



Bristol HIV Health Needs Assessment

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March 2020

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Executive Summary

Introduction

HIV (Human Immunodeficiency Virus) is a chronic health condition which attacks the immune system and if not treated can lead to the development of acquired immunodeficiency syndrome (AIDS). Although HIV stays in the body for life, there are now highly effective treatments for people living with HIV (PLWH), enabling a normal life expectancy. There are ways to detect and prevent HIV transmission including regular HIV testing and medications which can be taken to prevent the acquisition of HIV. Despite these medical advances, significant challenges still remain.

Although anyone could become infected with HIV there are some groups in society that are affected disproportionately by HIV. This includes men who have sex with men (MSM), being of Black African ethnicity and people who inject drugs (PWID). HIV can not only be transmitted through sex but through sharing of injecting drug use equipment, through blood products and also from mother to child.

In 2014 UNAIDS set global targets of ending AIDS as an epidemic by 2030 and to see an end to HIV stigma and discrimination. They set ambitious treatment targets known as the 90:90:90 targets; aiming for 90% of people living with HIV being diagnosed, 90% of those diagnosed receiving treatment and 90% of those receiving treatment having an undetectable HIV viral load by 2020. The aim was to reach these targets by 2020 and reach 95:95:95 targets by 2030. Fast Track Cities is a global initiative which supports high prevalence cities to accelerate progress in these UNAIDS targets. The UK met the 90:90:90 targets in 2018 and Bristol is currently estimated to have reached 92: 98: 98.

The purpose of this Bristol HIV health needs assessment is to review national and local HIV data, outline our current HIV services, summarise the latest evidence around prevention and treatment of HIV and to explore the views of stakeholders in order to determine the key issues and recommendations for action to address HIV in Bristol. This information will be used to inform Bristol's plans to become a Fast Track City for HIV.

HIV nationally

The prevalence of HIV in England was 2.37/1000 people aged 15-59 in 2018 and has remained relatively static over the past couple of years. The prior gradual increase in prevalence in England is mainly attributed to people living longer with HIV due to advances in HIV treatments. The rate of new HIV diagnoses in England was 8.7/100,000 people aged 15+ in 2018 and this demonstrates a

reduction in HIV transmission. The percentage of late diagnoses in England between 2016-2018 was 42.5%. This percentage has reduced over the past decade but still represents a significant proportion of new diagnoses and in turn, the mortality associated with HIV.

Within the exposure risk group of men who have sex with men (MSM), there were 2250 new diagnoses in the UK in 2018 (adjusted figure) . The HIV incidence amongst MSM has continued to decline by 35% since its peak in 2015. The estimated prevalence of HIV in MSM in 2018 was 88/1000 and they remain the most at risk group for acquisition of HIV. The late diagnosis rate in MSM in 2018 was 32.5% which has remained relatively static.

The number of new diagnoses in Black African men and women in 2018 was 818 which shows a continued reduction. The late diagnosis rate was 52% which has shown a marginal reduction but still remains high. The estimated prevalence of HIV for the Black African population in England was 37/1000 in 2018, however the number of Black African women living with HIV is known to be much higher than the number of Black African men. Nationally in 2018 it was estimated that 17,600 Black African women were living with HIV, compared to 8,500 Black African men. It is estimated that 5% of Black African men and 6% of Black African women are living with HIV and unaware of their diagnosis.

The number of new diagnoses amongst people in England who inject drugs (PWID) was 110 in 2018 and shows a reduction from recent years. The late diagnosis rate is 49% which has remained relatively static but high. It is estimated that 11% of people living with HIV who are PWID are unaware of their diagnosis.

HIV in Bristol

HIV prevalence in Bristol has been steadily increasing and was 2.7/per 1000 people aged 15-59 in 2018 which is higher than the overall prevalence in England. According to the NICE criteria Bristol is considered a high prevalence HIV area. There are estimated to be almost a 1000 people now living with HIV in Bristol although around 80 people are unaware of their diagnosis. The number of new HIV diagnoses in 2018 was 36 which reflected a reduction from the previous year, and the rate of new diagnoses was 9.4/100,000 people aged 15+ in 2018 (it was 11.4 in 2017). There were 897 Bristol residents receiving HIV related care in 2018. 43.4% were late presentations, and the number of people with HIV who remained undiagnosed was estimated at 8% (an 'outside of London' figure from Public Health England). Bristol has met the initial 2020 Fast Track Cities and UNAIDS targets of 90:90:90 but are yet to meet the updated 95:95:95 targets (Bristol performance = 92:98:98).

It has been estimated that 231 PLWH in Bristol are of Black African ethnicity with approximately 11 being unaware of their diagnosis. 456 PLWH are estimated to be MSM with 22-96 being unaware of their diagnosis. 21-25 PWID are estimated to be living with HIV with up to 4 unaware of their diagnosis.

Prevention

To prevent HIV acquisition, transmission and late diagnoses there are a combination of evidence based interventions that have shown to be effective. These include the use of condoms, the use of pre-exposure prophylaxis (PrEP), the use of post exposure prophylaxis (PEP), antiretroviral treatment (ART) and regular HIV testing to ensure prompt diagnosis. Health promotion including relationships and sex education in schools is also instrumental to improving understanding and reducing risk of acquisition and therefore informs an important part of the HIV prevention strategy.

Services in Bristol

Bristol has health promotion activities including sexual health teaching in schools, teaching to healthcare professionals and outreach work. Much of this is done through Unity sexual health (BNSSG's commissioned sexual health service) in partnership with Terrence Higgins Trust (THT). This service also provide free access to condoms for the under 20s to promote safe sex practices.

HIV testing is predominantly performed at Unity clinics but also in GP surgeries when indicated. Outreach testing is undertaken at Bristol Drugs Project (BDP) and One 25 (a charity for sex workers) and at lesbian, gay, bisexual, transgender, queer and others (LGBTQ+) venues in Bristol. Unity also has on line access to HIV testing. Antenatal HIV screening is now routine practice.

HIV treatment is provided by the Brecon Unit at Southmead hospital. There are good links between Unity and the Brecon. The Brecon also provides counselling and a team of specialist nurses for support with initiation and maintenance of treatment.

HIV support, including groups and peer support, is predominantly provided by Brigstowe a local charity.

Local views

A service user consultation was undertaken amongst PLWH which highlighted key areas for improvement including improved communication and awareness of Undetectable=Untransmittable (U=U) and awareness within the workplace and amongst healthcare professionals. Promotion of HIV testing venues and free online testing was also felt to be important. Stigma was continually highlighted as an area for improvement with education in schools and the community identified as a key to improve this.

A semi-structured interview with service providers, commissioners and professional experts was also conducted. Key themes from this included the need for good sexual health education in schools, increased community outreach, improved promotion of U=U and PrEP and also an increase in HIV testing within Bristol. The fragmented commissioning structure and lack of funding was also highlighted as an area where lack of resources can impact on PLWH in the city.

A further city-wide consultation took place in October 2019 following the initial gathering of data, views and recommendations for action in Bristol. This was to gather views from key stakeholders in order to inform Bristol's Fast Track Cities Action Plan. HIV treatment and support services were highlighted as areas that were doing well in Bristol. However it was felt that there was still a lack of understanding the needs of diverse communities, a lack of testing in outreach settings and continued HIV stigma amongst healthcare professionals. More details on this consultation can be found in Section 8.4.

Key issues and gaps identified from the needs assessment

In order to determine the key issues around HIV in Bristol, the epidemiological data was considered alongside an understanding of local services, views from stakeholders and the evidence base.

Key issues identified from this needs assessment include:

Insufficient HIV Testing

NICE Guidelines for high prevalence HIV areas (>2.0 per 1,000) recommend performing HIV testing on new GP practice registrations, GP patients undergoing blood tests for another reason and all patients admitted to hospital already undergoing blood tests for another reason who have not previously been diagnosed with HIV. These guidelines are not currently being followed in Bristol. The financial implications of adopting these guidelines and fragmented HIV commissioning responsibilities are likely barriers to this.

Although HIV testing is already available through a number of routes in Bristol- sexual health clinics, on line, GP and outreach services there is further scope to maximise these testing opportunities.

A high rate of undiagnosis and late diagnosis

It is estimated that around 80 people in Bristol are currently unaware of their diagnosis which increases the risk of late diagnosis and onward transmission. The proportion of late diagnoses in Bristol remains high, particularly in Black African heterosexual people.

Persistent stigma

Stigma and discrimination remains a persistent issue that impacts on Bristol HIV testing rates, late diagnoses and overall quality of life for PLHIV. This appears to be particularly common among some BAME communities.

A lack of understanding of HIV among healthcare professionals and the general population

A lack of understanding amongst healthcare staff and the public was raised by all consultation groups and better education has been highlighted as an important consideration for Bristol for young people, for high risk groups and for healthcare professionals. The service user consultation highlighted that stigma needs to be addressed within the healthcare setting and again reinforces better education of healthcare professionals is needed in Bristol. A lack of awareness of the U=U message (Undetectable=Untransmittable) was highlighted multiple times from service users to staff within HIV services.

Fragmented HIV commissioning

It is recognised that HIV commissioning arrangements have been fragmented nationally which impacts on PLWH. A lack of ring-fenced dedicated HIV funding has compounded this impact. An integrated approach is essential for Bristol to ensure the best outcomes for PLWH and the local authority and the NHS will need to collaborate and fully explore options around any future treatment and prevention.

Levels of provision of support services

HIV treatment and support services for Bristol residents are highly rated, but there is a need to ensure adequate provision particularly of support services (including peer support) to address wellbeing issues as well as addressing wider needs such as housing. Mental health of people at highest risk of and living with diagnosed HIV has been highlighted as an unmet need alongside support for healthy lifestyles and long term conditions as people with HIV live longer.

Lack of availability of NHS funded PrEP (pre-exposure prophylaxis)

PrEP is known to be a very effective way of preventing HIV transmission but despite this it is not yet available on the NHS. Knowledge of PrEP needs to be more widely disseminated into other 'at risk' groups and not just the MSM community. The Department for Health & Social Care is currently exploring options for routine commissioning. Bristol will need to ensure that there are effective commissioning arrangements in place that both meet the needs of local residents and are aligned with national recommendations. There will also be a need to understand how to address any potential impacts of increasing PrEP use on other sexually transmitted infection rates, especially syphilis.

Limited understanding of how changing sexual behaviour may impact HIV

The changing population in Bristol and the changing landscape of sexual practices- such as dating apps and chemsex are likely to impact on HIV rates in Bristol and further research is needed to explore these.

Summary of recommendations for consideration

Develop Systems Leadership for HIV

1. Ensure that an **integrated approach** is taken to HIV prevention, HIV care and stigma reduction within Bristol. Clinical services, support services and commissioners need to work in partnership to reduce the potential fragmented nature of the HIV pathway.
2. Ensure commissioners are abreast of changes to the **commissioning of PrEP**, and take account of research findings from the IMPACT and CHOP studies.
3. Take into account the likely future needs of PLWH since people are **living longer with more medical comorbidities**.
4. Ensure that services prioritise the **mental health and psychological wellbeing** of PLWH . Special consideration should be given to how this is addressed within primary care and within the integrated HIV care pathway.
5. Continue to **support increased HIV outreach testing** in services working with high risk groups (e.g. substance misusers and street sex workers) in community settings
6. Ensure adequate **access to HIV support services** including peer support
7. Conduct a **review of resources** that fund HIV treatment, prevention and support in Bristol.
8. Consider conducting a study to give more **robust data on the number of PLWH who remain undiagnosed** within Bristol, rather than relying on modelled estimates.
9. Explore **interventions to engage PLWH not in HIV treatment**

Prevent HIV

1. Improve the **promotion of PrEP within at risk groups** (not only MSM).
2. **Improve the knowledge of HIV amongst healthcare professionals** to reduce the late diagnosis rate and improve HIV testing rates.
3. Ensure good quality HIV teaching is included in the **relationships and sex education (RSE) teaching in schools**, in line with the change to now compulsory sex education in schools from 2020.
4. Undertake **research to consider how mobile dating apps and chemsex** are influencing sexual practices and STI risk in Bristol and how this will impact on HIV rates.

Test the right people and diagnose early

1. **Target HIV screening at GP surgeries within high HIV prevalence wards.** As there is now free postal kit testing for HIV in Bristol provided through Unity, a shifting of resources to a more targeted approach may reduce late diagnoses and improve the targeting of 'at risk' groups.
2. Consider conducting routine **late diagnosis lookbacks** in primary care to encourage learning with the aim of reducing future late diagnoses.
3. Consider implementing the NICE guidance on **HIV testing in A+E**.
4. Improve **access and availability of HIV testing within high risk and diverse groups** (including BAME populations, older people and transgender people) . This could be achieved by **raising awareness, creating social conditions where it is safe to discuss prevention and promoting testing** across community settings.
5. Ensure opportunities for testing and partner notification within **existing HIV testing services are maximised** .
6. Provide accessible information for the public so they know **how to access** HIV testing.

Treat people with HIV effectively and holistically

1. Ensure adequate investment in **HIV support services including peer support** to improve the quality of life for PLWH and those most at risk of HIV exposure
2. Improve the **links between HIV services and lifestyle services** such as smoking cessation provision to improve the health outcomes of PLWH who smoke.
3. Ensure access to services for people with HIV to address mental health and quality of life issues as well as broader issues such as housing to **address inequalities**.

