td>Black African</td>
<td>314</td>
<td>1%</td>
</tr>
<tr>
<td>Other BME</td>
<td>1,233</td>
<td>4%</td>
</tr>
<tr>
<td>Unknown</td>
<td>5,478</td>
<td></td>
</tr>
</tbody>
</table>

The highest number of STIs were in White (26,718) population groups, which represents 93% of the total. Black Carribean population groups made up 1%, Black African 1% and other BME 1% of the total where ethnicity was known.
Spotlight on STIs in the South West

Figure 6: Diagnoses of the five main STIs among MSM in GUM clinics: South West residents, 2011-2015. Data source: GUMCAD

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.

The line chart shows large increases in the number of diagnoses of gonorrhoea (from 249 in 2011 to 882 in 2015), chlamydia (from 374 to 586), syphilis (from 78 to 112) and genital warts (from 195 to 273) over the past 5 years.

Table 3: Percentage change in new STI diagnoses in men who have sex with men (MSM) diagnosed in GUM clinics: South West residents. Data sources: GUMCAD data only

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>New STIs</td>
<td>2,476</td>
<td>77%</td>
<td>13%</td>
</tr>
<tr>
<td>Syphilis</td>
<td>112</td>
<td>44%</td>
<td>2%</td>
</tr>
<tr>
<td>Gonorrhoea</td>
<td>882</td>
<td>254%</td>
<td>25%</td>
</tr>
<tr>
<td>Chlamydia</td>
<td>586</td>
<td>57%</td>
<td>26%</td>
</tr>
<tr>
<td>Genital Herpes</td>
<td>87</td>
<td>81%</td>
<td>13%</td>
</tr>
<tr>
<td>Genital Warts</td>
<td>273</td>
<td>40%</td>
<td>9%</td>
</tr>
</tbody>
</table>

Please see notes for Figure 6.

Gonorrhoea was the most common STI in MSM in 2015 (882 cases). From 2011 to 2015, very large proportional increases were seen in gonorrhoea (254%) and genital herpes (81%). In just one year from 2014 to 2015, the number of gonorrhoea diagnoses in MSM increased by 25% and chlamydia by 26%.
Figure 7a: Rate of new STI diagnoses per 100,000 population among South West residents by upper tier local authority of residence: 2015. Data sources: GUMCAD and CTAD

Rate for Cornwall includes the Isles of Scilly.

The bar chart shows the rate of new STIs per 100,000 by South West local authorities compared to the South West (628.7) and England (797.2). Local authority rates ranged from 461 per 100,000 to 1,180 per 100,000, with three local authorities significantly higher than the England rate.
Figure 7b: Rate of new STI diagnoses (excluding chlamydia diagnoses in persons aged 15-24 years) per 100,000 population aged 15-64 years among South West residents by upper tier local authority of residence: 2015. Data sources: GUMCAD and CTAD

The bar chart shows the rate of new STIs (excluding chlamydia in 15-24 year olds) by South West local authorities compared to the rate in England (814.9) and the South West (660.5) per 100,000 15-64 year olds. The rate for the South West local authorities ranged from 463 to 1,146. Three of the LAs had rates significantly higher than the England rate.

Rate for Cornwall includes the Isles of Scilly.
Figure 8: Chlamydia detection rate per 100,000 population aged 15-24 years in South West residents by upper tier local authority of residence: 2015. Data sources: GUMCAD and CTAD

Rate for Cornwall includes the Isles of Scilly.

Figure 8 shows the variation in the chlamydia detection rate in young people in local authorities in the South West from 1,109 per 100,000 to 2,529 per 100,000. Three LAs had a rate higher than 2,300 per 100,000.
Figure 9: Rate of gonorrhoea diagnoses per 100,000 population in South West residents by upper tier local authority of residence: 2015. Data source: GUMCAD

Rate for Cornwall includes the Isles of Scilly.

The bar chart showed 5 fold difference in the rate of gonorrhoea in the South West LAs from 17 to 84 per 100,000.
Figure 10: Map of new STI rates per 100,000 residents by upper tier local authority in the South West: 2015. Data source: GUMCAD & CTAD

Map showing tendency for higher STI rates scattered around the South West, with the highest in Plymouth, Bournemouth, Torbay and City of Bristol.
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: 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
Spotlight on STIs in the South West

(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](http://www.erpho.org.uk/statistical_tools.aspx).

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 information: http://fingertips.phe.org.uk/profile/sexualhealth


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

Please contact fes.southwest@phe.gov.uk for an Annual Epidemiological Spotlight on HIV in the South West: 2015 data
Spotlight on STIs in the South West

5 About Field Epidemiology Services and Acknowledgments

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.southwest@phe.gov.uk

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

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