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# Trends in new HIV diagnoses and in people receiving HIV-related care in the United Kingdom: data to the end of December 2018\*

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\* More extensive analyses and interpretation of factors causing the observed HIV trends will be included in PHE's annual HIV report that is scheduled for publication in November 2019.

# Trends in new HIV diagnoses and in people receiving HIV-related care in the United Kingdom: data to the end of December 2018

The decline in the number of annual new HIV diagnoses in the United Kingdom (UK) has continued, with 4,453 people (3,266 males and 1,185 females<sup>1</sup>) newly diagnosed with HIV in 2018. This figure represents a 29% decline from the 6,271 diagnoses reported in 2015 and a 6% decline relative to the 4,761 new diagnoses reported in 2017<sup>2</sup>. This overall decline is driven by the trend in new HIV diagnoses among gay, bisexual and other men who have sex with men, which have decreased by 39% since the 2015 peak, to 1,908 diagnoses in 2018. During the same period, the number of new HIV diagnoses has also declined by 24% among people who acquired HIV through heterosexual contact, from 2,304 in 2015 to 1,550 in 2018. The number of new HIV diagnoses reported in people who inject drugs and people who acquired HIV through other exposure categories<sup>3</sup> remains low in 2018, at 94 and 98 respectively<sup>4</sup>. For the remaining 834 new HIV diagnoses, the exposure category is undetermined at present.

Trends in reported new HIV diagnoses are always preceded by earlier changes in the frequency of HIV transmission, because people can live with an undiagnosed HIV infection for some years [1]. The frequency of underlying HIV transmission, or the incidence of new infections, is estimated indirectly by statistical inference. Although new HIV diagnoses in gay and bisexual men have been falling since 2015, the underlying fall in HIV incidence is estimated to have begun in 2012 [1,2].

While the decrease in new diagnoses has been observed among all gay and bisexual men, the steepest declines have been observed in gay and bisexual men who are; white (46% decrease from 2,353 in 2015 to 1,276 in 2018), born in the UK (46% decrease from 1,627 in 2015 to 873 in 2018), aged 15-24 (47% decrease from 505 in 2015 to 269 in 2018) and resident in London (50% decrease from 1,459 in 2015 to 736 in 2018) (Figure 1). Outside of London, large declines were also seen in the West Midlands (47% decrease, 195 in 2015 to 104 in 2018), Scotland (43% decrease, 130 in 2015 to 74 in 2018) and the East Midlands (40% decrease, 115 in 2015 to 69 in 2018). In 2018, two in every five gay and bisexual men diagnosed with HIV were a London resident (39%, 736/1,907)<sup>5</sup>.

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<sup>1</sup> New HIV diagnoses totals for males and females are based on gender identity and include trans people. The overall total includes people who identify gender in another way and those with gender identity not reported.

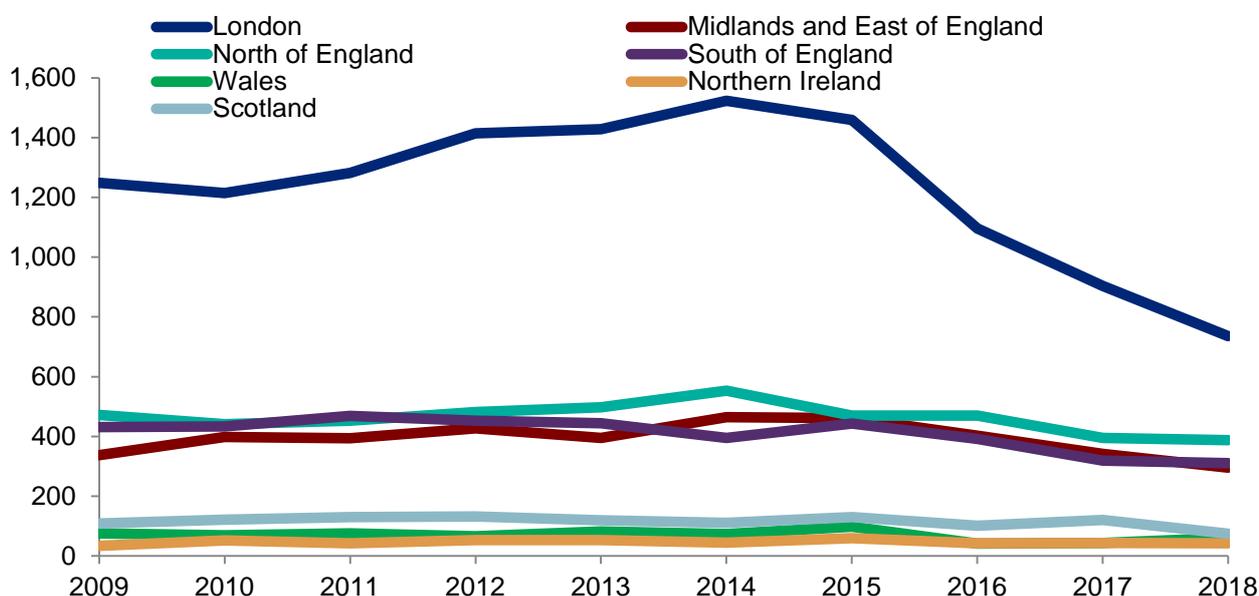
<sup>2</sup> See Table 1 – National HIV surveillance data tables at <https://www.gov.uk/government/statistics/hiv-annual-data-tables>

<sup>3</sup> Other exposure routes include mother-to-child transmission, blood or blood products and exposure through health-care related work.

