



Public Health
England

Protecting and improving the nation's health

Annual Epidemiological Spotlight on HIV in the East of England 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.

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

Prepared by: Josh Forde, Paul Crook and Lynsey Emmett, Field Epidemiology Services, National Infection Service and and Peter Kirwan and Cuong Chau, Centre of Infectious Disease Surveillance and Control

© Crown copyright 2017

You may re-use this information (excluding logos) free of charge in any format or medium, under the terms of the Open Government Licence v3.0. To view this licence, visit [OGL](https://www.ogil.io) or email psi@nationalarchives.gsi.gov.uk. Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned. Any enquiries regarding this publication should be sent to lynsey.emmett@phe.gov.uk.

Published July 2017
PHE publications
gateway number: 2017211

PHE supports the UN
Sustainable Development Goals



Important note about the data in this report

With the exception of Figure 3, all analyses in this report are residence-based. Information about a patient's place of residence is not collected by the HIV and Aids New Diagnosis Database (HANDD). Reports to this database are cross-linked to the annual survey of people accessing care for HIV, SOPHID. Please see Section 3 for more information on data sources.

If a report could not be linked to a corresponding SOPHID report, the patient's PHEC of residence (but not their LA of residence) was imputed using the location of the centre at which they were diagnosed.

For most years in the period covered by this report (2006 to 2015) a PHE centre (PHEC) of residence can be obtained via this linkage/imputation process for around 100% of UK new HIV diagnosis reports.

Of those assigned as residents of the East of England, 338 (81%%) were known to be residents (identified through linkage). This number will correspond to the numbers provided in the [Sexual and Reproductive Health Profiles](#). For the remaining 80 (19%%) PHEC of residence was imputed from PHEC of diagnosis.

Imputation was not used to supplement the linkage process in the HIV Spotlight report produced in 2014. This means that the numbers in the new diagnosis section of those reports cannot be compared directly with the numbers in this report.

Numbers may change as more information becomes available to assign area of residence to cases and historical data is refreshed accordingly.

Contents

1 Summary	5
2 Charts, tables and maps	10
3 Information on data sources	17
4 Further information	18
5 About the Field Epidemiology Service	18
6 Acknowledgements	19

1. Summary

HIV remains an important public health problem in the East of England with high and increasing rates of HIV and evidence of sustained HIV transmission in men who have sex with men (MSM).

New diagnoses

In 2015, an estimated 418 East of England residents were newly diagnosed with HIV (338 known residents and 80 where residence has been imputed from PHEC of diagnosis. See page 3 for more information). Numbers may change as more information becomes available to assign area of residence to cases. All residence-based numbers and rates at PHEC level in this report include both known and imputed residents.

For robust trend data we need to examine the number of people newly diagnosed in East of England clinics (not all of whom are resident in the East of England). In 2015, this was 399, a rise of 6% from 2014. There has been a long term trend for a decline in the overall number of new diagnoses due in the main to a fall in the number of new diagnoses in Black Africans who have acquired HIV abroad.

There is a long term trend for an increase in the number of new HIV diagnoses in MSM, in the context of increased HIV testing. The number of MSM resident in the East of England newly diagnosed with HIV in 2015 (140, adjusted for missing information) was 31% higher than in 2006.

The new diagnosis rate for East of England residents aged 15 years or older (8 per 100,000) was below that of England in 2015 (12 per 100,000).

In 2015, 39% of all new diagnoses in East of England residents were in men who have sex with men (MSM) (compared to 40% in 2014 and 21% in 2006). Of the MSM newly diagnosed with HIV 85% were white and 66% were UK born.

Heterosexual contact was the largest infection route for new diagnoses in East of England residents in 2015 (57%). Infections in African born persons accounted for 49% of all heterosexually acquired cases in 2015 (n=99), compared to 78% (n=324) in 2006. Infections in UK born persons accounted for 30% of all heterosexually acquired cases in 2015.

Injecting drug use accounted for 2% of new diagnoses in East of England.

Black Africans represented 34% of all newly diagnosed East of England residents in 2015 (compared to 35% in 2014 and 61% in 2006). A small proportion of new diagnoses in 2015 were in black Caribbeans (2%).

The number of new diagnoses was highest in the 25-34 year age group in males and the 35-44 year age group in females in 2015.

Late diagnoses

It is of particular concern that a large proportion of people with HIV are diagnosed late in the East of England (52% from 2013 to 2015, compared to 40% in England), as defined by a CD4 count of less than 350 cells/mm³ at diagnosis. Reducing late HIV diagnoses is one of the indicators in the Public Health Outcomes Framework. People who are diagnosed late have a tenfold risk of mortality within one year of diagnosis compared to those diagnosed promptly and they have increased healthcare costs.

Heterosexuals were more likely to be diagnosed late (67% of males, 56% of females) than MSM (38%). By ethnic group Black Africans were more likely to be diagnosed late than the white population (64% and 45% respectively).

People living with diagnosed HIV

The 6,419 people living with diagnosed HIV in the East of England in 2015 was 6% higher than 2014 and 87% higher than 2006. This increase is partly due to the effectiveness of HIV treatment, which has reduced the number of deaths from HIV.

The diagnosed prevalence rate of HIV in the East of England in 2015 was 1.6 per 1,000 residents aged 15-59 years. This was lower than the 2.3 per 1,000 observed in England as a whole. Ten local authorities in the East of England had a diagnosed HIV prevalence in excess of 2 per 1,000 population aged 15-59 years in 2015, which is the threshold for expanded HIV testing. They were Bedford (2.4), Harlow (2.8), Hertsmere (2), Luton (4.3), Milton Keynes (3), Norwich (2.1), Southend-on-Sea (2.8), Stevenage (2.4), Thurrock (2) and Watford (2.8).

The two commonest probable routes of transmission for East of England residents living with diagnosed HIV in 2015 were sex between men and women (65%) and sex between men (31%).

In 2015, 50% of those living with diagnosed HIV in the East of England were aged between 35 and 49 years, and 35% were aged 50 years and over (up from 14% in 2006). Males represented 57% of East of England residents living with diagnosed HIV in 2015 and females represented 43%.

In 2015, 46% of East of England residents living with diagnosed HIV were white and 45% were Black Africans. However, due to the relative sizes of the white and Black African populations the rate per 1,000 population was much higher in Black Africans (47.2 per 1,000) than in the white population (0.8 per 1,000).

People living with undiagnosed HIV

It is estimated that in 2015 13% (95% CrI 10%-17%) of people living with HIV in England and Wales, excluding London, were undiagnosed, although there is considerable uncertainty in this estimate.

Implications for prevention

Free and effective antiretroviral therapy (ART) in the UK has transformed HIV from a fatal infection into a chronic, manageable condition. People living with HIV in the UK can now expect to live into old age if diagnosed promptly. For many people, treatment means one daily tablet with no or few side effects.

There are a number of approaches to the prevention of HIV transmission and continued funding in prevention activities remains critical to curb the HIV epidemic. Correct and consistent condom use remains an extremely effective way to prevent HIV transmission. Investment in HIV prevention has resulted in moderately high rates of condom use in key populations.

