Public Health England

Protecting and improving the nation's health

Prevalence of HIV infection in the UK in 2018

Health Protection Report
Volume 13 Number 39
1 November 2019

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The latest Multi-Parameter Evidence Synthesis (MPES) estimates of HIV prevalence show the overall number of persons living with HIV in the UK at the end 2018 being 103,800 (95% credible interval (CrI) 101,600 to 107,800). An estimated 7,500 (CrI 5,400 to 11,500) of these people were living with an undiagnosed HIV infection, with 6,700 (CrI 4,900 to 10,100) in England (see table).

Twice as many people were living with undiagnosed HIV infection in England outside London (4,500, CrI 3,000 to 7,500) compared to London (2,100, CrI 1,500 to 3,300) (table). While credible intervals overlap, this was also the case for gay and bisexual men (GBM) with 1,100 (CrI 600 to 2,200) in London and 2,400 (CrI 1,100 to 5,100) outside London; and for heterosexual men and women, with 900 (CrI 700 to 1,500) in London and 2,000 (CrI 1,500 to 3,400) outside London.

In England, the number of heterosexual black Africans who are unaware of their infection continued to decline with an estimated 1,200 (CrI 940 to 1,600) in 2018, two thirds of whom were women, and three-quarters were outside London. An estimated 1,700 (CrI 1,100 to 3,500) heterosexual non-Black African adults in England were unaware of their infection (table). A half were women (800, CrI 600 to 1,100) and two-thirds lived in England outside of London (1,200, CrI 800 to 2,600).

MPES is a statistical model that combines and triangulates multiple sources of surveillance and survey data [1]. Information on exposure group sizes, numbers diagnosed and in care, and HIV prevalence from prevalence surveys, and data on HIV testing in various groups, are synthesised to estimate the number of persons living with undiagnosed HIV. The MPES model, providing a “snapshot” of the current state of the

epidemic each year, has evolved structurally since its creation [2], as both the epidemic and the available data sources have changed over time, to make greater and more efficient use of the available data [3].

Over 1.1 million attendees were tested for HIV in all sexual health services (SHS) in 2018, representing an HIV test coverage of 61%. However, at specialist SHS, more than half a million (543,236) eligible attendees were not tested for HIV. Of these 69% were heterosexual women, 19% were heterosexual men and 3% were GBM. Overall, nearly half of the eligible specialist SHS attendees who were not tested had not been offered an HIV test while the other half declined the test offer. Specialist SHS outside London were less likely to offer HIV tests to eligible attendees than those in London (81% vs 88%) and across all exposure groups.

As it becomes progressively more challenging to discover and care for those living with undiagnosed HIV, it is essential that existing testing guidelines are fully implemented, and that these policies are applied equally in all parts of the country. Specialist SHS commissioners and providers should consider how they can improve coverage to match the 99% achieved by antenatal screening services.

The online HIV data tables and the Sexual and Reproductive Health Profiles were released in September 2019. The data tables provide detailed breakdowns of national data for people newly diagnosed with HIV and people accessing HIV care in the UK. The profiles include measures of HIV testing coverage, repeat HIV testing, new HIV diagnosis, late HIV diagnosis, diagnosed HIV prevalence, prompt ART treatment initiation and virological success. Publication of the annual report, "*HIV in the United Kingdom: Towards zero HIV transmissions by 2030 – 2019 report (data to end of December 2018)*" will be published in the near future.