Reduce HIV Stigma

1. Tackle the stigma associated with HIV through **promotion of U=U** for the whole of Bristol and not just within high risk exposure groups.
2. Undertake targeted work to tackle the stigma associated with HIV and HIV testing within the **under-served and marginalised communities**.
3. Provide **education opportunities to improve the knowledge of HIV amongst healthcare professionals**
4. Ensure **good quality HIV teaching is included in the relationships and sex education (RSE)**

teaching in Bristol schools including how to access local services.

5. Work with local businesses to address **stigma and discrimination within the workplace**

1 Introduction

HIV (Human Immunodeficiency Virus) is a virus which attacks the immune system and weakens it. Although HIV stays in the body, treatment can keep the virus under control and the immune system healthy. If not treated, people with HIV can develop AIDS (acquired immune deficiency syndrome). Treatment for HIV is known as anti-retroviral therapy (ART). It is a highly effective treatment and available on the NHS. ART prevents AIDS if started early, and also suppresses the virus so it is not transmittable to others. With the introduction of ART, HIV has now become a condition with the potential for normal life expectancy.

HIV can be transmitted through many different routes. HIV is found in body fluids of an infected person which includes semen, vaginal and anal fluids, blood and breast milk. The most common way of getting HIV in the UK is through having anal or vaginal sex with a person infected with the HIV virus without a condom. Other ways of contracting HIV include sharing of needles, syringes or other injecting equipment associated with drug use. HIV can also be transmitted from mother to baby during pregnancy, birth or whilst breastfeeding.

Type of exposure	Estimated risk of HIV transmission per exposure from a known HIV-positive individual not on ART
Receptive anal intercourse	1 in 90
Receptive anal intercourse with ejaculation	1 in 65
Receptive anal intercourse no ejaculation	1 in 170
Insertive anal intercourse	1 in 666
Insertive anal intercourse not circumcised	1 in 161
Insertive anal intercourse and circumcised	1 in 909
Receptive vaginal intercourse	1 in 1000
Insertive vaginal intercourse	1 in 1219
Semen splash to eye	<1 in 10,000
Receptive oral sex (giving fellatio)	<1 in 10,000
Insertive oral sex (receiving fellatio)	<1 in 10,000
Blood transfusion (one unit)	1 in 1
Needlestick injury	1 in 333
Sharing injecting equipment (includes chemsex)	1 in 149
Human bite	<1 in 10,000

Table1.1: Risk of HIV transmission per exposure from a known HIV-positive individual not on ART. (BASHH 2016)

There are effective ways to prevent or reduce the risk of HIV infection including using a condom for sex, using pre-exposure prophylaxis (PrEP) or post-exposure prophylaxis (PEP) medication¹, not sharing needles or other injecting drug equipment and taking ART medication

¹ Pre-exposure prophylaxis or PrEP is a medication which can be taken by someone who does not have HIV to prevent the risk of acquiring HIV. It can be taken before having sex for those with a high risk exposure and has been shown to be highly effective at preventing HIV acquisition. Post-exposure prophylaxis (PEP) is medication which can be taken as soon as possible (within 3 days) following high risk HIV exposure to lower an individual's chance of contracting HIV if they have come into contact with the virus.

for HIV to ensure HIV viral load is undetectable.

Some groups in society are disproportionately affected by HIV, including MSM, Black African ethnicity and PWID.

Despite significant medical advances, HIV stigma and discrimination continue to impede individuals and communities from accessing and benefiting from effective HIV prevention and treatment approaches. Evidence suggests that HIV stigma provides a barrier to both individuals and groups in society to test for HIV. This stigma also impacts on PLWH adherence to treatment and accessing HIV support which negatively affects their quality of life (Stangl et al, 2013).

The purpose of this needs assessment is to understand the health needs of the Bristol population in relation to HIV. This involves a systematic exploration of the national and local data, a review of current services available in Bristol to prevent, treat, and support people with HIV and consultation with service users, service providers, commissioners, and academics to understand their views on what we should be doing to tackle HIV in Bristol.

2 Who is at risk of HIV?

2.1 Prevalence of HIV in the UK

The gradual increase in prevalence of HIV over the past decade has mainly been attributed to people living longer with HIV due to advances in HIV treatment.

PHE data (PHE 2019b), shows the prevalence rate of HIV (numbers of people with HIV per 1000) in England between the ages of 15-59 to be 2.37/1000 in 2018, which has remained relatively static over the past few years. Prior to this the trend had been of gradual increase.

In 2018 it was estimated that almost 103,800 people are living with HIV in the UK (PHE 2019a). Of these:

- 93% are diagnosed (leaving 7,500 unaware of their diagnosis).
- 97% (96,000) of those diagnosed are on treatment,
- 97% of those in treatment are virally suppressed.

This means of all those in the UK who have HIV, 87% are virally suppressed. (PHE 2019c). Of those people receiving treatment, around a third are female and two thirds are male. The age of people in treatment has been increasing, with around a third now over 50. Over half (54%) of people in treatment are White whilst 29% are Black African.

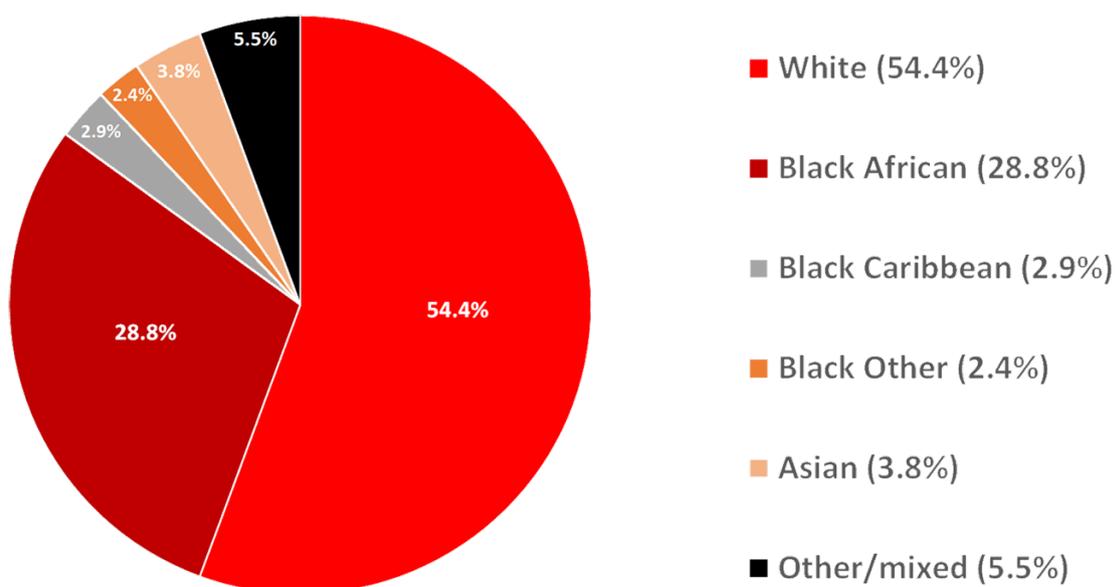


Fig.2.1.1 Ethnicity of people receiving specialist HIV care in the UK in 2018. Source: National Aids Trust, December 2019

2.2 Mode of transmission for those in treatment

Most people in treatment in 2018 acquired HIV through sexual transmission (NAT 2018)

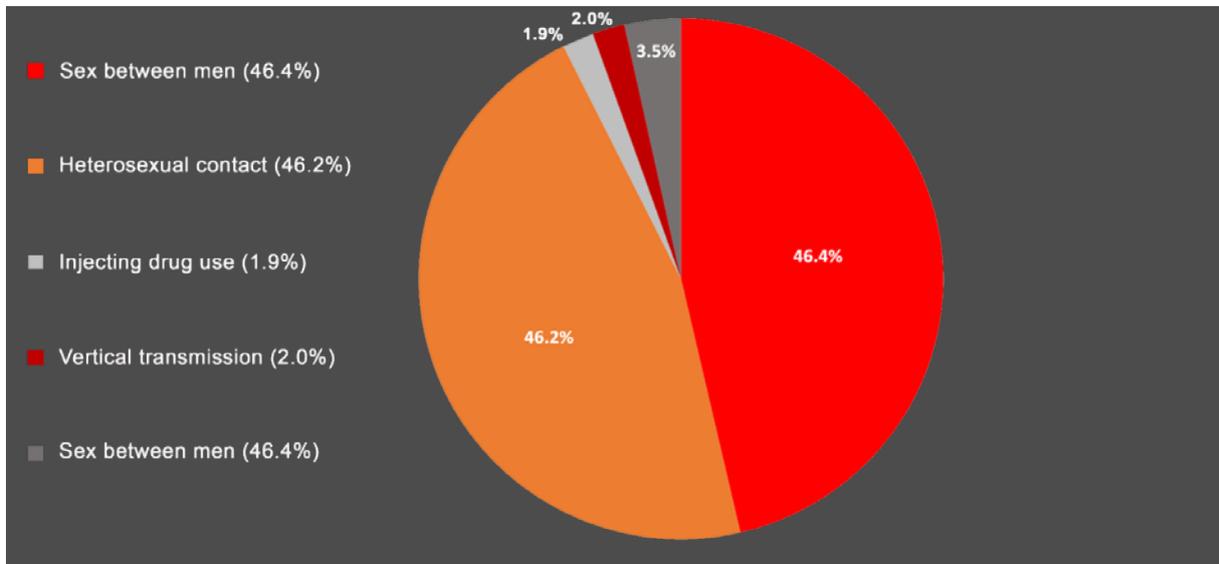


Fig.2.2.1 Mode of transmission for PLWH in treatment in the UK in 2018. Source: National Aids Trust, December 2019

2.3 Incidence of HIV

The number of new cases of HIV in the UK has continued to fall with a 29% reduction since 2015 (PHE 2019a). The predominant cause for the fall is a reduction in new infections from sex between men particularly those who are White, UK born, aged between 15-24 and living in London. The rate of new HIV diagnoses (incidence rate) over the age of 15 in England was 8.7/100,000 in 2018. This has reduced from 10.8 in 2016. 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.

PHE identified that there were 4,453 new diagnoses (3,266 males and 1,185 females (27%)) in the UK in 2018 (PHE 2019b). One in 5 of these were over 50. Taking into account the fact that 834 had their exposure route undetermined and making adjustments for this, of these 4,453 people newly diagnosed with HIV in the UK in 2018:

- 2250 were as a result of men having sex with (MSM). This has reduced by 35% since 2015.
- 1940 were from heterosexual contact (850 male and 1090 female). This has reduced by 20% since 2015.
- 110 were as a result of injecting drug use. The trend for this exposure category has been of continuing low transmissions.
- 140 were from other routes of transmission including mother to child transmission and through blood or blood products. The trend for this exposure category has been of

continuing low transmissions.

- 18% (818) identified as Black African

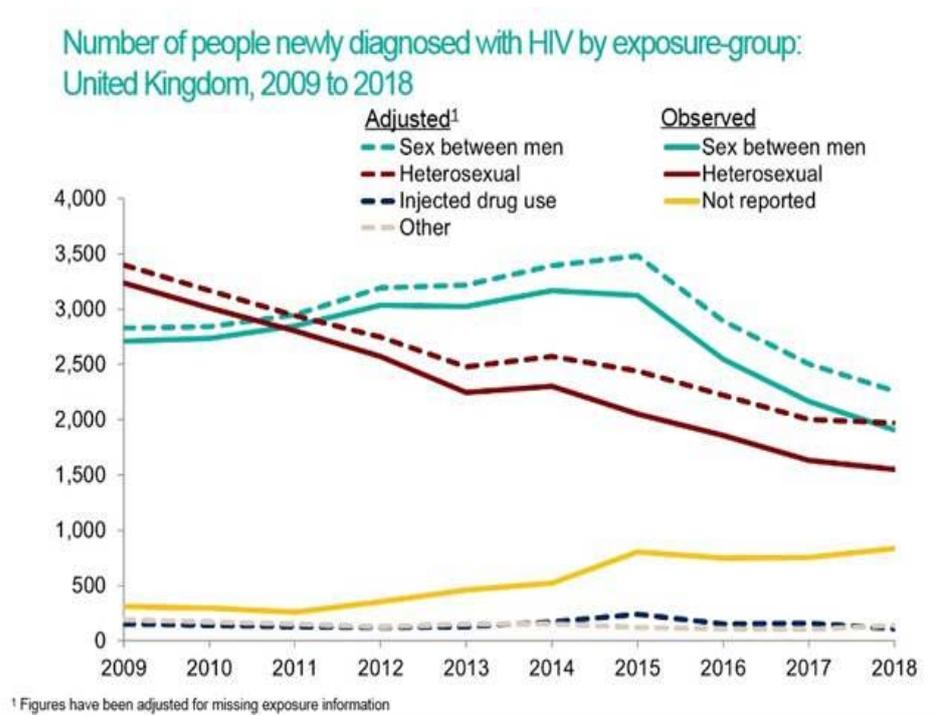


Fig.2.3.1 Number of people newly diagnosed with HIV by exposure group. Source: PHE Slide Set 2019

2.4 Late Diagnosis

The percentage of late HIV diagnoses in England between 2016-2018 was 42.5% (PHE 2019b). A late diagnosis is defined as a very low level of immune cells which make the chances of acquiring other infections very high (CD4 cell count of less than 350 cells per mm³ among all newly diagnosed adults within 91 days of diagnosis). Late diagnosis is the most important predictor of morbidity and mortality among those with HIV infection. Those diagnosed late have a ten-fold increased risk of death within a year of diagnosis, compared to those diagnosed promptly.