Work to improve condom use should address underlying factors that lead to risk taking behaviour, especially among MSM. These are diverse and may include low self-esteem, 'chemsex' and sero-adaptive behaviour (modifying of sexual behaviour based on one's own HIV sero-status, the perceived HIV sero-status of a sexual partner, and/or differences in risk of transmission by different sexual acts).

While testing and treatment for HIV in the UK is free and available to all, over 13,000 people living with HIV remain undiagnosed and rates of late diagnosis remain high. Late HIV diagnosis is associated with poorer health outcomes, including premature death. Furthermore, since the vast majority of people diagnosed with HIV are effectively treated, most new HIV infections are passed on from persons unaware of their infection.

Undiagnosed HIV infection and onward transmission can be reduced through further HIV testing. HIV testing is particularly important for MSM as in the UK an estimated 5,830 were living with undiagnosed HIV infection in 2015 and incidence remains high. It is also important to promote HIV testing within black African communities as there are estimated to be 2,860 black Africans living with undiagnosed HIV infection in the UK.

Partner notification following the diagnosis of HIV infection is a highly effective way to detect undiagnosed HIV infections: in 2015 in England, 5.3% of partners of people diagnosed with HIV were also positive for HIV.

Referring to the recent 2016 joint PHE and NICE guidelines on HIV testing, the 2016 [PHE report on HIV testing in England](#) has recommendations on increasing testing including:

- specialist sexual health clinics (SHCs) should increase HIV testing among all attendees, but especially black African women and MSM
- specialist SHCs should improve the notification and testing of sexual partners of people with HIV
- MSM should be encouraged to have regular HIV tests at specialist SHCs, at other venues, or by ordering self-sampling HIV kits on-line (www.freetesting.hiv).
- according to 2016 NICE guidelines, people admitted to hospital, especially in extremely high prevalence areas should be tested for HIV. Extremely high prevalence areas are defined as more than 5 people aged 15-59 years living with diagnosed HIV per 1,000 residents
- according to the 2016 NICE guidelines, general practices should test patients for HIV, especially in extremely high prevalence areas
- HIV testing should improve for patients with hepatitis B and hepatitis C and for people who inject drugs
- two further HIV testing programmes should continue to be developed - the prison based opt-out testing programme for HIV and other blood borne viruses and the latent tuberculosis infection testing and treatment programme
- the current high levels of HIV testing in antenatal care, blood, tissue and organ donation services, among patients with TB and among men attending specialist SHCs, should be maintained

Symptoms due to HIV and AIDS may not appear for many years, and people who are unaware of their infection may not feel themselves to be at risk. However, anyone can acquire HIV regardless of age, gender, ethnicity, sexuality or religion and it is essential to challenge assumptions about who is at risk of HIV. As well as increasing awareness of HIV, efforts to reduce stigma and other socio-cultural barriers that prevent people from testing and seeking long-term care must be strengthened.

HIV Pre Exposure Prophylaxis (HIV–PrEP) is the use of antiretroviral agents by people who do not have HIV prior to a potential exposure to HIV to prevent acquisition of infection. Studies have shown that consistent use of HIV-PrEP can be an efficacious and effective prevention intervention. HIV–PrEP has the potential, within a combination prevention approach, to have a significant role in the control of HIV transmission. The first phase of implementation will be the launch of a large scale clinical trial early in the

2017 to 2018 financial year. Although the evidence around the clinical effectiveness of PrEP is strong, advice from PHE has highlighted significant outstanding implementation questions that should be answered prior to using PrEP in a sustained way on a substantial scale in England. These questions will be answered by the clinical trial, paving the way for full roll-out. NHS England will fully fund the cost of the clinical trial phase and will work in partnership with local authorities, the Local Government Association and PHE to implement the findings as part of a wider national roll-out.

It has been demonstrated that the advantages of ART extend beyond personal clinical benefit. It is now widely understood that effective HIV treatment results in an 'undetectable' viral load which is protective from passing on the virus to others. Revised guidelines from the British HIV Association and World Health Organisation have recently been published which recommend that patients start ART at diagnosis regardless of CD4 count both for clinical benefits and preventing onward transmission. People living with HIV and their health care providers can discuss starting ART to reduce their risk of transmitting HIV to their sexual partners.

HIV risk reduction messages

Always use a condom correctly and consistently and until all partners have had a sexual health screen.

Unprotected sex with partners believed to be of the same HIV status (serosorting) is unsafe. For the HIV positive person, there is a high risk of acquiring other STIs and hepatitis. For the HIV negative person, there is a high risk of acquiring HIV infection as well as of acquiring STIs and hepatitis.

Early diagnosis of HIV infection enables better treatment outcomes and reduces the risk of transmitting the infection to others. Have an HIV test if you think you may have been at risk.

How to get an HIV test:

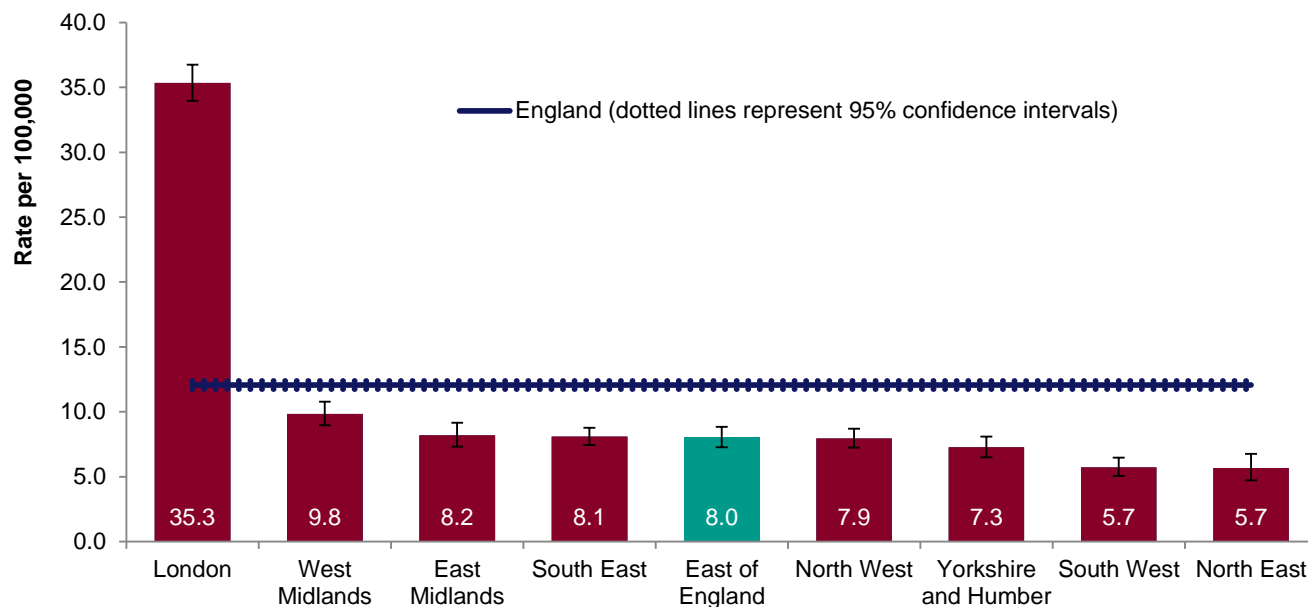
- go to an open-access STI clinic (some clinics offer 'fast-track' HIV testing) or a community testing site (www.aidsmap.com/hiv-test-finder)
- ask your GP for an HIV test
- request a self-sampling kit online (www.freetesting.hiv) or obtain a self-testing kit

Gay, bisexual and other men who have sex with men are advised to test for HIV and other STIs at least annually and every three months if having sex with new or casual partners.

