



Public Health  
England

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# **Annual epidemiological spotlight on sexually transmitted infections in the East of England 2015 data**

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# 1. Summary

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

Over 35,900 new STIs were diagnosed in East of England residents in 2015, representing a rate of 572 diagnoses per 100,000 adults. Rates by upper tier local authority ranged from 445 new STI diagnoses per 100,000 population in Suffolk to 818 new STI diagnoses per 100,000 population in Bedford.

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 1,200 diagnoses of new STIs in East of England residents were reported to have been made in level 2 services (excluding enhanced GP services). The analyses in this report are based only the level 3 and CTAD diagnoses.

The number of new STIs diagnosed in East of England residents fell by 7% between 2014 and 2015. Falls were seen in the numbers of three of the five major STIs: chlamydia decreased by 6%, genital herpes by 3% and genital warts by 7%. Syphilis increased by 24% and gonorrhoea by 17%.

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 East of England residents aged 15 to 24 years was 1,511 per 100,000 residents.

Men and women have similar rates of new STIs (579 and 553 per 100,000 residents respectively).

Where gender and sexual orientation are known, men who have sex with men (MSM) account for 8% of East of England residents diagnosed with a new STI in a GUM clinic (68% of those diagnosed with syphilis and 41% of those diagnosed with gonorrhoea). STIs disproportionately affect young people. East of England residents aged between 15 and 24 years accounted for 54% 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: 1,573 per 100,000. This is 3.2 times the rate seen in the white ethnic group. Where country of birth was known, 86% of East of England 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 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. 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 benefit.

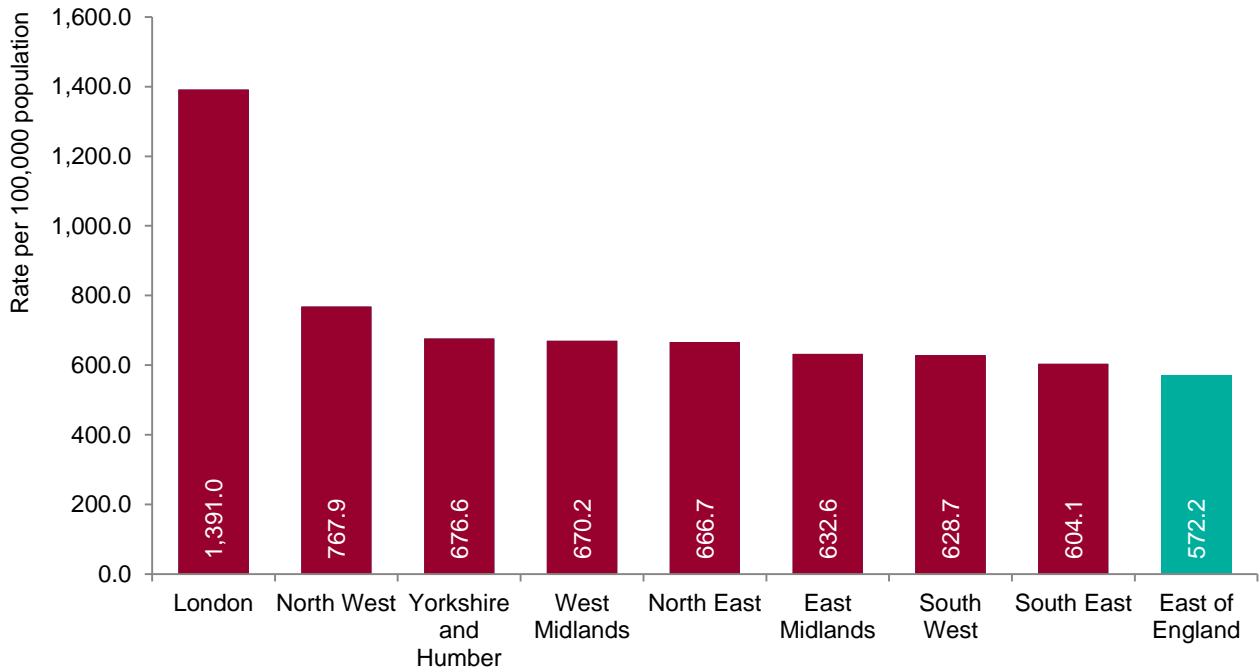
Health promotion and education remain the cornerstones of STI prevention, through improving risk awareness and encouraging safer sexual behaviour, together with condom provision. Consistent and correct condom use substantially reduces the risk of being infected with an STI. Prevention efforts should 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:

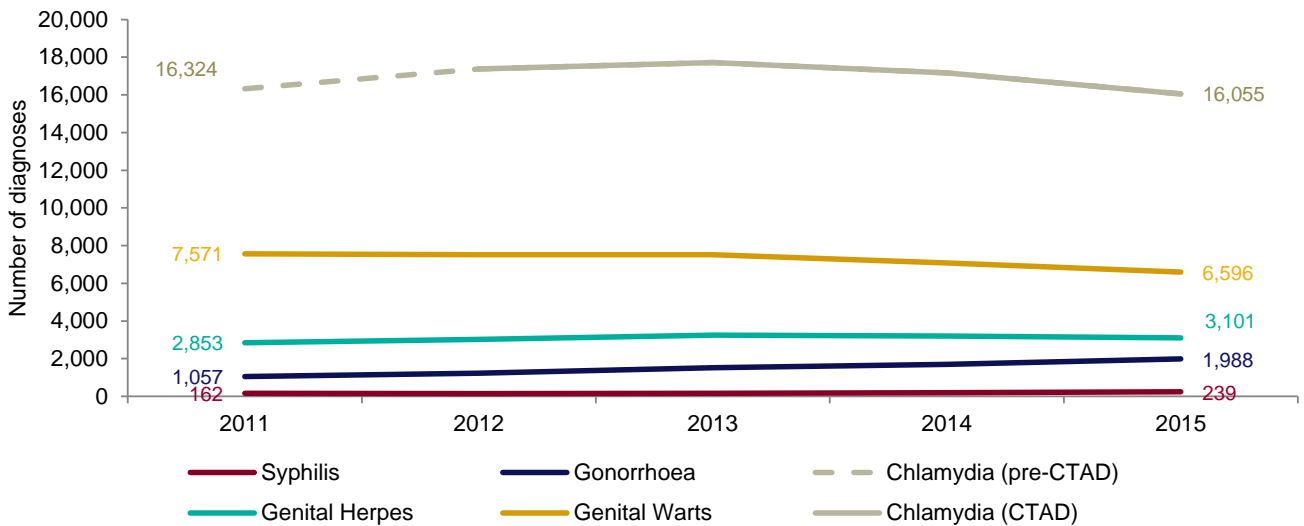
- prevention should focus on groups at highest risk, including young adults, MSM and black ethnic minorities
- consistent and correct use of condoms can significantly reduce risk of infection
- regular testing for HIV and STIs is essential for good sexual health:
  - anyone under 25 who is sexually active should be screened for chlamydia annually, and on change of sexual partner
  - MSM should test annually for HIV and STIs and every three 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 2: Diagnoses of the five main STIs: East of England residents, 2011-2015**  
Data sources: GUMCAD, 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.

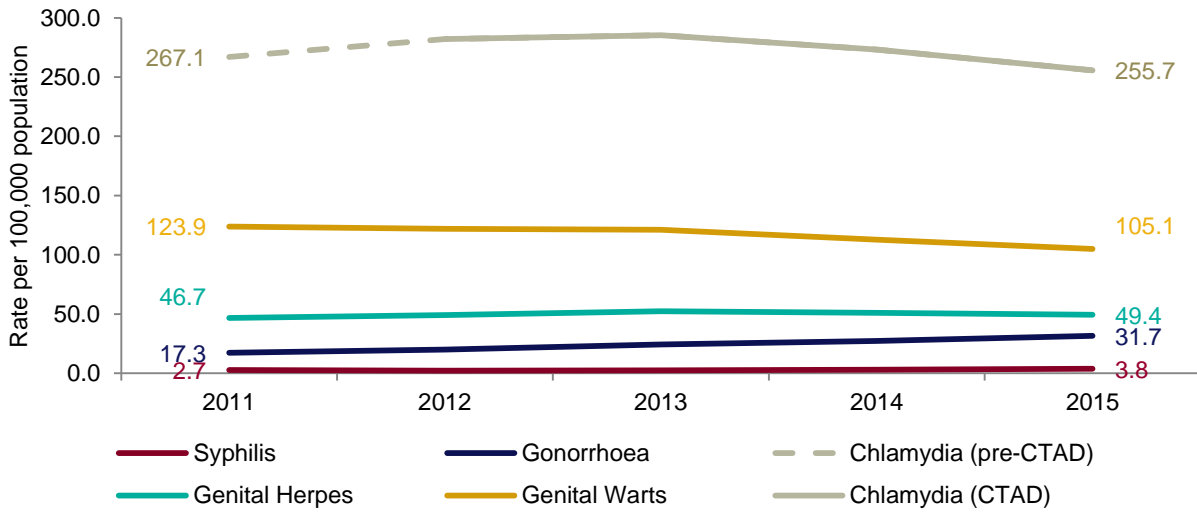
Any decrease in genital wart diagnoses may be due to a moderately protective effect of HPV-16/18 vaccination.