Nationally UK data on the proportion of late diagnoses shows that 60% of heterosexual men have a late diagnosis, 52% of black African adults have a late diagnosis 59% of adults over the age of 50 have a late diagnosis and only 33% of gay and bisexual men have a late diagnosis. Although the proportion of late diagnosis has reduced in the UK over the past decade (52% in 2009 to 43% in 2018), this has been to a lesser extent in areas outside of London (PHE 2019b).

2.5 Mortality Rate

In 2017 the overall mortality rate amongst those aged 15-59 who had a prompt HIV diagnosis

was 1.22/1,000 compared to 1.66/1,000 in the general population of same age group (PHE 2018a).

In 2018 there were 473 deaths reported in the UK among people living with HIV. Over the past decade this has shown a 20% decrease in the number of deaths. Consideration needs to be given with this data in that it may not have been an HIV related condition which led to the cause of death (PHE 2019b)

2.6 People Living with HIV who are in NHS Treatment

In 2018 in the UK 96,142 people were seen for NHS HIV care which represents an increase over the past decade (PHE 2019b). Over 75% of people newly diagnosed with HIV in 2018 and engaged in HIV care began treatment within the first 90 days of their diagnosis. Of those engaged in care, 97% were receiving treatment. 97% of people in regular HIV care on ART were virally suppressed (PHE 2019b). Over half of people receiving HIV specialist care in the UK in 2018 were white (52266, 54.4%), and just over a quarter were Black African (27667, 28.8%) (National AIDS Trust 2019)

2.7 People Living with HIV in the UK who Remain Undiagnosed

Table 2.7.1 below shows the estimated number of people living with HIV in the UK per exposure group and also estimates the number that remain undiagnosed (PHE 2019a). The proportions are calculated for UK, for London and outside London. Around 7% of people are thought to be unaware of their diagnosis in the UK (5% in London, 8% outside of London)

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

Exposure category	UK			London			Elsewhere in England			
	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%)	

Table 2.7.1: Estimated number of people living with HIV (diagnosed and undiagnosed) by exposure group – UK, 2018. Public Health England (PHE 2019a)

This shows that the proportion of people living with HIV is similar for gay/bisexual men to people who have acquired HIV through heterosexual sex.

2.8 Groups at Risk of HIV

Although the following section discusses detail about the higher risk groups, it must be highlighted anyone could potentially contract HIV and that awareness of HIV is everyone’s business. The focus on these high risks groups aims to address some of the issues that have been identified but we also recognise that there will be individuals who fall into more than one high risk exposure route and also people who do not view themselves as part of a high risk exposure group. An example of this would be individuals practising Chemsex (engaging in sexual activity whilst under the influence of substances) who may not identify as PWID. There are other at risk populations including sex workers, modern slavery and trafficked individuals not specifically mentioned below.

2.8.1 Men who have sex with men (MSM)

Estimated prevalence of HIV in MSM in 2018 in the UK aged 15-74: 88/1000

Number of new diagnoses in MSM in 2018 in UK : 2250 (50.5% of new diagnoses). The incidence has continued to decline by 39% since its peak in 2015 (PHE 2019b)

Late diagnosis rate in MSM in 2018 in the UK: 33%. This has remained relatively static (PHE 2019b)

The number of MSM newly diagnosed with HIV has continued to decline since the 2015 peak, with a 39% reduction between 2015 and 2018 (PHE 2019b). This is a 35% decrease since 2015 and reflects the success of increased HIV testing and increased uptake HIV treatment and the introduction of PrEP. Data for the UK however, shows that of the new HIV diagnoses, MSM remain the most at risk group for acquisition (53%). The risks are likely to be multifactorial. It is known that the highest risk of HIV transmission per exposure from a known HIV-positive individual not on anti-retroviral therapy (ART) is receptive anal intercourse with ejaculation (British Association for Sexual Health and HIV (BASHH 2016)). The estimated risk of this is 1 in 65 which when compared with the risk of receptive vaginal intercourse at 1 in 1000, is significantly higher.

In 67% of MSM new diagnoses were of white ethnic origin (see Chart NAT), and 84% of MSM in treatment are white.

As a result of unprotected anal intercourse, MSM are also at risk from other sexually transmitted infections such as chlamydia, gonorrhoea, syphilis and genital ulcers. It is known that concurrent STI infections increase the risk of HIV transmission.

There are also behavioural factors that increase the risk of HIV transmission among this group. For example, it can be more common to have multiple sexual partners within the MSM community which increases the risk of acquiring HIV. The stigma surrounding HIV which can result in MSM having barriers to accessing healthcare. This may prevent them from presenting for sexual health screening, advice on condom use, Pre exposure prophylaxis (PrEP) or to access PEP (Post exposure prophylaxis).



Fig. 2.8.1.1 Percentage of MSMs accessing HIV care in 2018 by ethnicity. Source: National Aids Trust, December 2019

The number needed to test (NNTT) is a way of expressing test positivity, making it easier to compare testing across groups and settings. NNTT reflects the number of people needed to test in order to diagnose one HIV infection and it should be considered together with the number of diagnoses made in each population group. The chart below displays the number of tests needed to be completed in sexual health services by sexual orientation. This highlights that a much lower number of tests are required to identify a positive for gay and bisexual men compared to heterosexual men and women.

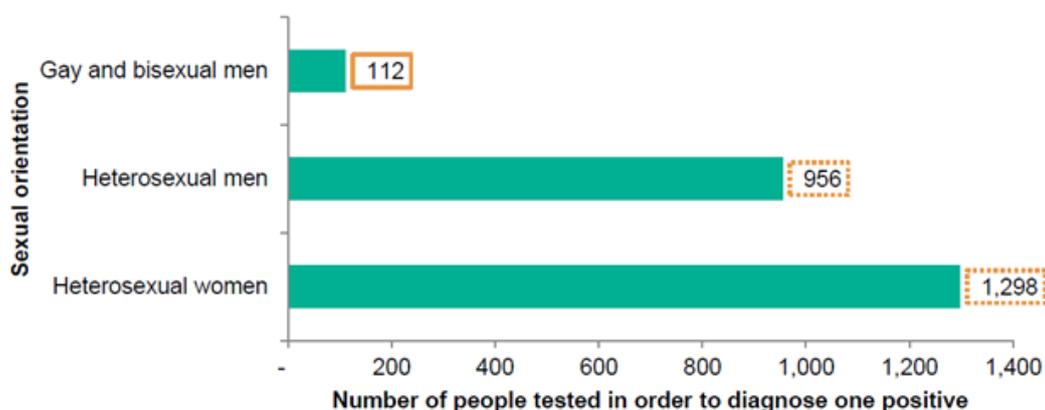


Fig. 2.8.1.2 Number needed to test in order to diagnose one person with HIV, all SHS attendees by sexual orientation, England, 2017 Source: PHE, 2018

2.8.2 Black African ethnicity

Estimated HIV prevalence in Black African persons nationally aged between 15-74 years in 2018 – 36.6/1000 (PHE 2019c)

Number of new diagnoses in Black African men and women in 2018 in the UK – 818. This demonstrates a continued reduction from 1052 in 2015. (PHE 2019b), due to combination prevention strategies and changing migration patterns

Late diagnosis rate in Black African men and women in 2018 in the UK – 52%. This has shown a reduction from 56% in 2017. (PHE 2019b) but compared to other ethnic groups, Black African people are most affected by late diagnoses compared to other ethnic groups.

Of the 818 Black African people newly diagnosed, 646 (79%) were heterosexual and 48 (6%) were men who have sex with men. The sexual orientation of the remaining 217 (16%) is undetermined. The vast majority of Black African people receiving HIV care in the UK acquired HIV through heterosexual sex with 1346 (5%) acquired HIV through vertical transmission (mother to baby through birth or breastfeeding- in most cases this will have happened abroad.

The reason for the increased incidence and prevalence amongst UK black Africans is multifactorial (Dodds 2019). Some cultural norms for this population include high rates of concurrence of sexual partners (including formal as well as informal polygamous relationships). Having multiple sexual partners increases the risk of STIs and also the risk of transmission of HIV, particularly during seroconversion when viral load is high. There is also a cultural stigma surrounding HIV and its link to MSM which can lead to this population not accessing services and being appropriately informed on safe sex practices. Black Africans are more likely to have sex with other Black Africans in the UK which increases the chance of having sex with someone who is HIV positive.

Biological factors include increased underlying rates of STIs which increase the risk of transmission of HIV. For women who have undergone female genital mutilation (FGM), the ongoing infections and fragile vaginal mucosa can increase the risk of HIV transmission.

Black African women accounted for almost two-thirds of women receiving care in 2017 (17,599/28,273; 62%). The number needed to test to detect a positive in Black African women is 137 (this compares to 3,002 for white women). See chart below.

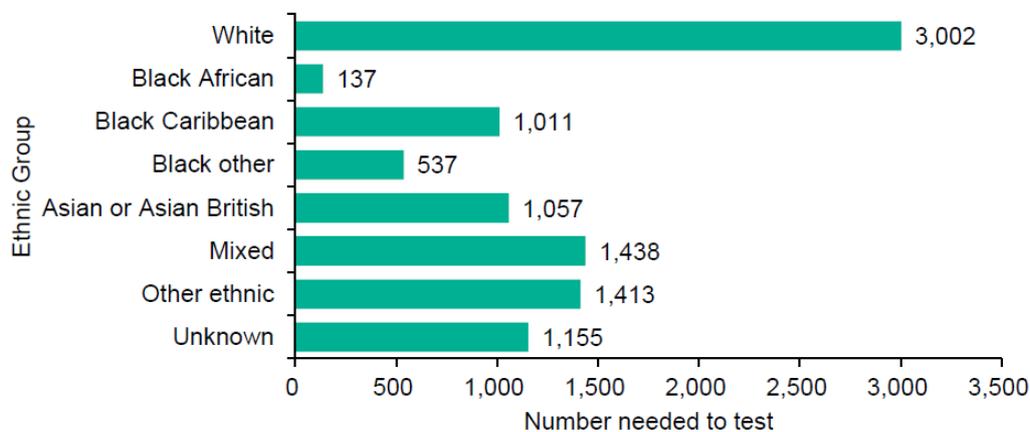


Fig. 2.8.2.1 Number of women needed to be tested to diagnose one positive by ethnicity at all SHS, England, 2017. Source: PHE, 2019

2.8.3 People who Inject Drugs (PWID)

Number of new diagnoses in PWID in 2018 in UK – 110. This demonstrates a reduction with 160 new diagnoses in PWID in 2017(PHE 2019b)

Late diagnosis rate in PWID in 2018 in the UK – 49%. This has remained relatively static over the past few years (PHE 2019b)

HIV prevalence in PWID – Estimates of the prevalence of HIV amongst people who inject drugs vary considerably. The HIV in the UK – Situation Report 2015 (PHE) estimated the HIV prevalence rate nationally in PWID as 2.2 per 1,000 (15-44 years), 11% of whom are undiagnosed. This estimate is lower than the general population prevalence but there are however contradictory estimates of HIV prevalence in the PHE publications:

PHE 2015 HIV report estimates prevalence at:	2.2 per 1,000
PHE Report 2017 ‘Shooting Up’ estimates prevalence at :	17 per 1,000
PHE 2017 ‘Unlinked Anonymous Monitoring Survey of People who Inject Drugs in contact with specialist services’ estimates prevalence at:	8.7 per 1,000

People who inject drugs are at an increased risk of acquiring HIV. HIV can be transmitted through the sharing of needles. The PWID population are also more likely to have a late HIV diagnosis which increases the risk of transmission due to high serum viral load.

Within the group of PWID, will also be sex workers who will have an increased risk of acquiring HIV. Sexual practice whilst under the influence of drugs is also less likely to be protected and less likely to access PrEP or PEP. PWID will also include some of the homeless population and people with more complex lifestyles who are less likely to access healthcare and HIV testing.

The practice of Chemsex has also been increasing in recent years, which is where psychoactive and performance enhancing drugs are taken to enhance group sex which can last for hours or days. This in turn increases the likelihood of unprotected sex whilst under the influence of drugs and can lead to a higher number of sexual partners (Bourne 2012). A study recently estimated that 3 in 10 sexually active HIV-positive MSM in the UK had engaged in chemsex in

the past year (Pufall et al 2018). A greater than 5 fold increase in the odds of HIV acquisition has been identified in MSM disclosing chemsex participation compared with nonparticipants (Pakianathan 2018). It is also recognised that people engaging in chemsex, may not identify themselves as PWID and the risks associated with this.

Another consideration for PWID is the use of performance enhancing drugs such as anabolic steroids. A study showed that prevalence of HIV within this PWID cohort was similar to that amongst injectors of psychoactive drugs and are therefore an at risk group who again may not identify themselves as being at high risk of blood borne viruses (Hope et al 2013).

PHE UK statistics show a continued trend of low numbers of new HIV diagnoses within PWID. The proportion of PWID diagnosed late is 49% and has remained relatively static over the past few (PHE 2019b).