Black African men and women are advised to have an HIV test and a regular HIV and STI screen if having condomless sex with new or casual partners.

2. Charts, tables and maps

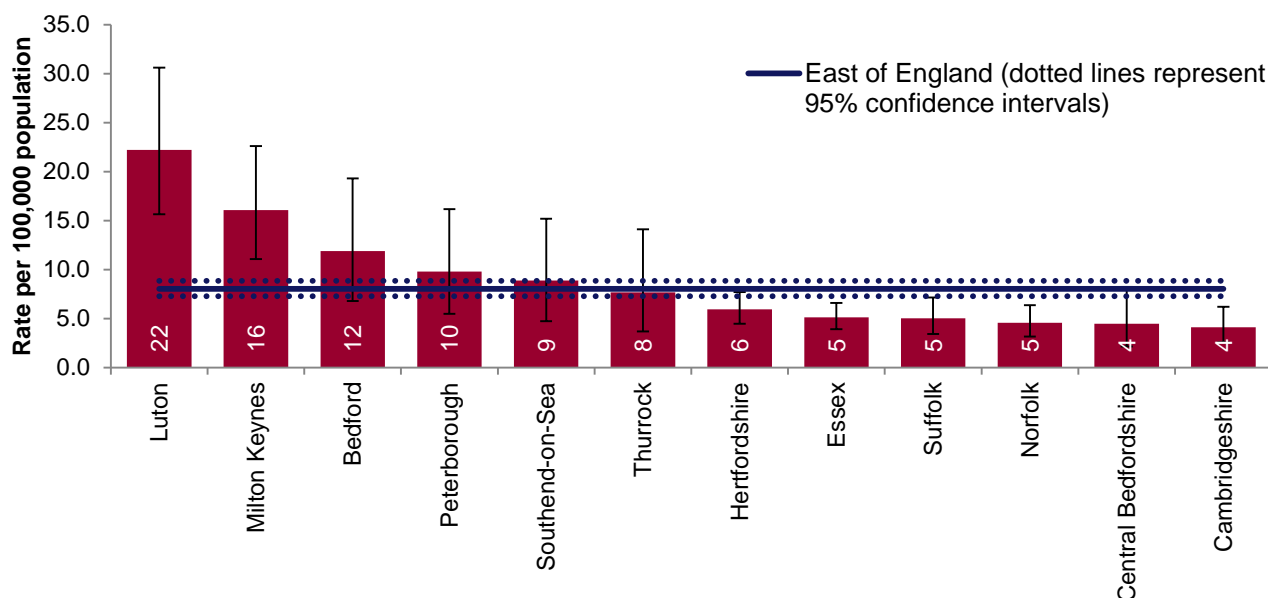
Figure 1: New HIV diagnosis per 100,000 population aged 15 years or older by PHE centre of residence, 2015



Source: Public Health England, HIV & Aids New Diagnoses and Deaths (HANDD).

The number of new diagnoses will depend on accessibility of testing as well as infection transmission.

Figure 2: New HIV diagnoses per 100,000 population aged 15 years or older by upper tier local authority of residence, East of England residents, 2015

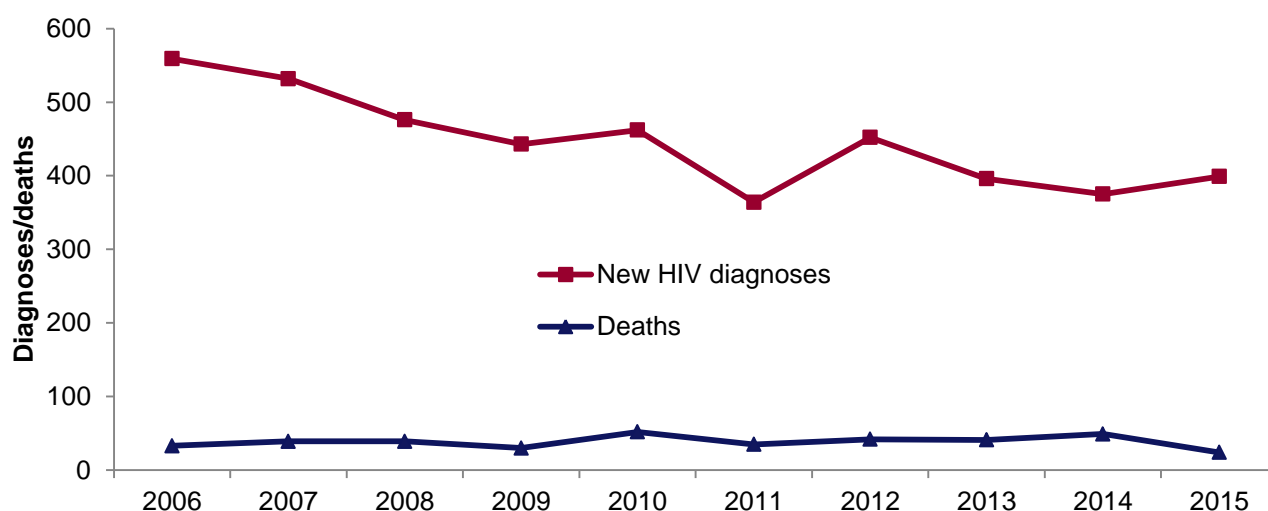


Source: Public Health England, HIV & Aids New Diagnoses and Deaths (HANDD).

The number of new diagnoses will depend on accessibility of testing as well as infection transmission.