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.

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



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Increases or decreases may also reflect changes in testing practices.

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

**Table 1: Percentage change in new STI diagnoses: East of England residents**

Data sources: GUMCAD, CTAD, NCSP and laboratory chlamydia data

Diagnoses	2015	% change 2011-2015	% change 2014-2015
New STIs	35,919	-	-7%
Syphilis	239	48%	24%
Gonorrhoea	1,988	88%	17%
Chlamydia	16,055	-	-6%
Genital herpes	3,101	9%	-3%
Genital warts	6,596	-13%	-7%

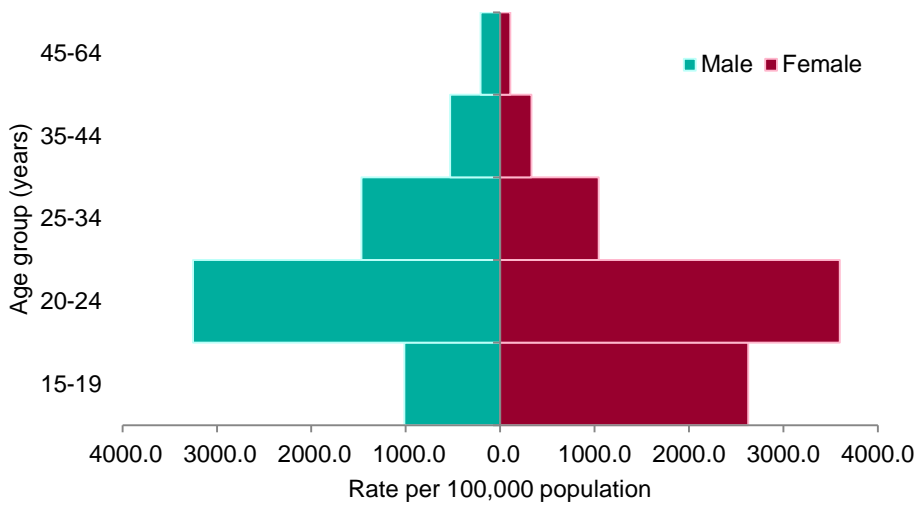
Please see notes for Figure 3.

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.