2.8.4 Transgender

There is a lack of data on transgender and non-binary people receiving HIV care in the UK despite knowing that they have an increased exposure risk of sexually transmitted infections. PHE changed their data recording in 2017 which identified that 123 trans people were recorded as accessing HIV care in England in 2017 (0.12% of all people in care) (Kirwan P et al 2019). The majority (88%) were trans women, over half were living in London and 62% identified as white. Data looking at the proportion of late diagnoses, number on HIV treatment and the number on treatment having an undetectable viral load were the same as for the wider population of people living with HIV. The proportion under psychiatric care however was much higher as 16% compared to other people living with HIV (4%) The positive voices survey also highlighted the health inequalities which were significantly higher for trans gender PLWH and 12% felt their care had been refused or delayed because of their HIV status compared to 7% for PLWH who do not identify as trans.

2.8.5 Women and HIV

In October 2019 PHE released a report which specifically looked at HIV amongst women, which has previously not received the spotlight with regards to HIV (PHE 2019d). It shows that women receive fewer HIV tests, women are still likely to be diagnosed late and that they experience high levels of poverty, stigma and unmet health and social needs. Among women diagnosed with HIV in 2018, 93% acquired HIV through heterosexual contact, 2% through injecting drug use, 4% through vertical transmission (spread from mother to baby) and 1% through other

routes. 48% of women newly diagnosed in 2018 were black African, making up the largest proportion of new diagnoses within women. 31% of women were white, 4% were black Caribbean, 4% black other, 4% were Asian and 9% were other/mixed. 25% of newly diagnosed women were born in the UK whilst 51% were born in Africa. Significantly, 47% were diagnosed at a late stage of HIV infection in 2018. As has been seen in the above section on HIV amongst people of black African ethnicity, women have a higher prevalence of HIV than men (almost double).

2.8.6 Deprivation and HIV

There is significant disparity in HIV mortality depending on social deprivation indices (Singh et al 2013). National data also shows that HIV diagnosed prevalence is higher among people from more deprived areas in England (PHEf 2019) than more affluent areas, although there is not a clear trend across the categories of deprivation. Furthermore some ethnicity groups that are disproportionately affected by HIV (e.g. black Africans) are more likely to live in areas of high deprivation (ONS, 2018). The risk of HIV acquisition and black Africans' experience of living with HIV are pervasively influenced by higher levels of poverty, unemployment and poor housing faced by many people in these communities. Immigration-related restrictions are also a significant cause of such deprivation, though not the only one. (NAT 2015).

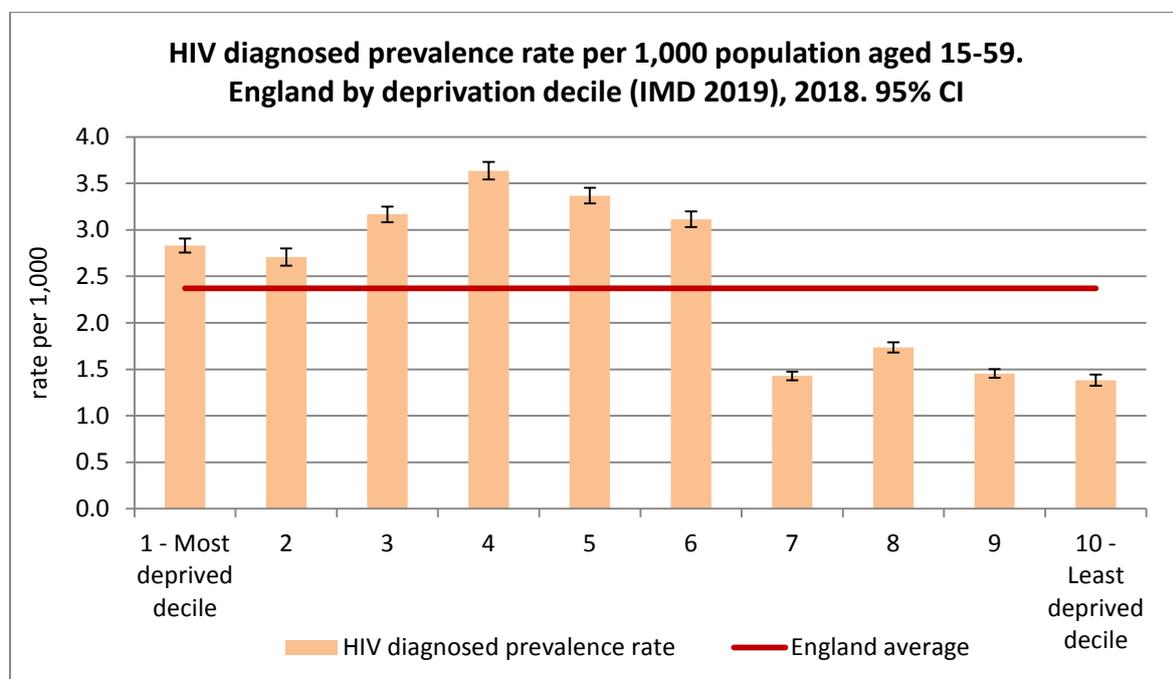


Fig 2.8.6.1 HIV diagnosed prevalence, rate per 1,000 people aged 15-59 by deprivation decile; Source: via PH Sexual and Reproductive Health Profiles November 2019

2.9 HIV Stigma

HIV stigma describes negative attitudes and beliefs held about people living with HIV. It is the prejudice that comes with labeling an individual as part of a group that is believed to be socially unacceptable (Goffman E, 1963); many people think of HIV as a disease that only certain groups get and many of the known HIV risk groups have been traditionally marginalised from social structures of power, and for those people who occupy more than one of these identities (i.e. Black African and gay) the experience of marginalisation is compounded, as is the risk of exposure to HIV.

Many ideas about HIV come from the HIV images that first appeared in the early 1980s. There are still misconceptions about how HIV is transmitted and what it means to live with HIV today. Whilst HIV stigma may have roots in fear of HIV, it is also recognised that stigma is about maintaining bigger power inequalities (Parker and Aggleton, 2003). It is about ensuring that the powerful remain powerful and the weak remain weak. It is now widely agreed that stigma and discrimination basically serve a functional purpose – across a wide range of cultural and social settings – to maintain boundaries between those who have power, and those who do not. It helps to hold social structures in place through techniques of exclusion.

In the context of HIV, this can mean that those who seek to distance themselves from the highly stigmatised associations between sex work, gay identity, being someone who injects recreational drugs and/or being Black African with the risk of HIV infection may be highly likely to struggle with realistic perceptions of HIV risk. For such an individual, they may therefore also struggle to take precautionary action to avoid exposure to HIV, and they may also struggle to engage in routine HIV testing, or to take their HIV medication once diagnosed.

Many UK based studies undertaken in the past decade among people with HIV have demonstrated that despite the remarkable gains in HIV treatment as prevention, they feared how they would be perceived and judged, if they implemented risk reduction strategies that did not involve abstinence or 100% condom use. This demonstrates the pervasive challenge of HIV related stigma in an era of new prevention technologies.

The solutions to stigma cannot be entirely reliant upon building up the resilience of the stigmatised, the solutions lay in tackling social inequalities. It has long been argued that social institutions have the greatest influence on (and therefore the greatest responsibility for) HIV incidence (Barnett & Whiteside 2003). This is because these structures have a disproportionate role to play in determining how resources are shared out at an economic level, and how norms are developed at a social level.

Stigma therefore plays a significant role in preventing people from testing for HIV and ultimately impacts on our late diagnosis rate and number who remained unaware of their HIV status. This stigma also contributes to the quality of life for people living with HIV through discrimination which can impact on all aspects of their life including social, work, living and sex life.

3 HIV in Bristol

Data from national PHE reporting together with data from the HIV treatment service has been used alongside Bristol census data and other local sources, to identify the size of the issue in Bristol. Due to limitations in the data which is available, estimates have been made where necessary, drawing on national percentages and applying them to locally available data. Due to this, caution must be used when interpreting the figures.

The following is a summary of the data for HIV in Bristol which is discussed in more detail in the text that follows.

HIV Prevalence in Bristol in 2018 (between 15-59 years of age)	2.7/1000 which has been steadily increasing. This is higher than the overall prevalence for England
HIV incidence in Bristol in 2018 (aged 15+)	9.4/100,000 which has reduced from 11.4 in 2017
Number of new diagnoses in 2018 in Bristol	36 which has been declining
Number receiving HIV related care in 2018 in Bristol	914 (897, 98%, receiving ART)
Percentage of PLWH presenting with a late diagnosis in Bristol in 2018	43.4% which has remained high and is higher than the England percentage
Percentage of PLWH who remain undiagnosed in Bristol in 2018	8% (England outside of London estimate used)
Deaths reported in Bristol in 2018 from people who were known to be HIV positive	<5 (due to small numbers, specific data will not be reported)

3.1 Bristol Population

Bristol is the 8th largest city outside London (within England and Wales) and has a growing population of over 463,000 people. It hosts 2 major universities and is a relatively young population compared to England as a whole with 20-29 year olds making up 22% of the Bristol population (compared to 13% nationally) .The city is increasingly ethnically diverse with more than 91 different languages spoken and in 2011 15% of the Bristol population were born outside of the UK. There is an active Lesbian, Gay, Bisexual and Transgender (LGBT) scene supported by LGBT-friendly businesses and entertainments district (BCCa, 2019).

The Index of Multiple Deprivation (IMD) is the official measure of relative deprivation in England. It is based on 39 indicators across 7 domains. The IMD 2019 show that 15% of Bristol residents (70,400 people) live in the most deprived 10% of areas in England, and that within England Bristol is ranked 60th (BCCb, 2019).

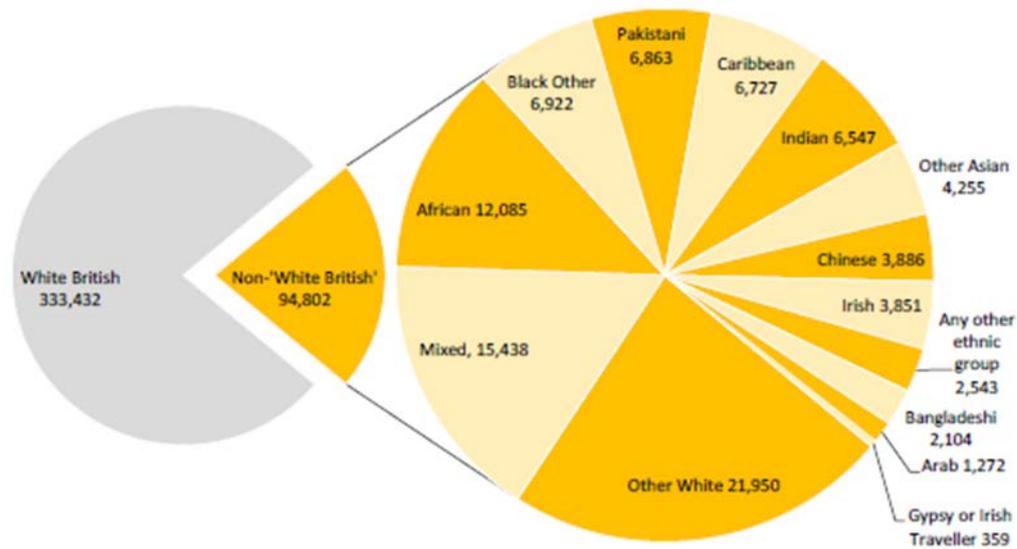


Fig.3.1.1 Population of Bristol by ethnic group Source: 2011 Census Office for National Statistics

3.2 Prevalence of HIV in Bristol

In 2018 the Bristol diagnosed HIV prevalence rate was 2.7 per 1,000 of the population aged between 15 and 59 years (PHE 2019f). The prevalence rate in Bristol has been steadily increasing since 2011 (1.77/1000 in 2011). This prevalence is higher than the 2.4/1000 HIV prevalence in England in 2018 (see Fig.3.2.1). This increase reflects advances and better adherence to HIV treatment so that people are living longer with HIV.

NICE categorises HIV prevalence into bands dependent on rates per 1000:

- Low: HIV prevalence less than 2
- High: HIV prevalence between 2 and 5
- Extremely high: HIV prevalence of 5 or more

Bristol therefore is classed as having a high HIV prevalence rate.