Figure 3: New HIV and deaths, reported from the East of England, 2006-2015

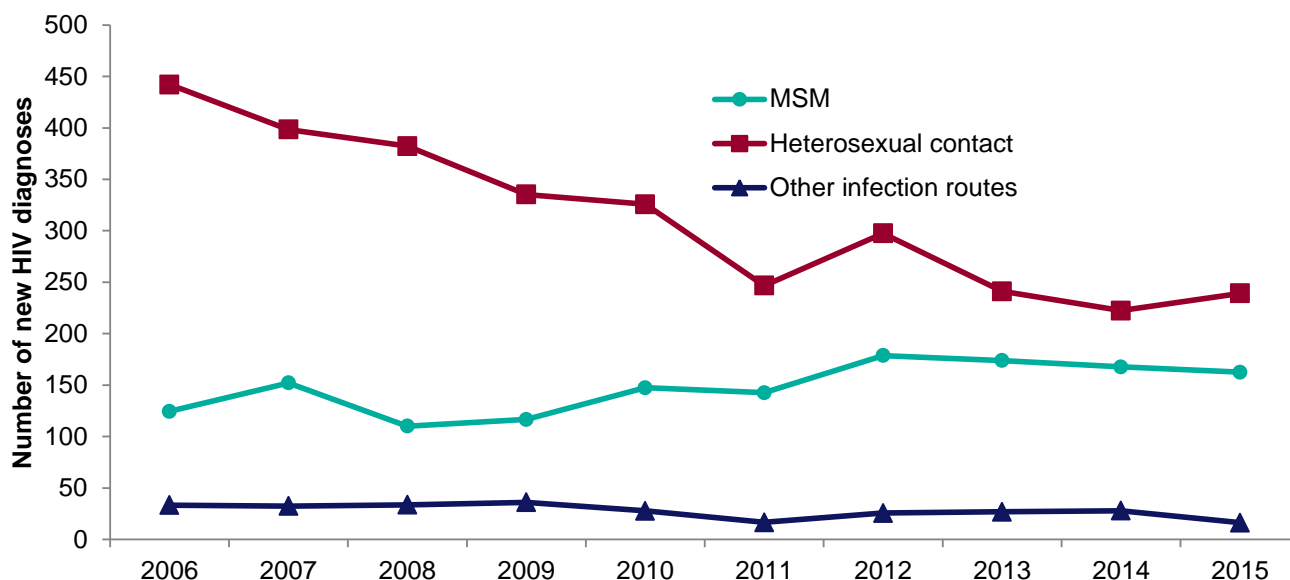
Please note that this chart is based on the PHEC from which the report originated (which is not necessarily the same as the PHEC of residence) as PHEC of residence is not available for death reports.



Source: Public Health England, HIV & Aids New Diagnoses and Deaths (HANDD) and HIV and AIDS New Diagnosis Database (HANDD). The number of new diagnoses will depend on accessibility of testing as well as infection transmission.

*Numbers may rise as further reports are received. This will impact on interpretation of trends in more recent years.

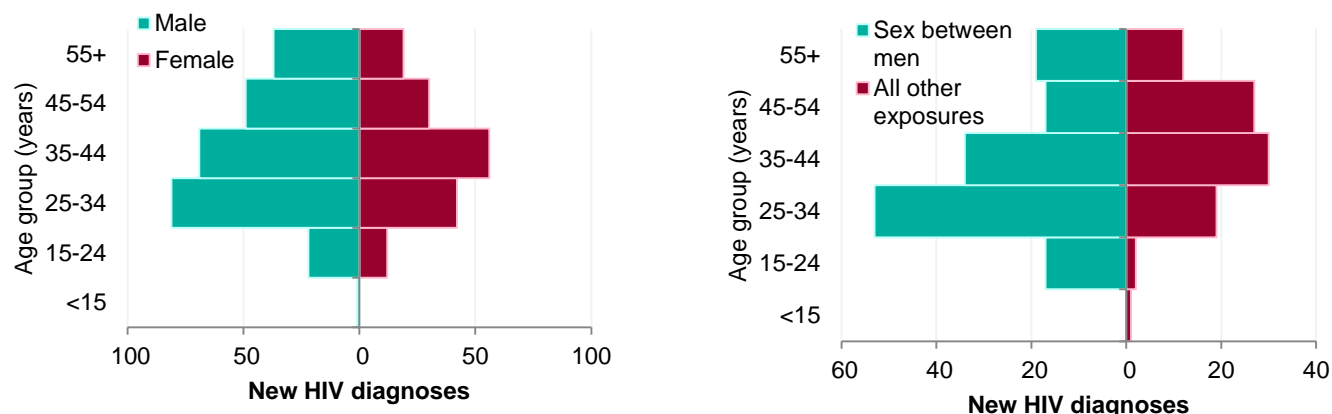
Figure 4: New HIV diagnoses by probable route of infection (adjusted for missing route of infection information), East of England residents, 2006-2015 (please see footnote on interpreting trends)*



Source: Public Health England, HIV & Aids New Diagnoses and Deaths (HANDD) and HIV and AIDS New Diagnosis Database (HANDD). The number of new diagnoses will depend on accessibility of testing as well as infection transmission.

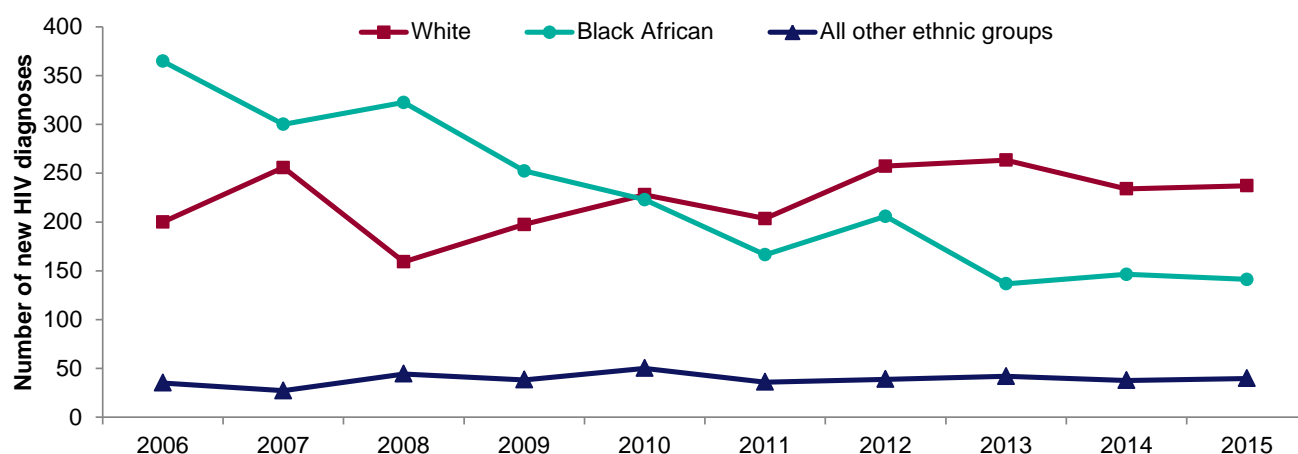
*Numbers may rise as further reports are received and more information is obtained on area of residence of those diagnosed. This is more likely to affect more recent year, particularly 2015. Please see important note on data earlier in this report. This will impact on interpretation of trends in more recent years.

Figure 5: Number of new HIV diagnoses by age group and gender (A) and probable route of infection in males (B), East of England residents, 2015



Source: Public Health England, HIV & Aids New Diagnoses and Deaths (HANDD).
The number of new diagnoses will depend on accessibility of testing as well as infection transmission.