<sup>4</sup> See Table 2 – National HIV surveillance data tables at <https://www.gov.uk/government/statistics/hiv-annual-data-tables>

<sup>5</sup> See Table 1 – Key populations HIV data tables at <https://www.gov.uk/government/statistics/hiv-annual-data-tables>

**Figure 1: Number of new HIV diagnoses among gay, bisexual and other men who have sex with men by region of residence: United Kingdom, 2009 - 2018<sup>1</sup>**

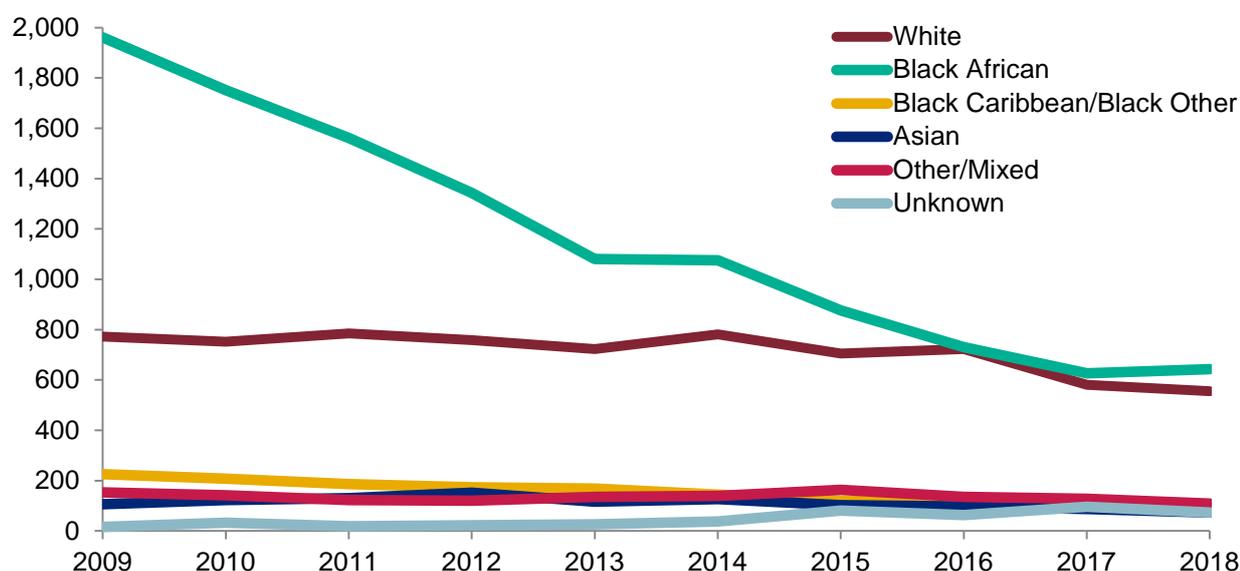


<sup>1</sup> See Table 1 - Key populations HIV data tables at <https://www.gov.uk/government/statistics/hiv-annual-data-tables>

Though the overall decline in new HIV diagnoses has been more modest among heterosexual adults, it has been stable over the past decade. The steepest recent declines in heterosexuals have been seen in adults resident in London (40% decrease 688 in 2015 to 416 in 2018), those aged 25-34 (34% decrease, 538 in 2015 to 355 in 2018), those born in Africa (24% decrease, 925 in 2015 to 700 in 2018)<sup>6</sup>. In Black African adults, while there was a 27% decrease between 2015 (877) and 2018 (643) (Figure 2), it should be noted that the numbers plateaued in 2017 (626) and 2018 (643).