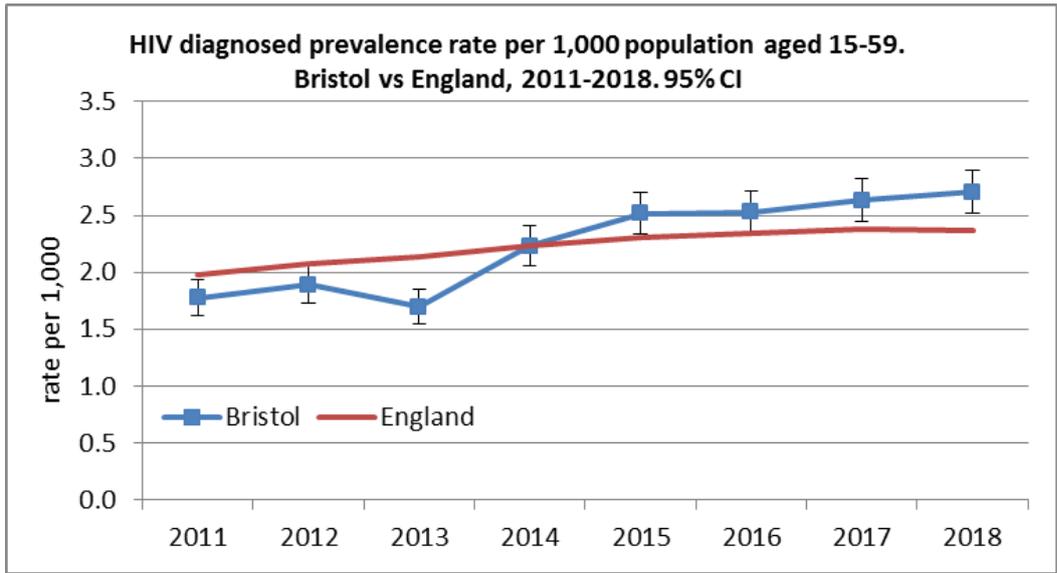
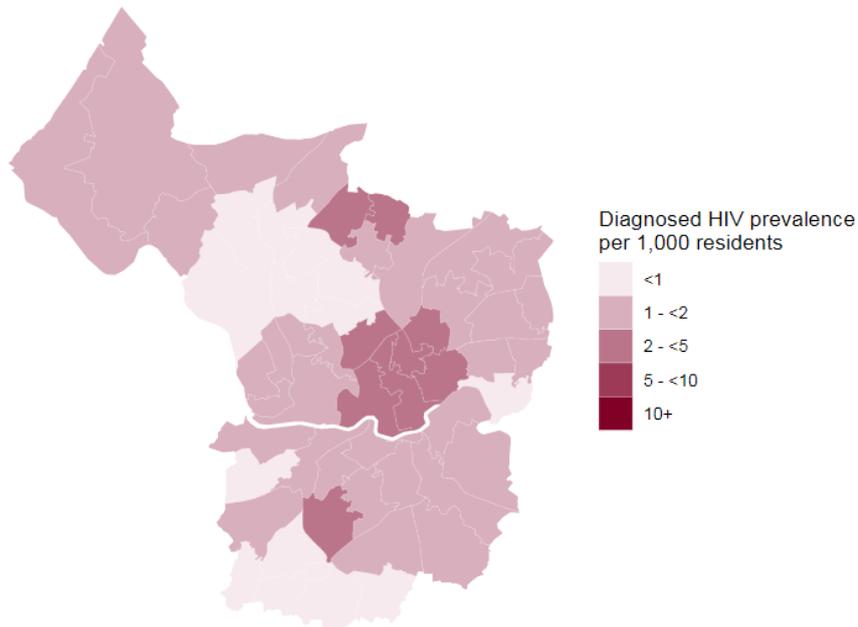


Fig 3.2.1 HIV diagnosed prevalence, rate per 1,000 people aged 15-59; Source: via PH Sexual and Reproductive Health Profiles November 2019

3.3 Prevalence of HIV within Bristol

Most HIV data is not available below Bristol local authority level. This map below though shows prevalence rate of HIV within Bristol medium super output areas (MSOAs). 20% of MSOAs had a prevalence rate of over 2 per 1000. Geographically these MSOAs include areas of Clifton, Horfield, Easton, Eastville, Lawrence Hill, St George, Brislington and Windmill Hill.



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Figure 3.3.1

shows the prevalence of diagnosed HIV infection per 1000 of the population in Bristol, 2018 by middle layer super output areas (MSOAs).

3.4 Incidence of HIV in Bristol (new cases)

Bristol had 36 new HIV diagnoses in people over the age of 15 in 2018 (PHE 2019f). The rate of new diagnoses in Bristol has decreased by 17% since 2017 and is similar to the rate in England. Bristol rate of new HIV diagnoses in 2018 was 9.4/100,000 and England was 8.7 in 2018.

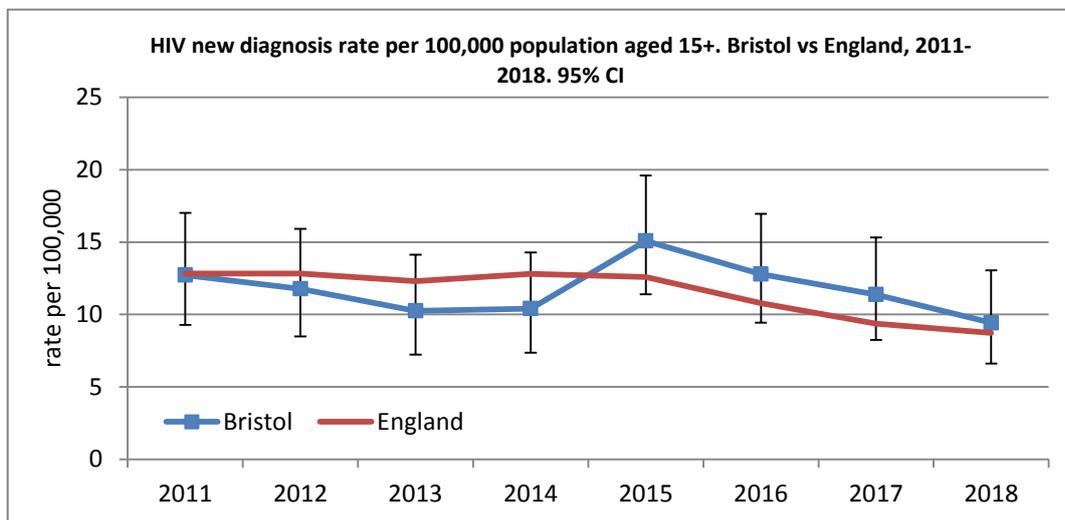


Fig.3.4.1 HIV new diagnosis rate per 100,000 population aged 15 and over; Source: via PH Sexual and Reproductive Health Profiles November 2019

3.5 Late Diagnosis in Bristol

HIV surveillance data shows that, of the 106 people with a new HIV diagnosis in Bristol between 2016 and 18, 43.4% were considered to have had a late diagnosis. This rate has slightly decreased from 46% in 2014-2016 and is similar to the national average of 42.5% (see fig 3.5.1). Heterosexuals and Black African, Black Other and Asian ethnicities are more likely to be diagnosed late within Bristol (see Table 3.5.1 & 3.5.2)

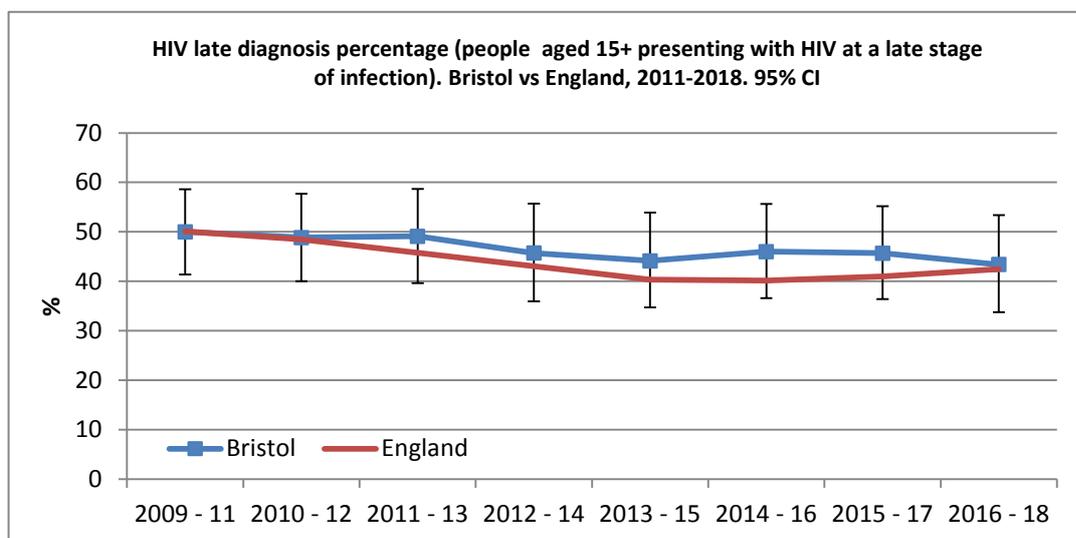


Fig.3.5.1 HIV late diagnosis percentage; Source: via PH Sexual and Reproductive Health Profiles

Exposure group	Bristol	England
Men who have sex with men (MSM)	37.0 (24.3 - 51.3)	32.5 (31.2 - 33.8)
Heterosexual men	52.2 (30.6 - 73.2)	59.4 (57.0 - 61.7)
Heterosexual women	36.8 (16.3 - 61.6)	49.4 (47.2 - 51.6)

Table 3.5.1 HIV late diagnosis percentage by exposure group; Source: via PH Sexual and Reproductive Health Profiles

Ethnicity	Percentage (95% confidence intervals)
White	39.8 (38.5-41.1)
Black African	54.7 (52.4-57.0)
Black Caribbean	47.6 (41.2-54.0)
Black Other	49.8 (42.6-56.9)
Asian	46.8 (42.8-50.9)
Other/mixed	34.5 (31.5-37.6)
Not reported	34.1 (30.5-37.7)

Table 3.5.2 HIV late diagnosis percentage by ethnicity; Source: via PH Sexual and Reproductive Health Profiles

3.6 Bristol People Living with HIV in NHS Treatment

The HIV & AIDS Reporting System (HARS) data is collected by NHS HIV Treatment Services. 2018 data shows that 914 people received HIV related care in Bristol in 2018. and the number of people living with HIV in Bristol who were undiagnosed was estimated at 8% (based on the 2018 England outside of London national estimate from PHE).

98% of those residents with diagnosed HIV were receiving ART, and of these, 98% were known to be virally suppressed (VL<200) and were therefore unable to pass on HIV.

Public Health Outcome Framework (PHOF) Indicator	England (2018)	Bristol (2018)
Prompt ART initiation in people newly diagnosed with HIV (%)	79.1%	86.8%
Virological success in adults accessing HIV care (%)	97.2%	97.5%

Table 3.6.1 comparing ART treatment and viral suppression in people in Bristol and England HIV treatment 2018

Source: via PH Sexual and Reproductive Health Profiles

3.7 Gender and Ethnicity of Bristol People Living With HIV Seen For Care

The table on the following page shows a breakdown of this data by ethnicity and probable route of infection for people in Bristol between 2014 and in 2016. In 2018 914 residents in Bristol received HIV related care. Of these 630 were male and 284 were female. Of these 57% were White, 24% were Black African and 5% were Black Caribbean (figure 3.7.1).

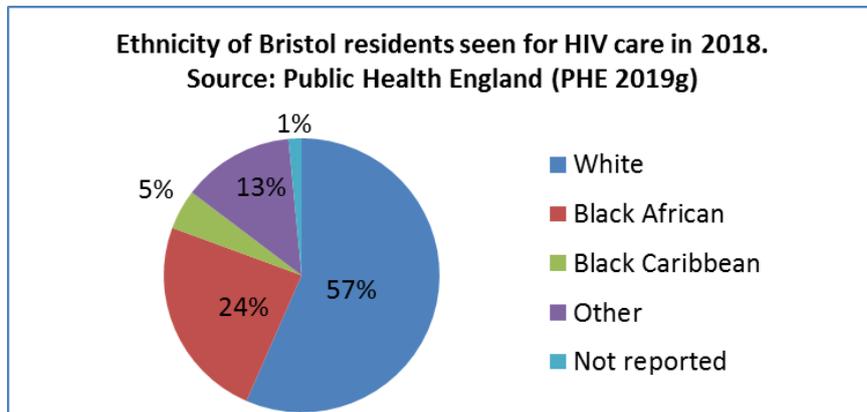


Fig 3.7.1 Ethnicity of Bristol residents seen for HIV care, 2018 (PHE 2019g)

Persons seen for HIV care, by ethnic group, gender and probable route of infection: 2014-2018						
Persons resident in Bristol, City of Local Authority / Data to the end of December 2018						
Source: Public Health England						
Ethnic group	Gender	Survey year				
		2014	2015	2016	2017	2018
White	Male	351	403	423	440	458
	Female	44	53	52	61	59
	Sub total	395	456	475	501	517
Black African	Male	51	62	65	71	73
	Female	138	145	137	132	147
	Sub total	189	207	202	203	220
Black Caribbean	Male	13	18	17	19	23
	Female	18	18	19	20	20
	Sub total	31	36	36	39	43
Black other	Male	5	6	5	8	9
	Female	7	11	12	10	11
	Sub total	12	17	17	18	20
Asian	Male	Data suppressed for confidentiality	12	Data suppressed for confidentiality		
	Female	Data suppressed for confidentiality	5	Data suppressed for confidentiality		
	Sub total	12	17	16	21	24
Other/mixed	Male	20	24	33	35	35
	Female	31	37	35	38	41
	Sub total	51	61	68	73	76
Not reported	Male	Data suppressed for confidentiality				
	Female	Data suppressed for confidentiality				
	Sub total	12	11	13	12	14
Total	Male	459	534	566	600	630
	Female	243	271	261	267	284
	Sub total	702	805	827	867	914
Exposure category	Gender	Survey year				
		2014	2015	2016	2017	2018
Sex between men	Male	309	353	380	403	411
	Female	120	134	145	163	173
Heterosexual contact	Male	226	240	237	247	260
	Female	226	240	237	247	260
	Sub total	346	374	382	410	433
Injecting drug use	Male	Data suppressed for confidentiality	15	Data suppressed for confidentiality	14	Data suppressed for confidentiality
	Female	Data suppressed for confidentiality	5	Data suppressed for confidentiality	5	Data suppressed for confidentiality
	Sub total	18	20	19	19	21
Mother to child	Male	Data suppressed for confidentiality	15	11	6	10
	Female	Data suppressed for confidentiality	20	16	9	13
	Sub total	11	35	27	15	23
Blood/blood products	Male	Data suppressed for confidentiality				
	Female	Data suppressed for confidentiality				
	Sub total	<5	<5	<5	5	5
Other/not known	Male	Data suppressed for confidentiality	14	Data suppressed for confidentiality		16
	Female	Data suppressed for confidentiality	5	Data suppressed for confidentiality		5
	Sub total	16	19	15	15	21
Total		702	805	827	867	914

Table 3.7.1: Number of people living with diagnosed HIV by ethnicity and reported exposure group in City of Bristol: 2014 to 2018 (PHE 2019g)

3.8 Route of Exposure for People with Diagnosed HIV in Bristol

Sex between men was the likely route of infection for 45.0% of people in Bristol in care for HIV in 2018, and heterosexual sex for 47.4%. These proportions have remained fairly consistent since 2014. A small proportion of people were exposed to HIV via injecting drug use (2.3%),

vertical transmission from mother to child (2.3%) and infected blood and blood products (0.5%).