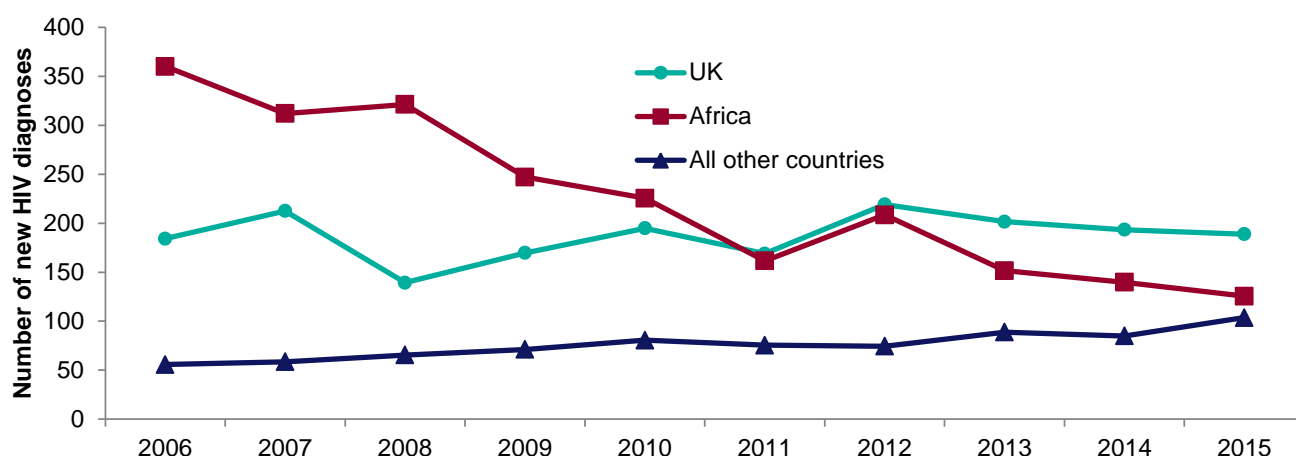
Figure 6: Number of new HIV diagnoses by ethnic group (adjusted for missing ethnic group information), East of England residents, 2006-2015 (please see footnote on interpreting trends)*



Source: Public Health England, HIV & Aids New Diagnoses and Deaths (HANDD) and HIV and AIDS New Diagnosis Database (HANDD).
The number of new diagnoses will depend on accessibility of testing as well as infection transmission.

*Numbers may rise as further reports are received and more information is obtained on area of residence of those diagnosed. This is more likely to affect more recent year, particularly **2015**. Please see important note on data earlier in this report. This will impact on interpretation of trends in more recent years.

Figure 7: Number of new HIV diagnoses by world region of birth (adjusted for missing world region of birth information), East of England residents, 2006-2015 (please see footnote on interpreting trends)*

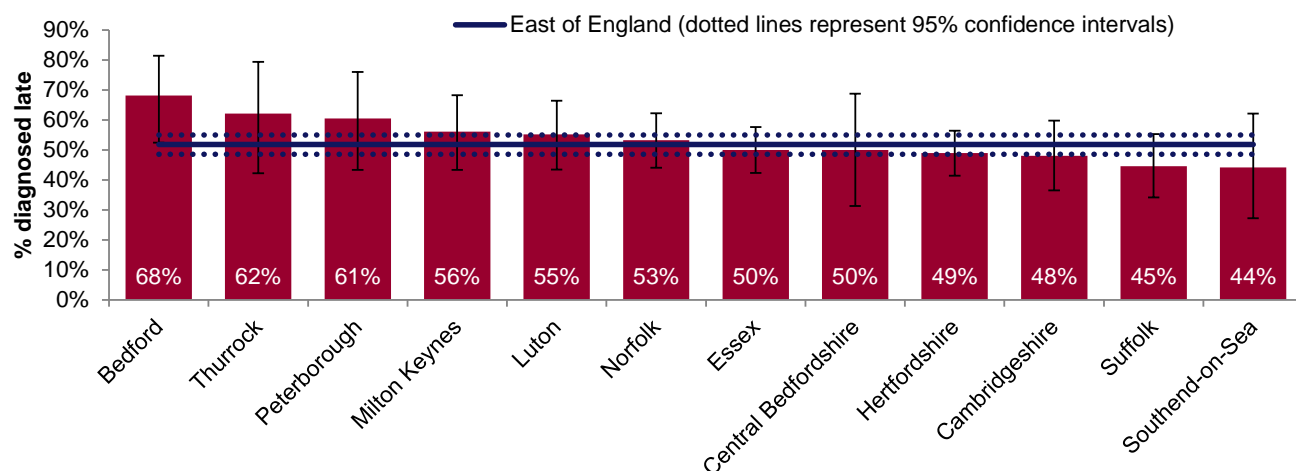


Source: Public Health England, HIV & Aids New Diagnoses and Deaths (HANDD) and HIV and AIDS New Diagnosis Database (HANDD).

The number of new diagnoses will depend on accessibility of testing as well as infection transmission.

*Numbers may rise as further reports are received and more information is obtained on area of residence of those diagnosed. This is more likely to affect more recent year, particularly **2015**. Please see important note on data earlier in this report. This will impact on interpretation of trends in more recent years.

Figure 8: Percentage of new HIV diagnoses that were diagnosed late by upper tier local authority of residence, East of England, aged 15 years and over, 2013-2015 *

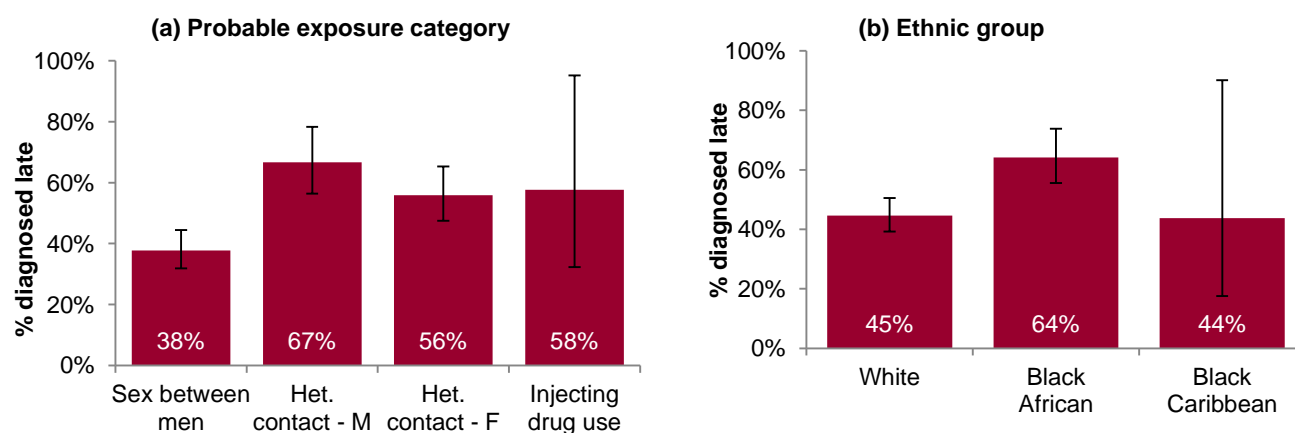


Source: Public Health England, HIV and AIDS New Diagnosis Database/System, CD4 Surveillance, Survey of Prevalent HIV Infections Diagnosed (SOPHID).