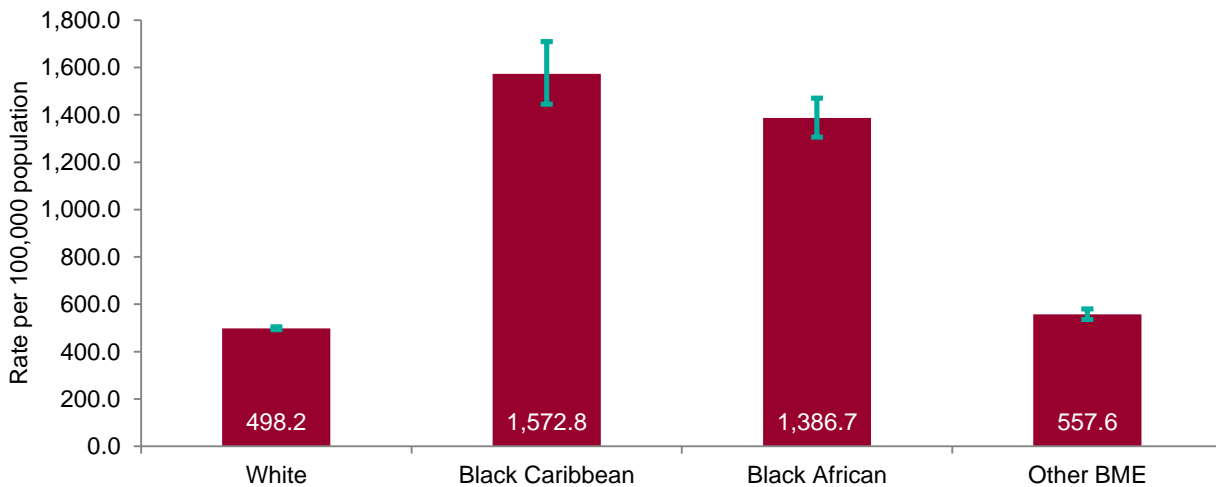
**Figure 4: Rate of new STIs per 100,000 residents by age group in the East of England, 2015**

Data sources: GUMCAD and CTAD



**Figure 5: Rates by ethnicity per 100,00 population of East of England residents diagnosed with a new STI: 2015**

Data sources: GUMCAD and CTAD



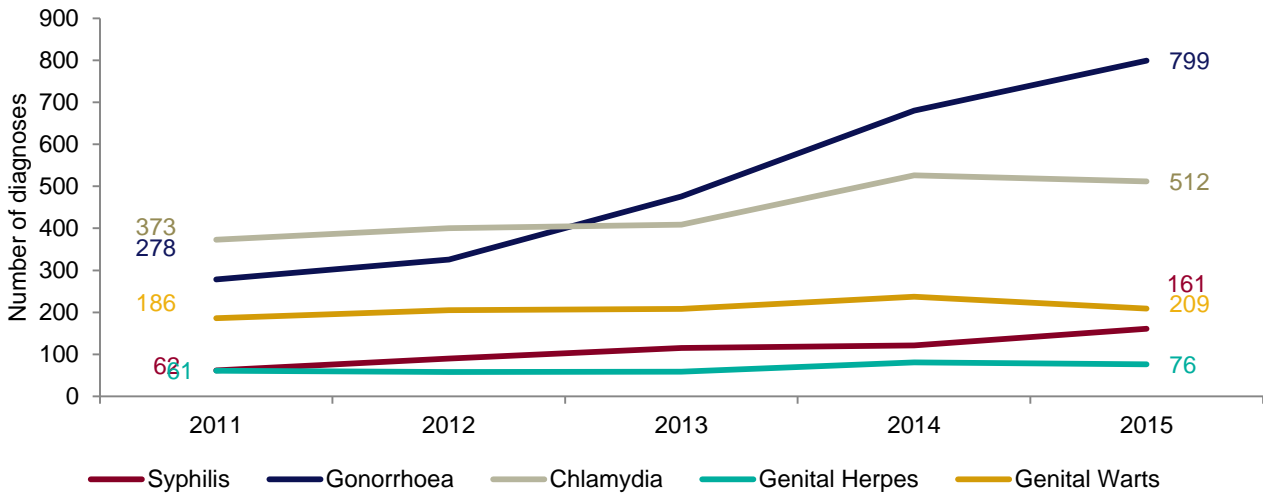
**Table 2: Proportion of East of England residents diagnosed with a new STI by ethnicity: 2015**

Data sources: GUMCAD, CTAD

Ethnic group	Number	Percentage excluding unknown
White	26,426	86%
Black Caribbean	553	2%
Black African	1,116	4%
Other BME	2,533	8%
Unknown	5,291	

**Figure 6: Diagnoses of the five main STIs among MSM in GUM clinics: East of England 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.