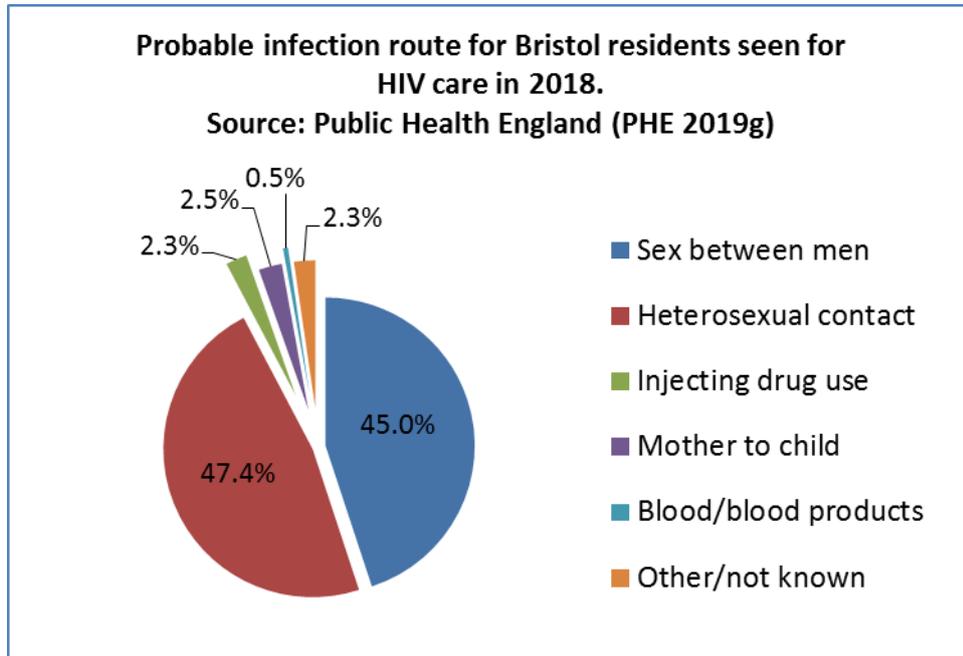


Fig.3.8.1 Probable exposure route of Bristol residents seen for HIV care, 2018 (PHE 2019g)

3.9 People Undiagnosed in Bristol

A proportion of those living with HIV are unaware of their infection and some people are diagnosed but not in treatment, therefore the total number of Bristol residents living with HIV (those diagnosed and those not) can only be approximated using estimates.

The calculations draw on national estimates derived from statistical modelling based on multiple sources of surveillance and survey data, as presented in the report from Public Health England (PHE 2019a). Estimates of total population prevalence of HIV are available only for England, London and the rest of England (outside of London) as a whole (See table 2.7.1.). Precision in the statistics presented for Bristol in this document is therefore limited.

Two different methodologies were used to derive meaningful approximations of the total numbers of Bristol residents living with HIV for this needs assessment:

Method 1: Applying national estimates of the population prevalence of HIV to local estimates of the Bristol population, in total and broken down by exposure groups.

The accuracy of this method relies on the quality of Bristol estimates of the population groups in scope, and how close the national estimates of population prevalence of HIV are to the reality in Bristol. Appendix 1 explains in more detail the calculation process and some of the challenges

encountered in estimating the population sizes in scope here, which compromise this method to a significant degree. The resulting estimates of the size of the Bristol population living with HIV were at odds with the data on known cases of HIV in treatment that are available from Public Health England, sometimes by a considerable margin and on balance it is not felt that this methodology is any more than indicative at best.

Method 2: Applying national estimates of the proportion of those living with HIV that are unaware of their infection status, to local data on the actual number of Bristol individuals in NHS treatment for HIV.

This method does not require local population estimates, and relies less on national estimates to derive its approximations of the PLWH. It works backwards from the actual data on those living with HIV in Bristol and in care in 2018. A proportion is added (based on PHE’s estimates for ‘England outside of London’) to include those cases living with HIV but unaware of their infection. The end result is an approximation of the total number of people living with HIV in Bristol, and those within that group that are unaware of their infection, for the population as a whole and broken down for exposure groups of interest, and gender where appropriate. Although this methodology is likely to be more robust, the inclusion of national estimates for the proportion of cases unaware of their HIV infection in this method still introduces a significant margin of potential error (and are presented as a central point estimate with a range of ‘credible’ values to acknowledge that margin of error)

The resulting estimates, derived from both approaches are summarised in the table below

Exposure category	Method #1		Method #2	
	PLWH in Bristol	Undiagnosed	PLWH in Bristol	Undiagnosed
Gay and bisexual men	539 - 1071	27 - 203	456 (433 - 507)	45 (22 - 96)
People who inject drugs	4 - 6	~1	22 (21 - 25)	1 (0 - 4)
Heterosexuals	Not possible to estimate with method #1		466 (456 - 487)	33 (23 - 54)
Black Africans	274 - 435	8 - 39	231 (228 - 237)	11 (8 - 17)
	<i>Black African (female)</i>	Not possible to estimate with method #1	155 (154 - 159)	6 (5 - 10)
	<i>Black African (male)</i>		76 (74 - 78)	5 (3 - 7)
	All other than Black Africans		235 (225 - 264)	22 (12 - 51)
	<i>All other than Black Africans (female)</i>		121 (117 - 125)	11 (7 - 15)
	<i>All other than Black Africans (male)</i>		114 (108 - 139)	11 (5 - 36)
Mother to child transmission			23	Not applicable / Not possible to estimate with method #2
Infected blood/blood products		5		
All other routes of infection & Unknown		21		
Total	814	47 - 110	993 (972 - 1051)	79 (58 - 137)

Table 3.9.1 Estimates of number of total number of people living with HIV by exposure category based on 2018 data

The estimates from method 2 above are presented visually below where the size of the circle is proportional to the number of people.

There are thought to be approximately 993 (972 – 1,051) people living with HIV in Bristol in total with around 79 (58-137) unaware of their diagnosis; Around half , or 456 (433 - 507) of these people are likely to have been infected through sex between men , and around half, or 466 (456 - 487) through heterosexual sex, with a small number (21 – 25) infected through injecting drugs.

Within the group who acquired HIV through heterosexual sex (466) , almost half, 231 (228 – 237) are estimated to be of Black African ethnicity with Black African women twice as likely to be affected than men.

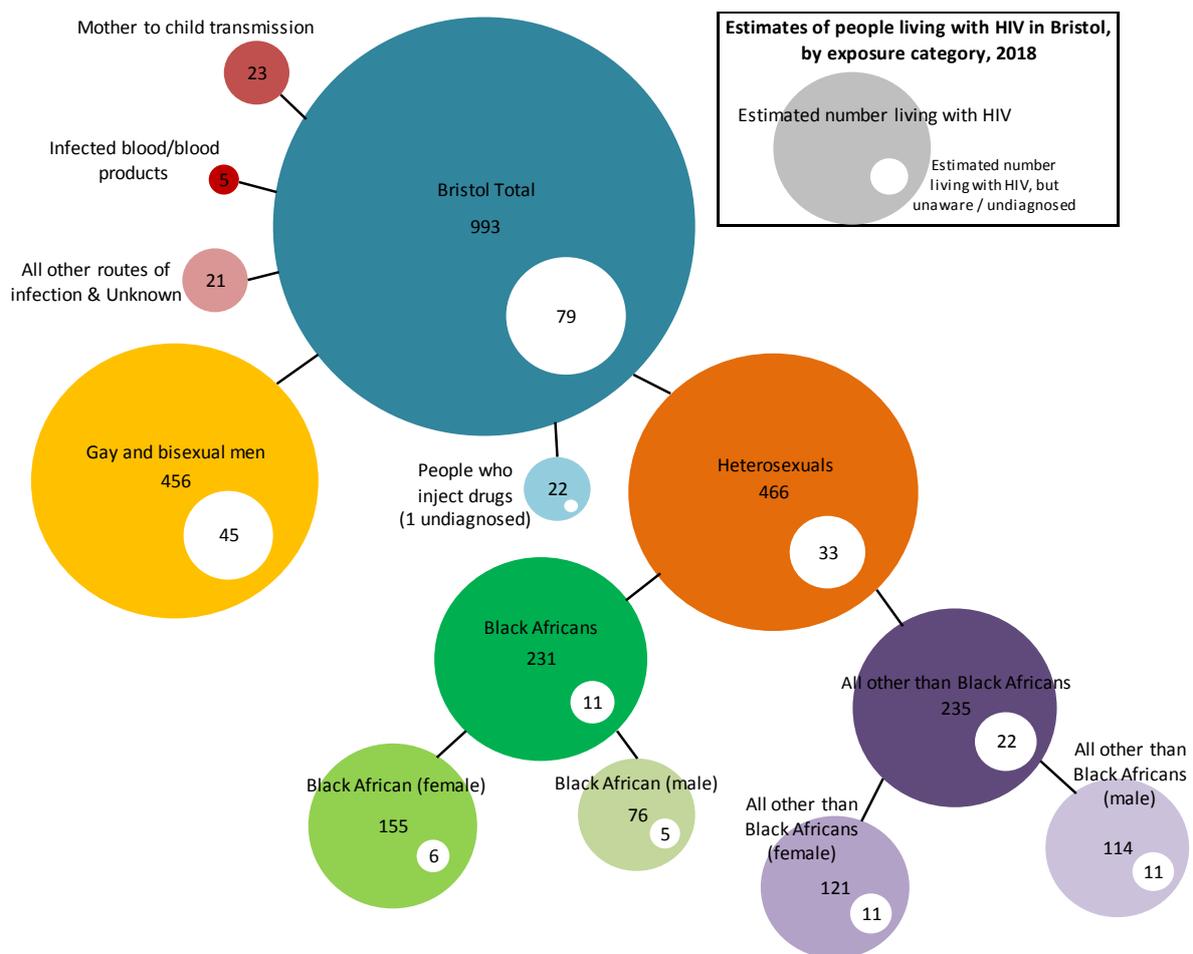
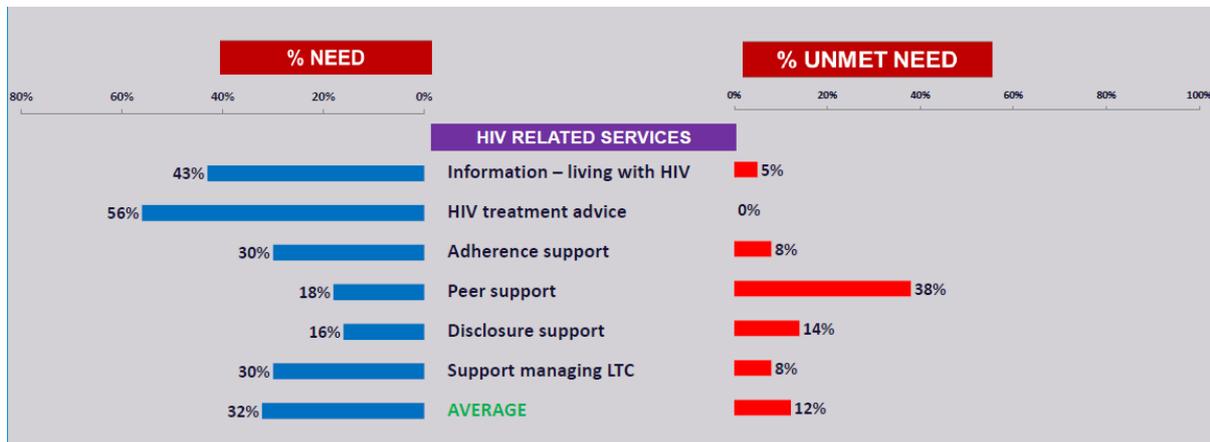


Figure 3.9.1 Estimated number of people living with HIV in Bristol, by exposure category, 2018

3.10 Quality of life of people living with HIV in Bristol

Positive Voices is a national survey of people living with HIV and receiving care in England and Wales, that is carried out by Public Health England. It surveys the lives, experiences and health care needs of people living with HIV and was last completed in 2017. The results displayed below are broken down by Bristol residents receiving HIV treatment who completed the survey (n=45)



* The % need is defined as the percentage of participants that stated a need for the service. Out of the total number of participants who stated that need, the % unmet need is defined as the percentage of participants who did not receive it; either because they could not get it or did not try to get it.