* Only includes new diagnoses for which CD4 count was reported within 91 days of diagnosis; late diagnosis defined as CD4 count <350 cells/mm³.

The underlying population will impact on the proportion diagnosed late, eg MSM are less likely to be diagnosed late.

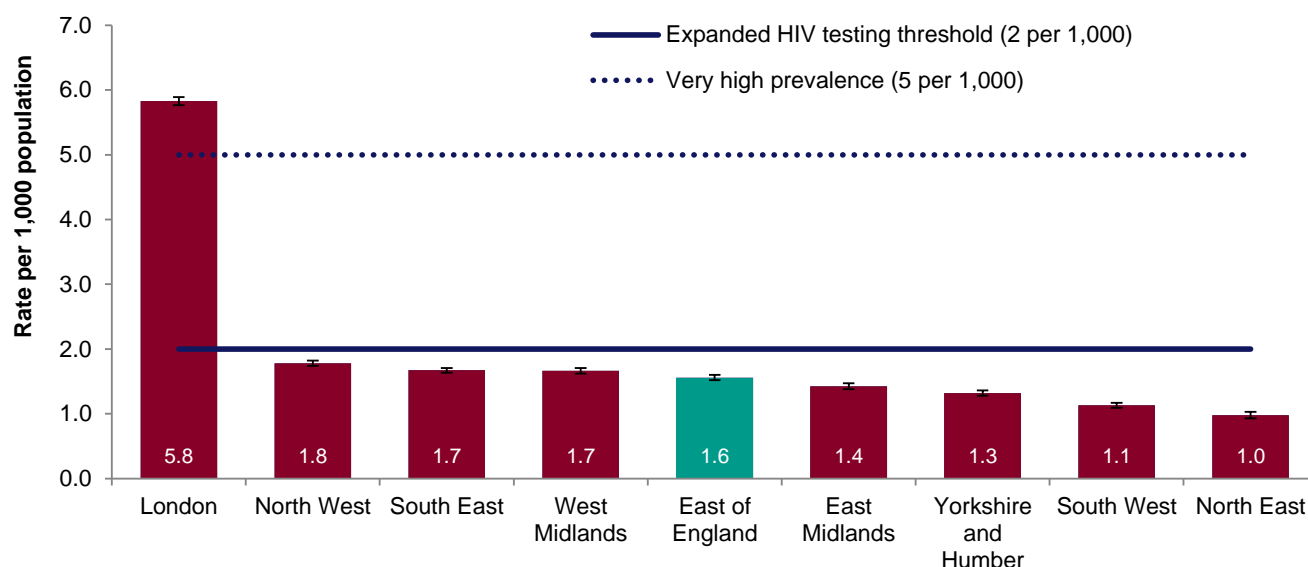
Figure 9: Percentage of new HIV diagnoses that were diagnosed late by probable route of infection (A) and ethnic group (B), East of England residents, ages 15 years and over, 2013-2015*



Source: Public Health England, HIV and AIDS New Diagnosis Database/System, CD4 Surveillance, Survey of Prevalent HIV Infections Diagnosed (SOPHID).

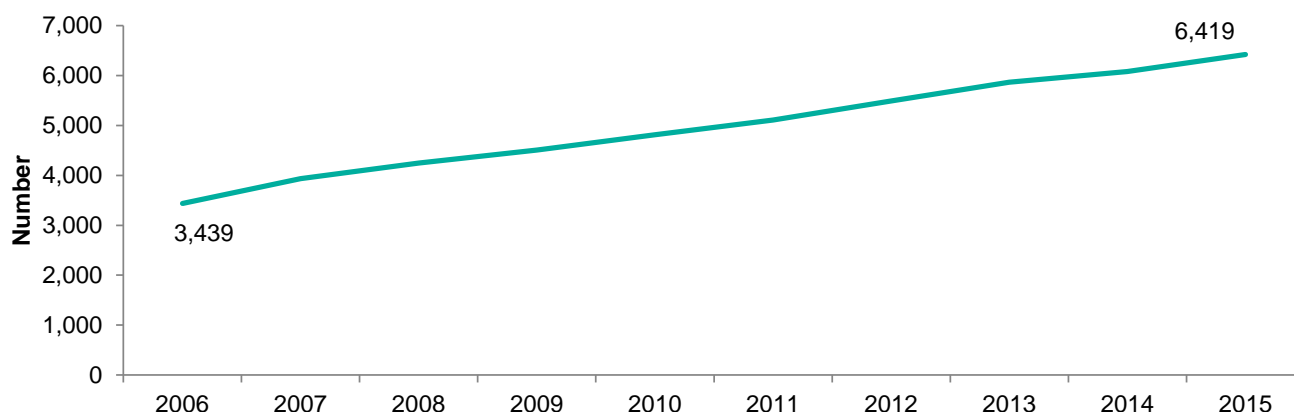
* Only includes new diagnoses for which CD4 count was reported within 91 days of diagnosis; late diagnosis defined as CD4 count <350 cells/mm³.

Figure 10: Diagnosed HIV prevalence per 1,000 residents aged 15-59 years by PHE Centre, 2015



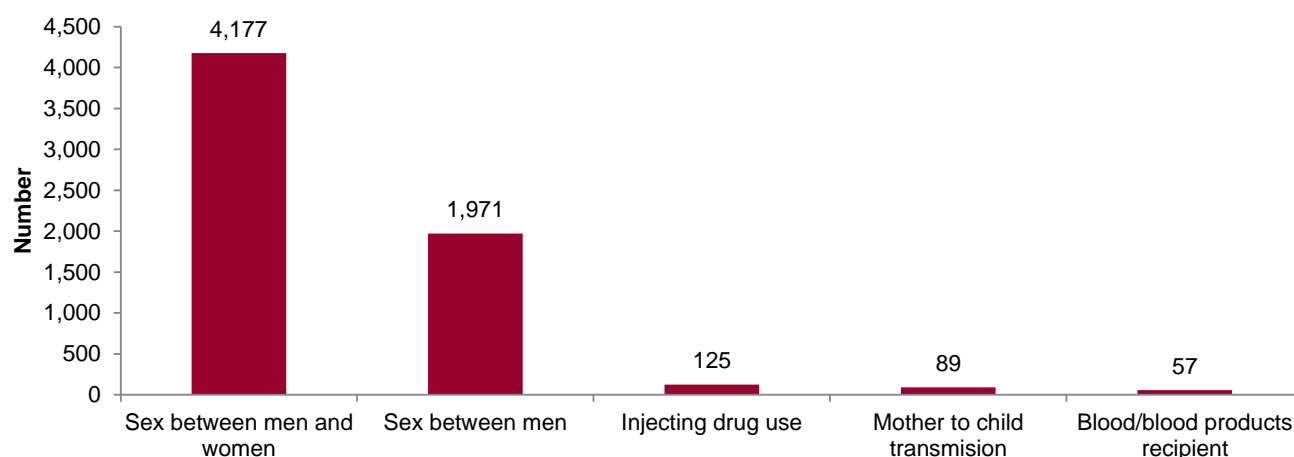
Source: Public Health England, Survey of Prevalent HIV Infections Diagnosed (SOPHID).