Estimated number of people living with HIV (diagnosed and undiagnosed) by exposure group: UK, London and elsewhere in England, 2018

		UK			London			Elsewhere in England		
Exposure category		**Number of people living with HIV (credible interval)**	**Number undiagnosed (credible interval)**	**Per cent undiagnosed (credible interval)**	**Number of people living with HIV (credible interval)**	**Number undiagnosed (credible interval)**	**Per cent undiagnosed (credible interval)**	**Number of people living with HIV (credible interval)**	**Number undiagnosed (credible interval)**	**Per cent undiagnosed (credible interval)**
Gay and bisexual men		49,800 (48,000, 53,400)	4,000 (2,300, 7,600)	8% (5, 14%)	20,300 (19,700, 21,400)	1,100 (600, 2,200)	6% (3, 10%)	24,800 (23,400, 27,500)	2,400 (1,100, 5,100)	10% (5, 19%)
Heterosexuals	Black African men	8,900 (8,700, 9,200)	500 (300, 800)	6% (4%, 9%)	3,400 (3,200, 3,600)	160 (100 – 300)	5% (3%, 9%)	5,100 (4,900, 5,300)	300 (200, 500)	6% (4, 9%)
	Men excluding black Africans	10,200 (9,600, 12,200)	900 (500, 3,000)	9% (5%, 24%)	3,000 (2,800 – 3,500)	240 (100 – 780)	8% ((4%, 22%)	6,100 (5,700, 7,400)	600 (300, 2,000)	10% (5, 26%)
	Black African women	18,500 (18,200, 18,800)	800 (600, 900)	4% (3%, ,5%)	6,900 (6,700 – 7,100)	250 (190 – 340)	4% (3%, 5%)	10,700 (10,400, 10,900)	500 (400, 600)	4% (3, 6%)
	Women excluding black Africans	11,100 (10,700, 11,500)	900 (700, 1,300)	8% (6%, 11%)	3,600 (3,400 – 3,700)	230 (160 – 350)	7% (5%, 9%)	6,500 (6,300, 6,800)	600 (400, 800)	9% (6, 12%)
Heterosexuals		48,600 (47,800, 50,800)	3,200 (2,400, 5,200)	7% (5, 10%)	16,900 (16,500, 17,500)	900 (700, 1,500)	5% (4, 9%)	28,300 (27,700, 29,700)	2,000 (1,500, 3,400)	7% (5, 11%)
People who inject drugs		2,300 (2,200, 2,600)	100 (30, 400)	6% (1, 15%)	700 (600, 800)	40 (10, 100)	5% (1, 15%)	1,100 (1,000, 1,300)	60 (10, 200)	6% (1, 15%)
Total		**103,800 (101,600, 107,800)**	**7,500 (5,400, 11,500)**	**7% (5, 11%)**	**39,000 (38,200, 40,200)**	**2,100 (1,500, 3,300)**	**5% (4, 8%)**	**55,800 (54,300, 58,800)**	**4,500 (3,000, 7,500)**	**8% (6, 13%)**

References

1. De Angelis D, Presanis AM, Conti S, Ades AE. (2014) Estimation of HIV burden through Bayesian evidence synthesis. *Statistical Science* **29**(1): 9-17; doi:10.1214/13-STS428.

2. Goubar A, Ades AE, De Angelis D, McGarrigle CA, Mercer C, Tookey P, *et al* (2008). Bayesian multi-parameter synthesis of HIV surveillance data in England and Wales, 2001 (with discussion). *J. Roy. Statist. Soc. A.* **171**: 541-580.

3. Presanis AM, Kirwan P, Miltz A, Croxford S, Harris R, Heinsbroek E, *et al* (2019). Implications for HIV elimination by 2030 of recent trends in undiagnosed infection in England: an evidence synthesis (Submitted).

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-leading science, research, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. We are an executive agency of the Department of Health and Social Care, and a distinct delivery organisation with operational autonomy. We provide government, local government, the NHS, Parliament, industry and the public with evidence-based professional, scientific and delivery expertise and support.

About Health Protection Report

Health Protection Report is a national public health bulletin for England and Wales, published by Public Health England. It is PHE's principal channel for the dissemination of laboratory data relating to pathogens and infections/communicable diseases of public health significance and of reports on outbreaks, incidents and ongoing investigations.

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Published **November 2019**
PHE publications
gateway number: **2019037**

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Sustainable Development Goals