<sup>6</sup> See Tables 4, 6 and 8 – Key populations HIV data tables at <https://www.gov.uk/government/statistics/hiv-annual-data-tables>

**Figure 2: Number of new HIV diagnoses among heterosexual adults by ethnic group: United Kingdom, 2009 - 2018<sup>1</sup>**



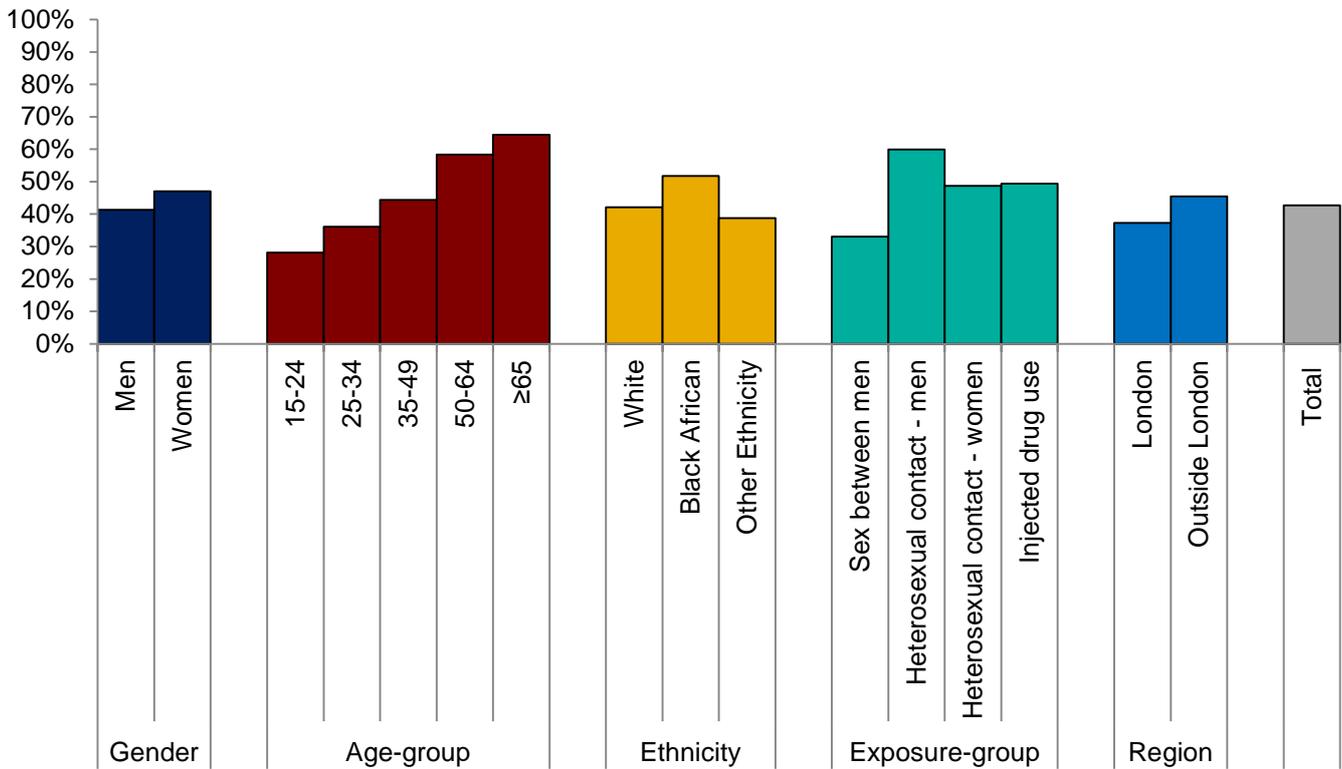
<sup>1</sup> See Tables 4, 6 and 8 – Key populations HIV data tables at <https://www.gov.uk/government/statistics/hiv-annual-data-tables>

The intensification of combination prevention has been critical to the decline in HIV incidence in gay and bisexual men since 2012 [1,2]. Over the past decade, combination prevention has evolved [3] with recommendations for very frequent HIV testing for those having unprotected sex with new or casual partners [1], a shift to earlier and immediate initiation of antiretroviral therapy (ART) after diagnosis [4], and the scale-up of pre-exposure prophylaxis (PrEP) availability from late 2015. The reasons for the fall in new HIV diagnoses will be described in greater depth in PHE’s annual HIV report to be published in November.

People living with HIV who are diagnosed late have been unaware of their HIV infection on average for around three to five years, increasing the risk of onward transmission [5], and have a ten-fold greater risk of dying within a year compared to those diagnosed promptly [6]. Data for 2018 show that there was substantial variation between sub-populations in rates of late diagnosis. The late diagnosis proportion was 60% (372/621) among heterosexual men, 52% among black African adults (346/669), and 59% in those aged 50 and older (399/673) (Figure 3). While the proportion of people living with HIV and diagnosed late has reduced in all areas of the UK over the past decade, (from 52% in 2009 to 43% in 2018), although to a lesser extent outside of London, considerable opportunity for improvement remains<sup>7</sup>.