Figure 11: Number of residents living with diagnosed HIV and accessing care, the East of England, 2006-2015



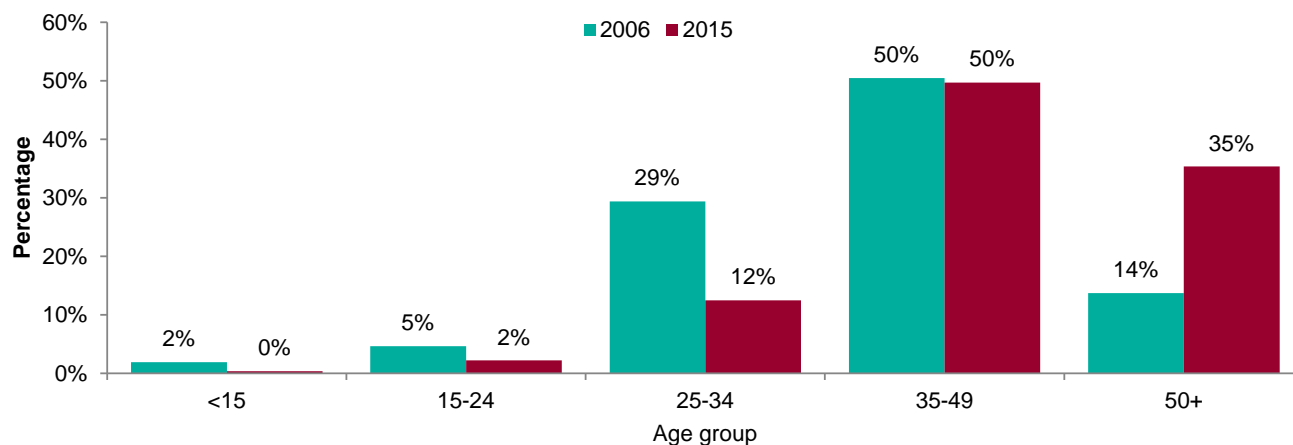
Source: Public Health England, Survey of Prevalent HIV Infections Diagnosed (SOPHID).

Figure 12: Number of residents living with diagnosed HIV and accessing care by probable route of transmission (adjusted for missing information), the East of England, 2015



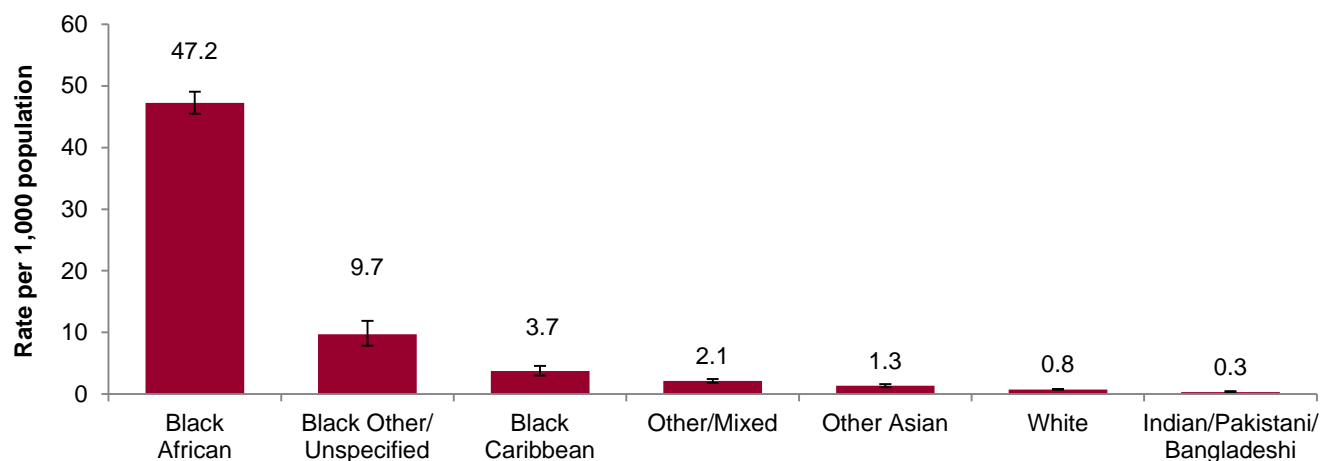
Source: Public Health England, Survey of Prevalent HIV Infections Diagnosed (SOPHID).

Figure 13: Percentage of residents with diagnosed HIV and accessing care by age group, the East of England, 2006 and 2015



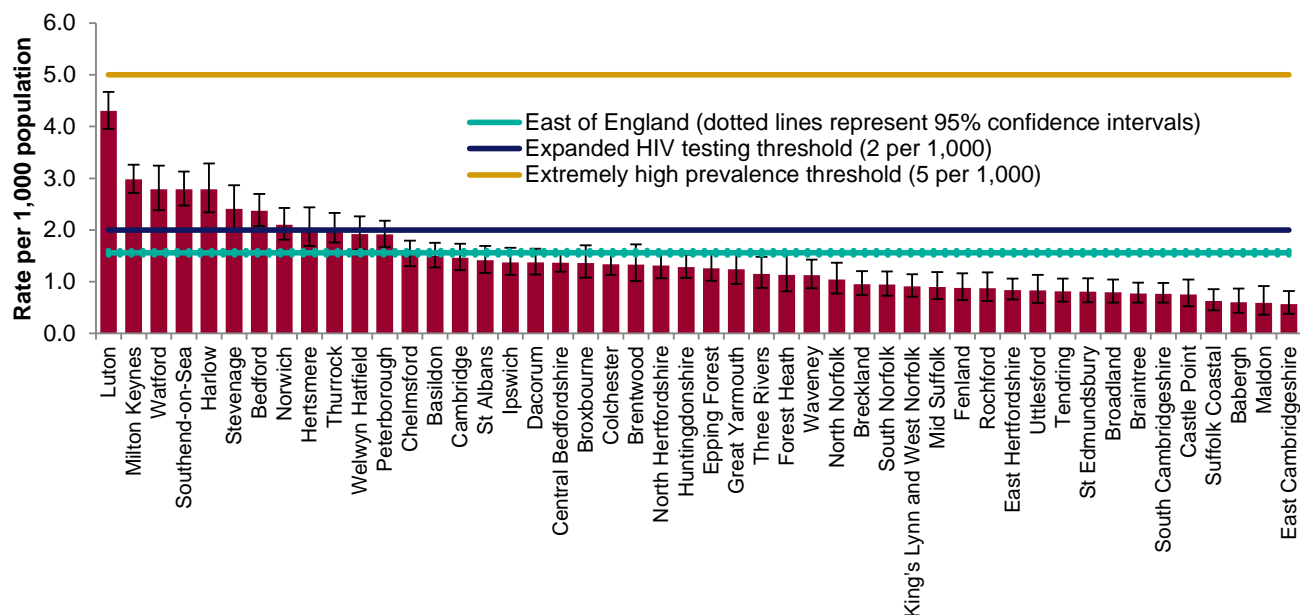
Source: Public Health England, Survey of Prevalent HIV Infections Diagnosed (SOPHID).