**Table 3: Percentage change in new STI diagnoses in men who have sex with men (MSM) diagnosed in GUM clinics: East of England residents**

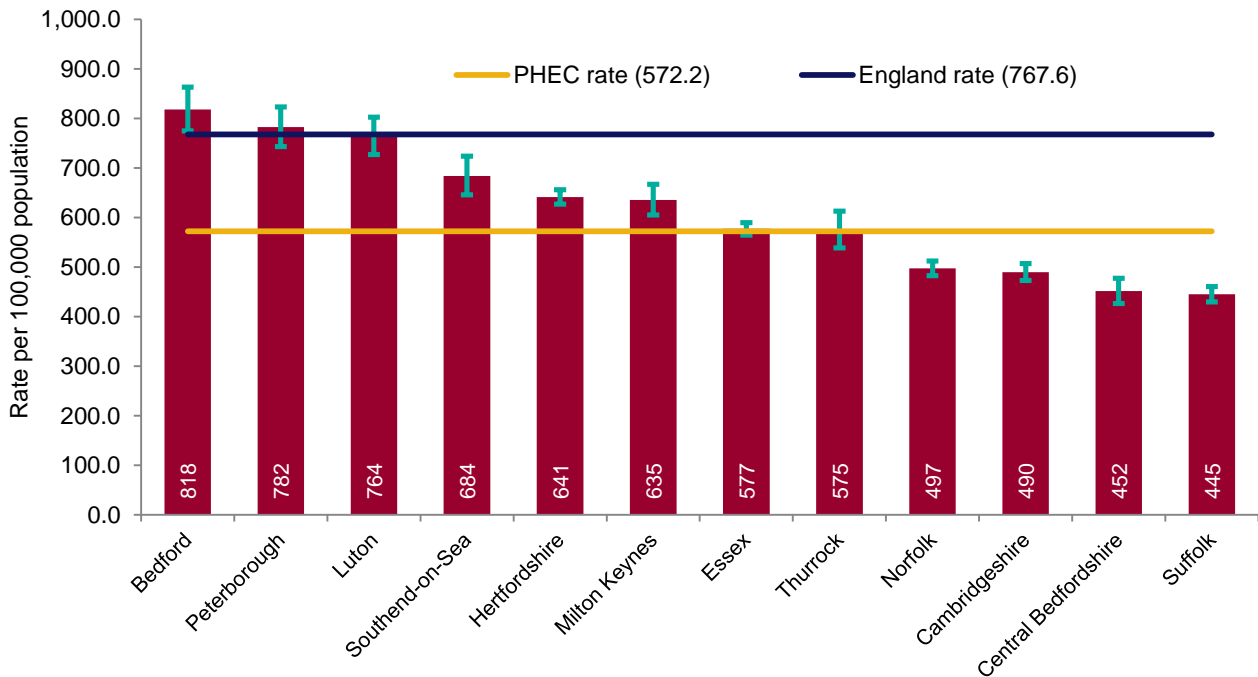
Data sources: GUMCAD data only

Diagnoses	2015	% change 2011-2015	% change 2014-2015
New STIs	2,327	53%	2%
Syphilis	161	160%	33%
Gonorrhoea	799	187%	18%
Chlamydia	512	37%	-3%
Genital Herpes	76	25%	-6%
Genital Warts	209	12%	-12%

Please see notes for Figure 6.