<sup>7</sup> See Table 4 – National HIV surveillance data tables at <https://www.gov.uk/government/statistics/hiv-annual-data-tables>

**Figure 3: Proportion of adults diagnosed late<sup>1</sup> by gender, age-group, ethnicity, exposure-group and area of residence: United Kingdom, 2018<sup>2</sup>**



<sup>1</sup> Late HIV diagnosis is defined as a CD4 count <350 cells/mm<sup>3</sup> within three months of diagnosis  
<sup>2</sup> See Table 4 – National tables at <https://www.gov.uk/government/statistics/hiv-annual-data-tables>

*AIDS diagnosis and HIV related deaths*

In 2018, there were 225 people with an AIDS-defining illness reported at HIV diagnosis. Moreover, there were 473 deaths among people living with HIV. Over the past decade there has been a 20% decrease in the number of deaths in people living with HIV (591 in 2009 to 473 in 2018)<sup>8</sup>. Given that previous work has shown that 58% of deaths in people with HIV are HIV related [6], the number of deaths due to HIV has decreased slowly over the past decade from an estimated 340 in 2009 to 270 in 2018.

*People seen for HIV care*

In the UK, the number of people seen for HIV care has steadily increased over the past decade, from 65,249 in 2009 to 96,142 in 2018, a 47% increase<sup>9</sup>. Once diagnosed, the quality of HIV treatment and care continues to be excellent in the UK. Over three quarters (77%, 2,915/3,761) of people newly diagnosed with HIV in 2018 and engaged in HIV care began treatment within

<sup>8</sup> See Table 1 – National HIV surveillance data tables at <https://www.gov.uk/government/statistics/hiv-annual-data-tables>  
<sup>9</sup> See Table 8 – National HIV surveillance data tables at <https://www.gov.uk/government/statistics/hiv-annual-data-tables>

90 days of their diagnosis. Furthermore, almost all people engaged in HIV care were receiving treatment, 97% (93,384/96,142) in 2018. Treatment coverage was uniformly high in all geographical regions. However, while remaining high, ART coverage was slightly lower among people aged 15-24 years, (95%, 2,405/2,537) and in people who inject drugs, (96%, 1,784/1,864)<sup>10</sup>.

People living with HIV who maintain an undetectable viral load do not transmit HIV infection [7]. The proportion of people living with HIV who are virally suppressed<sup>11</sup> is an overestimate as it excludes those in HIV care in a particular year who have not re-attended for care in that year, those newly diagnosed in a year who have not been linked to care, and those in regular care without a reported viral load measurement<sup>12</sup>. Nevertheless, this metric allows valuable comparisons between sub-categories of those in HIV care. This topic will be explored in greater depth in PHE's annual HIV report, to be published in November. Meanwhile, the summary metric for 2018 shows 97% (81,775/84,129) of people in regular HIV care on ART with a viral load reported, were virally suppressed, (defined as a viral load  $\leq 200$  copies per ml). Moreover, there was very little variation in viral load suppression across sub-groups, with at least 97% of those on treatment having a suppressed viral load across PHE centre areas<sup>13</sup>.

Following the 2015 peak, the continuing decline in new HIV diagnoses in gay and bisexual men is encouraging and the excellent ART coverage and viral suppression overall is a major achievement. The commitment to routine commissioning of PrEP [8] upon culmination of the PrEP Impact Trial in 2020, and the increase the PrEP Impact Trial places to 26,000 places [9], are vital additions to the combination prevention efforts. Nevertheless, further work is required to consolidate the decline in new diagnoses and reduce late HIV diagnoses among particular sub-populations. There remains scope for reaching even higher levels of combination prevention uptake in these sub-populations such as heterosexuals, people aged 50 and older and in areas outside of London.

### *New local HIV indicators*

HIV indicators are provided at local authority level on PHE's **Sexual and Reproductive Health Profiles**. These profiles include epidemiological data about new HIV diagnoses and people receiving HIV care at the regional and Local Authority level and are based on place of residence. The profiles include existing measures of HIV testing coverage, new HIV diagnosis rates, late diagnoses and diagnosed prevalence rates.

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<sup>10</sup> See Table 8 and 11 – National HIV surveillance data tables at <https://www.gov.uk/government/statistics/hiv-annual-data-tables>

<sup>11</sup> See Table 11 – National HIV surveillance data tables at <https://www.gov.uk/government/statistics/hiv-annual-data-tables>

<sup>12</sup> See Table 13 – National HIV surveillance data tables at <https://www.gov.uk/government/statistics/hiv-annual-data-tables>

<sup>13</sup> See Table 11 – National HIV surveillance data tables at <https://www.gov.uk/government/statistics/hiv-annual-data-tables>

The latest profiles include seven new indicators: late diagnoses rates for MSM, heterosexual men, heterosexual women and people who inject drugs, repeat HIV testing in MSM within the past year, prompt ART treatment initiation in people newly diagnosed with HIV and virological success. These profiles can be used to assist with monitoring the progress towards ending HIV transmission and can be analysed on the [PHE Sexual Health Profiles](#).

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## 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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