Figure 3.9.2 Percentage of needs and unmet needs of Bristol residents accessing HIV related services. Source: Postive Voices 2017, Southmead Hospital Clinic Report (2019).

Whilst the highest percentage of need reported was ‘HIV Treatment Advice’, none of the participants reported an unmet need around this domain which suggests that individuals are receiving good HIV treatment advice. The highest percentage of unmet need reported around HIV related services were ‘Peer support’.

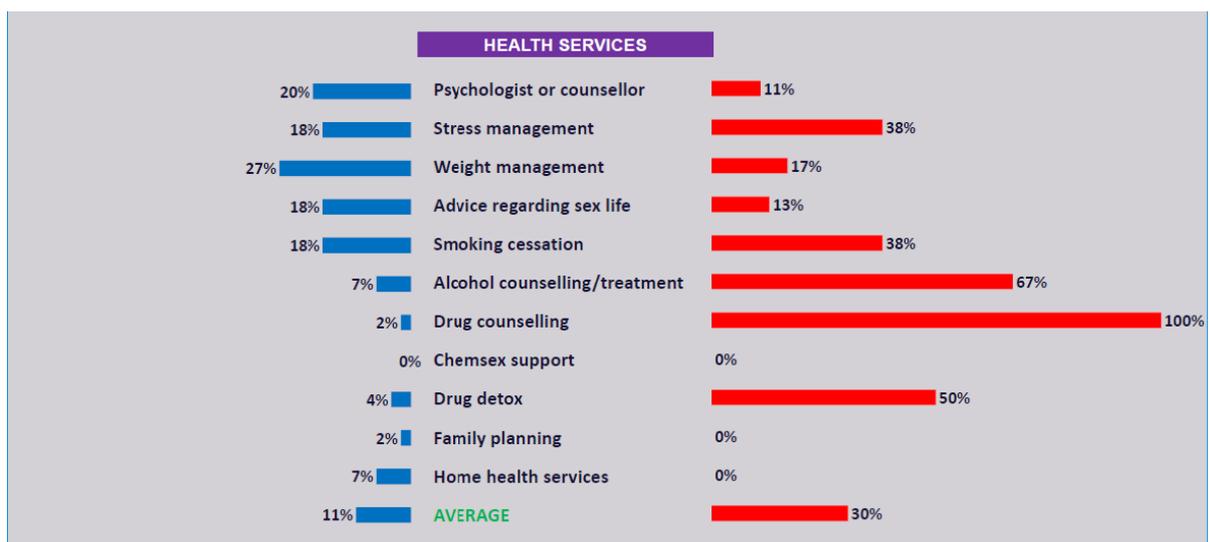


Figure 3.9.3 Percentage of needs and unmet needs of Bristol residents accessing health services. Source: Postive Voices 2017, Southmead Hospital Clinic Report (2019).

The highest percentage of need reported for health services was for 'Weight management' however there was a relatively low unmet need for this domain amongst the participants. Where a relatively high percentage of need was reported, 'Stress Management' and 'Smoking Cessation' services had the highest levels of unmet need. As there were a higher percentage of Bristol residents who were smokers reported in this study than nationally (28% compared to 21%), this would suggest that further support is required around smoking cessation.

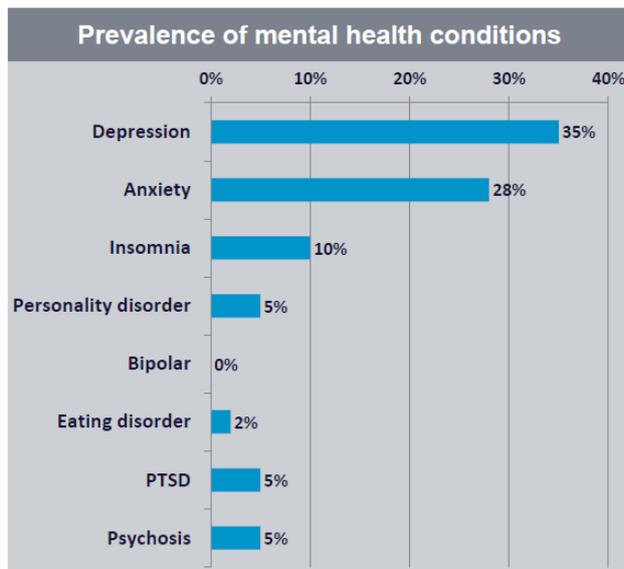


Figure 3.9.4 Percentage prevalence mental health needs. Source: Postive Voices 2017, Southmead Hospital Clinic Report (2019).

The highest percentage of mental health conditions were for depression and anxiety. 35% of participants had a diagnosis of depression which compares to 19% in the general population. Whilst 28% had a diagnosis of anxiety which compares to 15% in the general population.

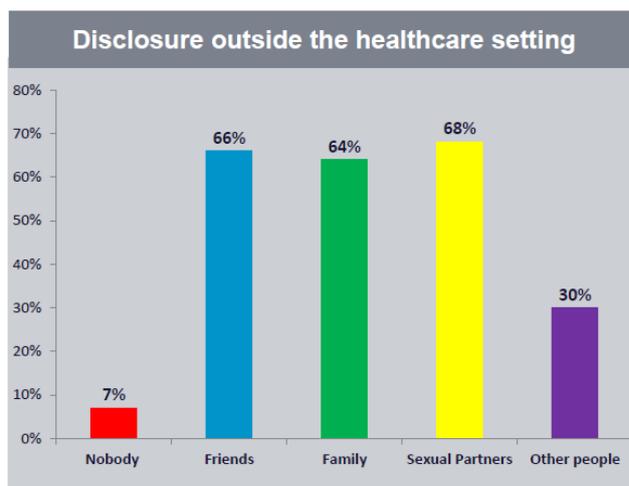


Figure 3.9.5 Percentage of individuals disclosing their HIV status outside of healthcare settings. Source: Postive Voices 2017, Southmead Hospital Clinic Report (2019).

7% of patients reported that they have never told anyone about their HIV status outside of a healthcare setting. In addition, 22% reported that they were worried about being discriminated against in a healthcare setting in the past year whilst 5% said they had avoided seeking healthcare when they had needed it in the past year. Only 4% said they had actually been refused healthcare or delayed a treatment or medical procedure in the past year.

4 National/global outcome indicators

4.1 Public Health Outcomes Framework

Table 5 shows the high level Public Health Outcome indicators (PHE 2019f) for HIV and how Bristol compares to the national rate and the other 7 core cities across England.

PHE HIV data	Definition	Bristol	England	Nottingham	Leeds	Sheffield	Newcastle	Birmingham	Liverpool	Manchester
New HIV diagnosis rate/ 100,000 age 15+	All new HIV diagnoses among adults (aged 15 years or more) expressed as a rate per 100,000 population.	9.4	8.7	25.7	13.2	5.6	7.6	12.9	11.8	25.3
HIV diagnosed prevalence rate/ 1000 aged 15-59	People aged 15 to 59 years seen at HIV services expressed as a rate per 1,000 population.	2.70	2.37	3.31	2.77	1.79	2.0	2.84	2.20	6.21
HIV late diagnosis (%)	Percentage of adults (aged 15 years or more) diagnosed with a CD4 <350 among all newly diagnosed adults with CD4 count available within 91 days of diagnosis.	43.4	42.5	40.5	52.5	38.4	43.6	41	45.5	40.8

Table 4.1.1 New and diagnosed HIV prevalence rate and Late Diagnosis Rate Bristol compared to Core Cities.

Source: Source: via PH Sexual and Reproductive Health Profiles

A number of other HIV related Public Health indicators are collated on the Sexual and Reproductive Health Profile on PHE's Public Health Fingertips website. The table below lists Bristol's performance against these indicators and compares them to the national rates:

PHE HIV data	Definition	Bristol	England
HIV late diagnosis (%) in heterosexual women	The proportion of heterosexual women newly diagnosed with HIV with a CD4 count <350 available within 91 days of diagnosis.	36.8	49.4
HIV late diagnosis (%) in heterosexual men	The proportion of heterosexual men newly diagnosed with HIV with a CD4 count <350 within 91 days of diagnosis.	52.2	59.4
HIV late diagnosis (%) in MSM	The proportion of gay, bisexual and other men who have sex with men (MSM) newly diagnosed with HIV with a CD4 count <350 within 91 days of diagnosis.	37.0	32.5
HIV testing coverage, men (%)	The proportion of eligible new males attending a specialist sexual health service where a HIV test was accepted.	79.4	78.4
HIV testing coverage, MSM (%)	The proportion of eligible new MSMs attending a specialist sexual health service where a HIV test was accepted.	87.7	87.8
HIV testing coverage, total (%)	The proportion of eligible new attendees at a specialist sexual health service where a HIV test was accepted.	72.6	64.5
HIV testing coverage, women (%)	The proportion of eligible new females attending a specialist sexual health service where a HIV test was accepted.	66.2	55.2
Infectious Diseases in Pregnancy Screening - HIV Coverage	The proportion of pregnant women eligible for HIV screening for whom a confirmed screening result is available at the day of report.	<i>No data</i>	99.6
Prompt ART initiation in people newly diagnosed with HIV (%)	The proportion of adults who started antiretroviral Therapy (ART) within 91 days of their HIV diagnosis.	86.8	79.1
Proportion of TB cases offered an HIV test	The annual proportion of TB cases who were offered an HIV test	97.7	96.8
Repeat HIV testing in MSM (%)	The proportion of MSM who have tested for HIV more than once for in the previous year.	44.3	44.8
Virological success in adults accessing HIV care (%)	Proportion of adults who are accessing HIV care with an undetectable viral load.	97.5	97.2

Table 4.1.2 Bristol & England's HIV related Public Health indicators. Source: Source: via PH Sexual and Reproductive Health Profiles 2018 data

Bristol is performing well compared to England in the total coverage HIV testing which was 72.6% in 2018. Bristol also has a relatively similar testing coverage for both MSM and for men when compared with England. Bristol is performing below the national rate at testing coverage in women.

4.2 Fast Track Cities Initiatives Goals

The Fast Track Cities Initiative is a world-wide movement towards ending HIV as a public health threat. The Fast-Track Cities initiative is a global partnership between cities and municipalities around the world and four core partners – the International Association of Providers of AIDS

Care (IAPAC), the Joint United Nations Programme on HIV/AIDS (UNAIDS), the United Nations Human Settlements Programme (UN-Habitat), and the City of Paris.

Launched on World AIDS Day in 2014, the network has grown to include more than 300 cities and municipalities. Mayors designate their cities as Fast-Track Cities by signing the Paris Declaration on Fast-Track Cities, which outlines a set of commitments to achieve the Initiative's objectives. The revised Paris Declaration (amended in 2018) committed Fast Track Cities to attain the UNAIDS 95-95-95 (previously 90-90-90) targets by 2030:

- 95% of all people living with HIV will know their HIV status;
- 95% of all people with diagnosed HIV infection will receive sustained antiretroviral therapy (ART);
- 95% of all HIV-diagnosed people receiving sustained ART will achieve viral suppression.
- Achieving zero HIV related stigma is the Initiative's fourth target.

Attaining these targets will put us on a trajectory towards getting to zero new HIV infections by 2030 which is a target the UK government in January 2019 also committed to. There are over 300 cities which have now signed up to be a Fast Track City and have committed to the above targets. London, Brighton, Liverpool, Manchester and Glasgow are the current UK cities signed up. Bristol will sign the Paris Declaration on the 30th November 2019 to officially become a Fast Track City.