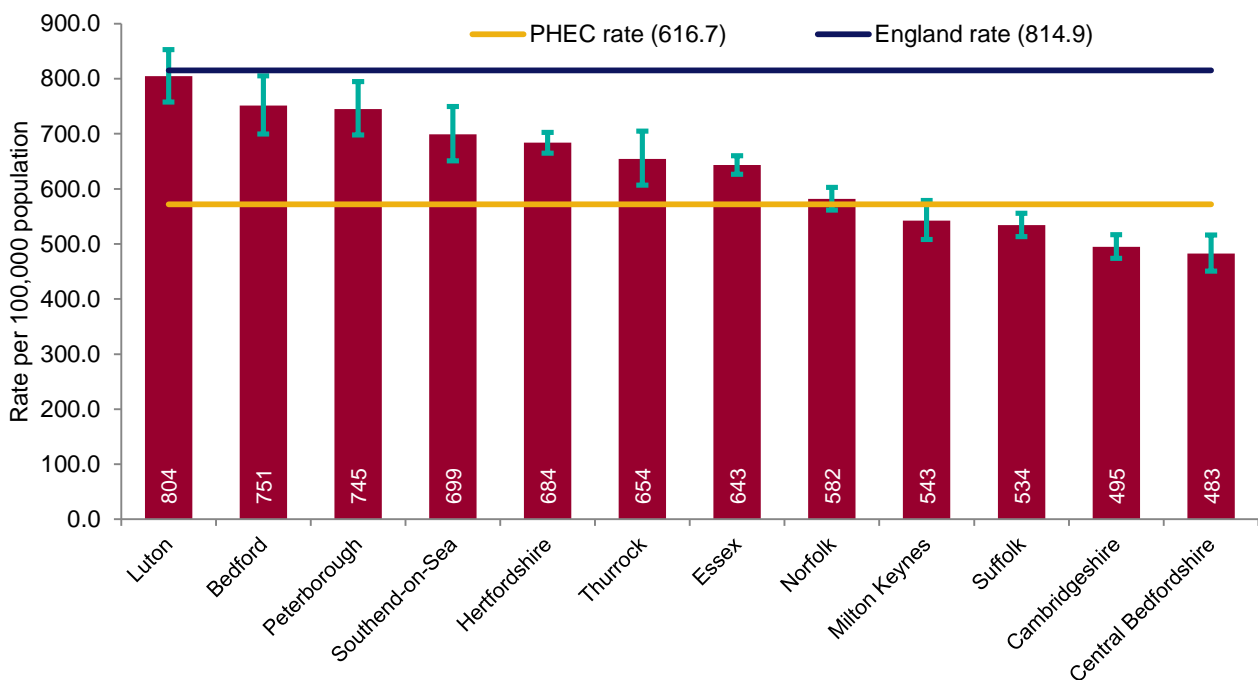
**Figure 7a: Rate of new STI diagnoses per 100,000 population among East of England residents by upper tier local authority of residence: 2015**

Data sources: GUMCAD and CTAD



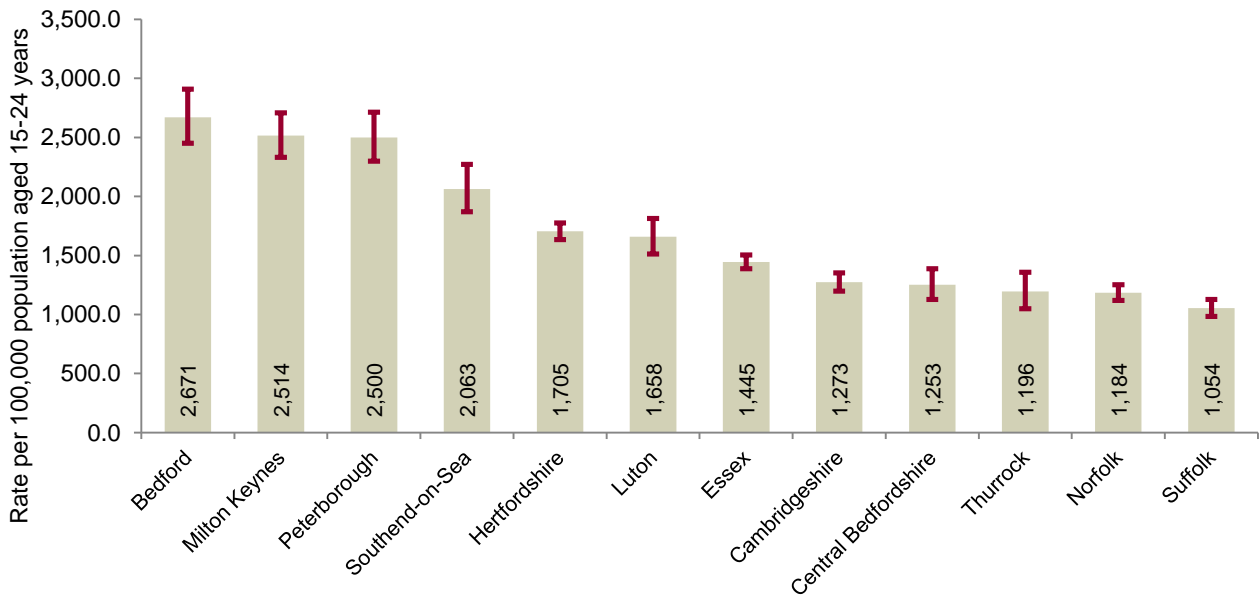
**Figure 7b: Rate of new STI diagnoses (excluding chlamydia diagnoses in persons aged 15-24 years) per 100,000 population aged 15-64 years among East of England residents by upper tier local authority of residence: 2015**