Figure 14: Diagnosed HIV prevalence per 1,000 residents by ethnic group aged 15-59 years, the East of England, 2015



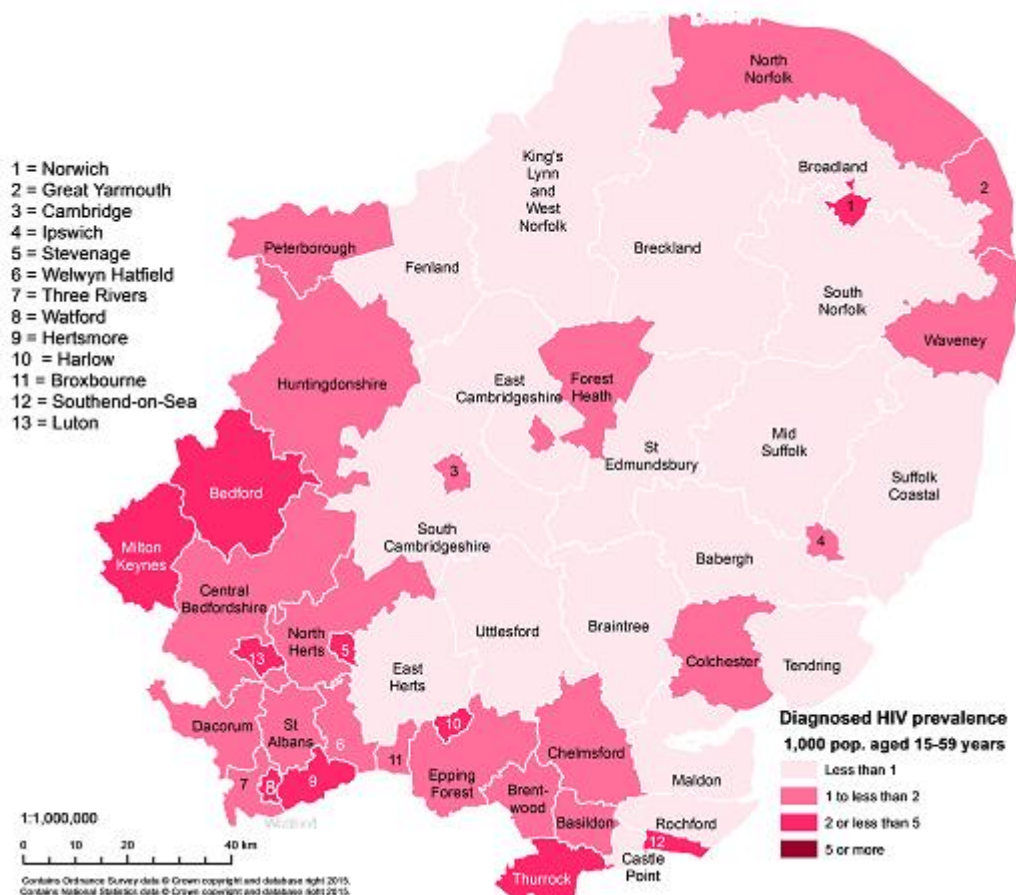
Source: Public Health England, Survey of Prevalent HIV Infections Diagnosed (SOPHID).

Figure 15: Diagnosed HIV prevalence per 1,000 residents aged 15-59 years by local authority, the East of England, 2015



Source: Public Health England, Survey of Prevalent HIV Infections Diagnosed (SOPHID).

Figure 16: Diagnosed HIV prevalence per 1,000 residents aged 15-59 years by local authority, the East of England, 2015



Source: Public Health England, Survey of Prevalent HIV Infections Diagnosed (SOPHID).

3. Information on data sources

- HIV & AIDS New Diagnoses and Deaths (HANDD) collects information on new HIV diagnoses, AIDS at diagnosis and deaths among people diagnosed with HIV. Information is received from laboratories, genitourinary medicine (GUM) clinics, GPs and other services where HIV testing takes place in England, Wales and Northern Ireland.). The Recent Infection Testing Algorithm (RITA) and CD4 surveillance scheme are linked to HANDD to assess trends in recent and late diagnoses. Data is deduplicated across regions and therefore figures may differ from country-specific data
- the Survey of Prevalent HIV Infections Diagnosed (SOPHID) began in 1995 and is a cross-sectional survey of all adults living with diagnosed HIV infection who attend for HIV care in England, Wales and Northern Ireland. SOPHID collects information about the individual's place of residence along with epidemiological data including clinical stage and antiretroviral therapy (ART). As of 2016, SOPHID has been replaced by the HIV & AIDS Reporting System (HARS)
- date of data extract: October 2016. Updates to HANDD and SOPHID/HARS made after this date will not be reflected in this report
- confidence intervals for rates in the figures have been calculated to the 95% level using the Byar's method; confidence intervals for percentages have been calculated to the 95% level using the Wilson Score method (see <http://www.apho.org.uk/resource/item.aspx?RID=48457>). Confidence intervals presented in the text are produced by Bayesian analysis
- ONS mid-year estimates for 2015 were used as a denominator for rates for 2015
- the data behind charts showing absolute numbers has been adjusted for missing information; however, unless stated otherwise, the numbers in the summary section are the numbers as reported, ie unadjusted counts. Where charts are displaying adjusted data this is indicated in the chart title
- the denominators for all percentages exclude records for which information was unknown, ie the proportion of new diagnoses where probable route of infection was sex between men would be calculated using new diagnoses for which route of infection was known as the denominator

4. Further information

Please access the online 'Sexual and Reproductive Health Profiles' for further information on a whole 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:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/576052/PHE_SH_data_guide_December_2016_FINALNB081216.pdf

Local authorities have access to LA HIV, sexual and reproductive health epidemiology reports (LASERs) and other HIV and STI intelligence via the HIV and STI portal. They should contact lynsey.emmett@phe.gov.uk if they do not have access to this information.

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 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.

6. Acknowledgements

We would like to thank the following:

- local sexual health and HIV clinics for supplying the HIV data
- Institute of Child Health
- PHE Centre for Infectious Disease Surveillance and Control (CIDSC) HIV and STI surveillance teams for collection, analysis and distribution of data
- Anne Presanis for providing estimates of the total number of people living with HIV and the proportion that remain undiagnosed