Data sources: GUMCAD and CTAD



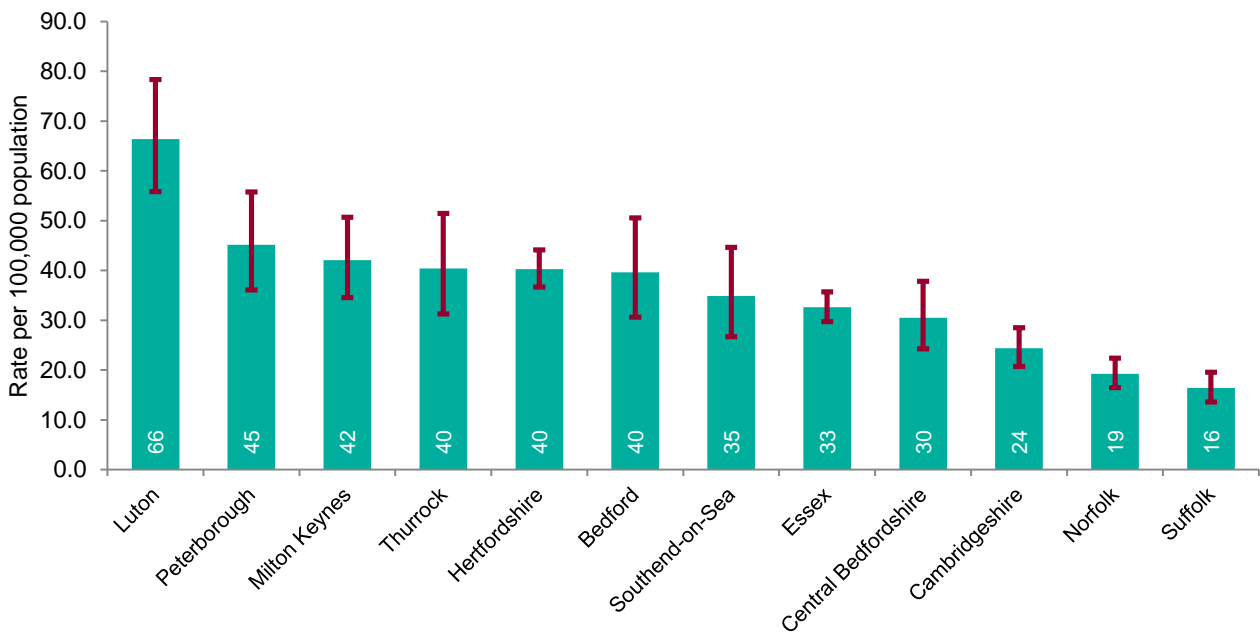
**Figure 8: Chlamydia detection rate per 100,000 population aged 15-24 years in East of England residents by upper tier local authority of residence: 2015**

Data sources: GUMCAD and CTAD



**Figure 9: Rate of gonorrhoea diagnoses per 100,000 population in East of England residents by upper tier local authority of residence: 2015**

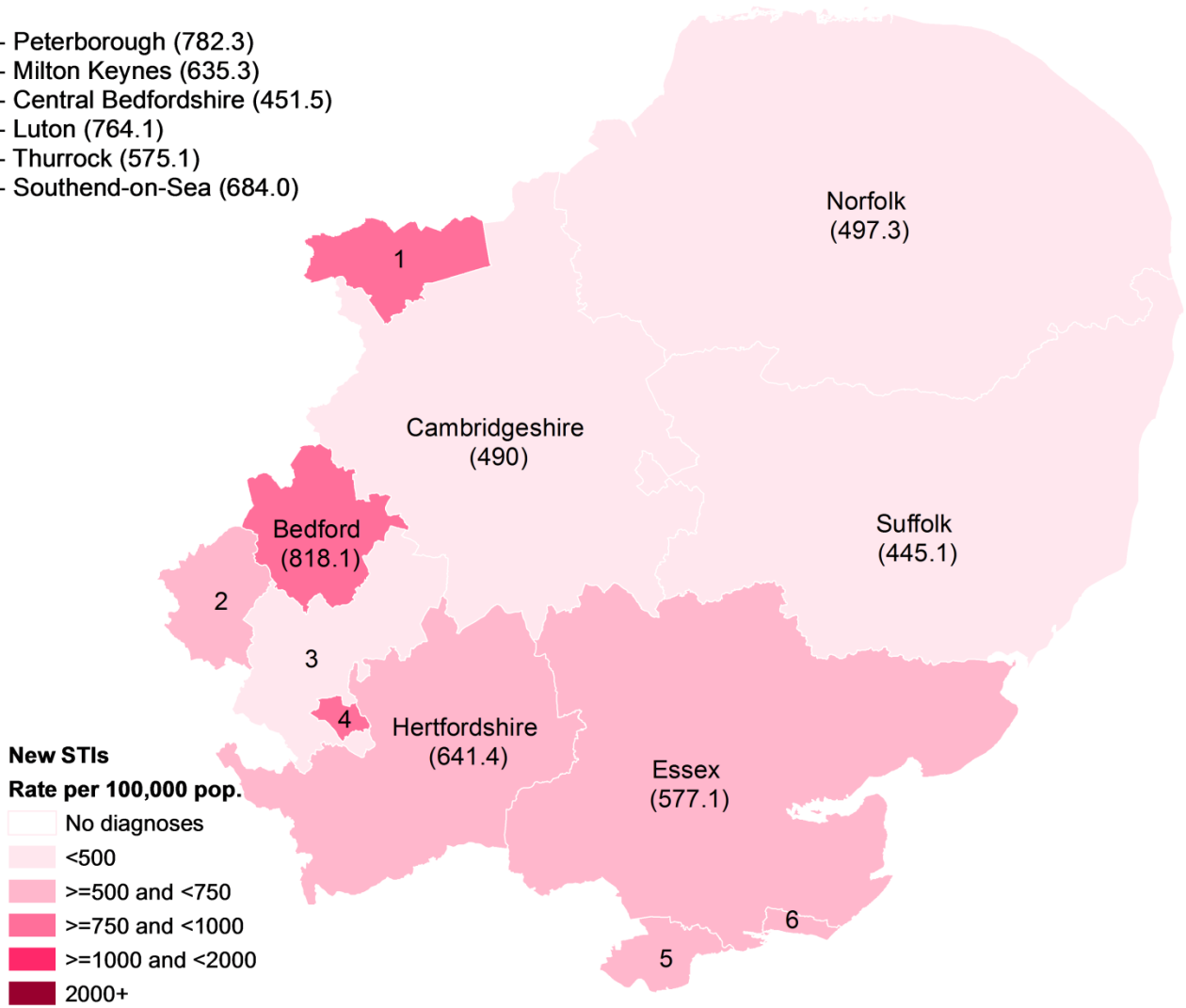
Data source: GUMCAD



**Figure 10: Map of new STI rates per 100,000 residents by upper tier local authority in the East of England: 2015**

Data source: GUMCAD & CTAD

- 1 - Peterborough (782.3)
- 2 - Milton Keynes (635.3)
- 3 - Central Bedfordshire (451.5)
- 4 - Luton (764.1)
- 5 - Thurrock (575.1)
- 6 - Southend-on-Sea (684.0)



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Map produced using PHEGIS. Contact GIS Team, ERD/MRA, Porton Down. 01980-616937 or [gis@phe.gov.uk](mailto:gis@phe.gov.uk)

## 3. Information on data sources

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 Genitourinary Medicine Clinic Activity Dataset (GUMCAD)

This disaggregate reporting system collects information about attendances and diagnoses at genitourinary (GUM) clinics. 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 de-duplicate 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 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

(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>

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 [lynsey.emmett@phe.gov.uk](mailto:lynsey.emmett@phe.gov.uk) if they do not have access to this information.



## 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 [efeu@phe.gov.uk](mailto:efeu@phe.gov.uk)

If you have any comments or feedback regarding this report or the FES service, please contact [lynsey.emmett@phe.gov.uk](mailto:lynsey.emmett@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