In 2018 the UK achieved the initial Fast Track City 90-90-90 targets with 93% of those living with HIV being diagnosed, 97% of those on HIV treatment and 97% of them having an undetectable viral load (PHE 2019a). Using the relevant HIV epidemiological data the performance of Bristol against the revised 95-95-95 UNAIDS targets are outlined below:

Continuum of HIV care; applying Bristol's 92:98:98 statistics to our estimated population numbers living with HIV, 2018

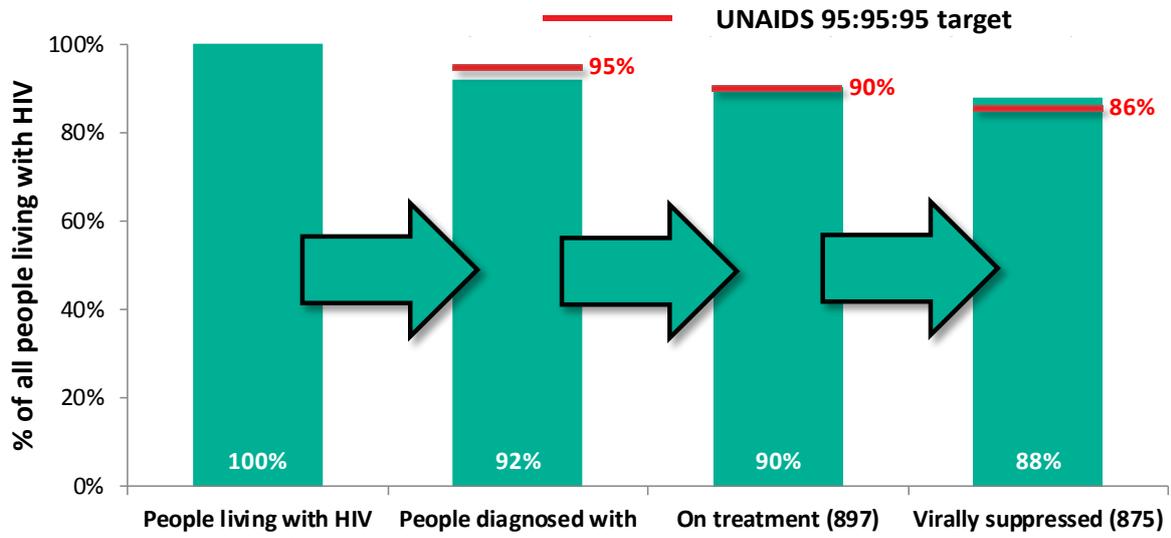


Fig.4.2.1 Bristol's performance against the 95-95-95 goals in 2018

5 What is the evidence of what works?

5.1 Combination HIV prevention

PHE recommends a combination approach to HIV prevention which has been the principal explanation for the fall in HIV incidence in MSM and bisexual men since 2012 (PHE 2018c). This combination approach includes:

5.1.1 Condom Provision

Condoms can prevent the transmission of HIV by acting as a barrier to prevent bodily fluids being passed from one person to the other during sex. Evidence shows that condoms are 90-95% effective when used consistently (Pinkerton et al). Condom promotion is therefore an important part of the strategy to prevent HIV transmission.

5.1.2 PrEP & PEP

Pre-exposure prophylaxis or PrEP is a medication which can be taken by someone who does not have HIV to prevent the risk of acquiring HIV. It can be taken before having sex for those with a high risk exposure such as for MSM having unprotected anal sex. Multiple studies have demonstrated that PrEP is highly effective and that the key to its effectiveness is adherence to the medication. The IPERGAY trial of PrEP for MSM found a relative risk reduction of 86%, demonstrating the high effectiveness of PrEP (Desai et al).

Currently PrEP is not available through NHS England and the IMPACT trial is ongoing at multiple sexual health clinics as a feasibility study to inform commissioners. The CHOP study is also ongoing in Bristol which stands for Challenges and Opportunities of PrEP. The aim of the CHOP study is to find out if PrEP being more readily available changes how people test for sexually transmitted infections. Motivation for testing, sexual behaviour and attitudes to PrEP will also be explored and will further inform commissioners.

Post-exposure prophylaxis or PEP is a medication which can be taken within 3 days following a high risk exposure. It can lower an individual's chance of contracting HIV if they have come into contact with the virus. It is recommended to start this as soon as possible after the possible exposure to HIV. A study showed that a 28 day course of PEP was protective against acquiring HIV (BASHH 2016).

PEP is available on the NHS mainly through sexual health clinics and emergency departments.

5.1.3 HIV testing

The NICE Guideline 'HIV testing: increasing uptake among people who may have undiagnosed

HIV' (NICE 2016a), highlights that testing leads to earlier diagnosis and therefore reduces the morbidity for the patient and also reduces the risk on onward transmission. Testing therefore has a key part to play in preventing a PLWH who is unaware of their diagnosis, from transmitting this to others. Testing also offers the opportunity to dispel common misconceptions about HIV and its treatment and also to encourage trigger points for retesting, depending on the individuals likely exposure risk.

The guideline also recommends the following in specialist sexual health services:

- Offer and recommend an HIV test to everyone who attends for testing or treatment
- Ensure 4th generation serological testing and point-of-care testing are available. 4th generation HIV tests are able to detect when an individual has been infected with HIV, one month post the exposure. This is much quicker than older HIV tests. Point-of-care (POCT) tests are able to give a result within minutes using a blood spot taken from the finger. Improved speed of diagnosis enables earlier treatment and can also prevent further transmissions.

And in secondary and emergency care:

- Routinely offer and recommend an HIV test to everyone attending their first appointment at drug dependency programmes, termination of pregnancy services and services providing treatment for :- Hepatitis B, Hepatitis C, Lymphoma, tuberculosis

In all areas, offer and recommend HIV testing on admission to hospital, including ED, and also in GP surgeries, to everyone who has not previously been diagnosed with HIV and who:

- Has symptoms that may indicate HIV or HIV is part of the differential diagnosis
- Is known to be from a country or group with a high rate of HIV infection
- If male, discloses that they have sex with men, or is known to have sex with men, and has not had an HIV test in the previous year
- Is a trans woman who has sex with men and has not had an HIV test in the previous year
- Reports sexual contact (either abroad or in the UK) with someone from a country with a high rate of HIV
- Discloses high – risk sexual practices, for example the practice of Chemsex
- Is diagnosed with or requests testing for a sexually transmitted infection
- Reports a history of injecting drug abuse

- Discloses that they are the sexual partner of someone known to be HIV positive, or of someone at high risk of HIV

In areas of high prevalence (such as Bristol), also offer and recommend HIV testing on admission to hospital, including ED, to everyone who has not previously been diagnosed with HIV and who is undergoing blood tests for another reason.

In areas of high prevalence offer and recommend HIV testing to everyone who hasn't previously tested positive for HIV and:

- Registers with the practice or
- Is undergoing blood tests for another reason and has not had an HIV test in the previous year

In community settings, testing services should be set up in:

- Areas with a high prevalence using venues such as pharmacies or voluntary sector premises
- Venues where there may be high-risk sexual behaviour, for example public sex environments, or where people at higher risk may gather, such as nightclubs, saunas and festivals.

Other NICE recommendations:

- Consider providing self-sampling kits to people in groups and communities with a high rate of HIV
- Recommend annual testing to people in groups or communities with a high rate of HIV, and more frequently if they are at high risk of exposure

Despite these improvements, significant challenges still remain. HIV testing has increased with over 1.1 million people tested for HIV in England in 2017. But despite this, 350,000 sexual health services attendees were not offered an HIV test despite being documented as eligible. This figure included over 10,000 gay and bisexual men and over 10,000 black African heterosexual men and women (PHE 2017a). BHIVA/BASH/BIA (2019) is currently consulting on HIV testing guidance until the end of January 2020.

Given the benefits of treatment, both to an individual's health and to public health, it is stipulated that more needs to be done to ensure that all those with HIV are diagnosed promptly and can

rapidly access treatment and care. Those who test negative but remain at risk should have equitable access to combination prevention (including PreP). In the absence of further progress on these they state that the target of HIV elimination will not be reached any time soon.

The draft recommendation states that all healthcare workers should be able to offer an HIV test in their setting. Pre-test discussion is not required.

HIV testing is recommended for the following groups of people:

- Belonging to groups at increased risk of testing HIV positive (e.g. men who have sex with men [MSM], people who inject drugs [PWID], people from countries with high HIV seroprevalence and trans women)
- Attending health services associated with increased risk of HIV (e.g. sexual health services, tuberculosis [TB] clinics and addiction and substance misuse services);
- Presenting with symptoms and/or signs consistent with an HIV indicator condition;
- People accessing healthcare in areas with high (if undergoing venepuncture) and extremely high (all attendees) HIV seroprevalence.

5.1.4 Health promotion activities

Educating individuals with evidence based information has been shown to be beneficial in reducing unsafe sexual practices. NATSAL – 3 data shows that schools are an important source of information about sex and those reporting school as their main source of sex education, were less likely to have unsafe sex. They also tended to report being older at first time of sex and were less likely to report having had an STI diagnosis. Sexual and reproductive education in schools is therefore very important as part of an HIV prevention strategy to ensure individuals are educated on HIV risk factors, methods of prevention and also feel empowered to take safe sex decisions (Pound et al 2017).

5.2 Systems Leadership

A report by the Kings Fund “The future of HIV services in England” (Kings Fund 2017) highlighted the need for clearer systems leadership at a local level around HIV and also the need for co-ordinated long term care pathways.

They recommended that national NHS bodies should set the strategic direction around HIV, including action around developing future models of long term care and reducing HIV stigma.

They explained that closer partnerships are needed between local specialised services and other health services, including GPs, and with social care services and that there also needs to be better co-ordination of commissioning decisions. They stated that stronger and much clearer system leadership is needed to bring together these various stakeholders – including providers, commissioners and people living with HIV – around a resourced, shared, overarching plan building on existing health and wellbeing strategies and sustainability and transformation plans (STPs). System leaders need to have authority to implement the plan across NHS and local authority areas of responsibility. They will need to nurture effective relationships, and develop joint governance. They recommended that directors of public health and lead HIV consultants in each area should have responsibility for this and for identifying which individuals take on the key roles.

5.3 Cost effectiveness

The NICE guideline (NICE 2016a) also give evidence of cost effectiveness. It identifies that late diagnosis is substantially more costly than early diagnosis due to the costs associated with inpatient admission and treatment. Prompt diagnosis was also associated with a cost saving per person and in turn further cost savings through averting transmission. Mixed evidence was identified when reviewing whether it is more cost effective to test everyone for HIV or to target certain groups. It was felt that the additional cost of testing for HIV from a person already undergoing blood tests was likely to be low. For this reason it was felt that in areas of high prevalence, offering HIV testing to everyone undergoing blood tests for another reason, would be cost effective due to low incremental cost and high HIV prevalence. The guideline also recommends that setting up community testing in high prevalence areas in addition to testing in hospital and primary care. The cost per test of self-sampling was comparable to the cost per test in other settings and so could represent a cost effective method of diagnosing HIV.

NICE HIV testing guidance (NAT 2014) estimates that HIV care in the first year after diagnosis costs the NHS twice as much for patient diagnosed late and thereafter the cost remain 50% higher for each year following diagnosis.

NICE also estimate that an improvement of 1% in patients being diagnosed earlier could save the NHS between £212,000 and £265,000 a year. They also estimate that if testing guidance was implemented, 3,500 cases of onward transmission could be prevented within 5 years, saving the NHS £18 million per year in treatment costs.

Preventing one UK-acquired HIV infection would save around £0.36m in undiscounted lifetime treatment and clinical care costs (NICE 2016b).

5.4 HIV Care Continuum

An advisory panel from the International Association of Providers of AIDS Care (IAPAC) produced guidelines on optimising the HIV care continuum (IAPAC 2015). They conducted a systematic literature search across HIV related studies. This generated 36 recommendations of interventions to optimise HIV care continuum for adults and adolescents. These recommendations were categorised under the following headings:

- Optimizing the HIV care environment
- Increasing HIV testing coverage and linkage to care
- Increasing HIV treatment coverage
- Increasing retention in care, ART adherence, and viral suppression
- Adolescents
- Metrics for and monitoring of the HIV care continuum

5.5 Evidence from Bristol

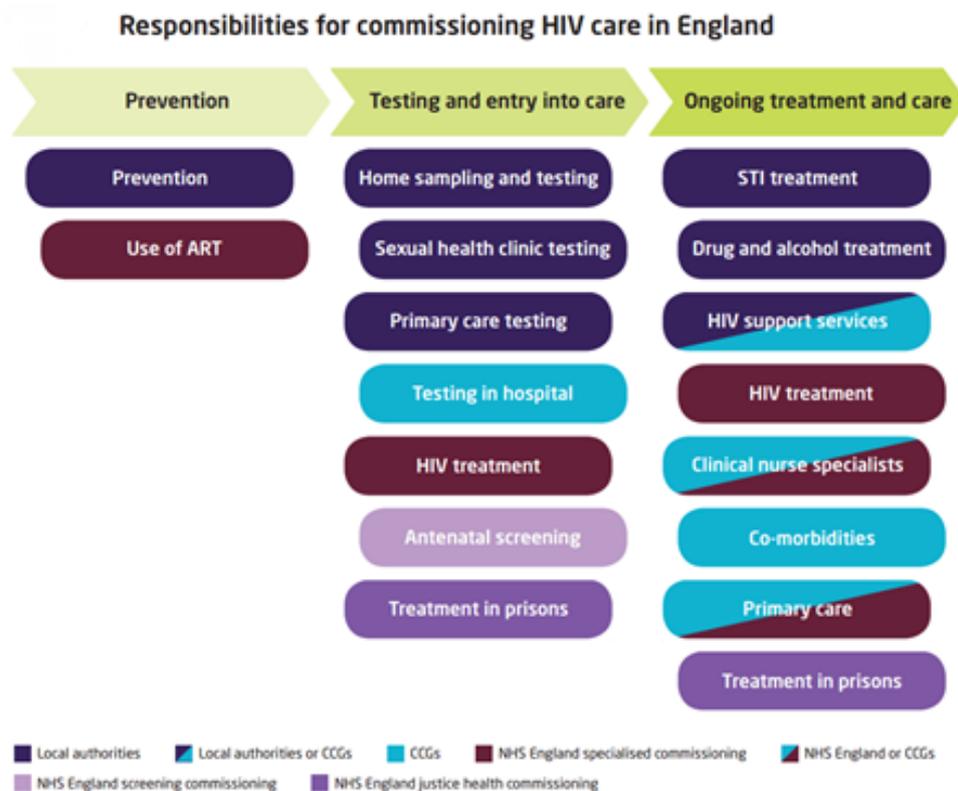
In Bristol, an RCT was undertaken to identify whether providing a one off GP training session on HIV testing, would increase HIV testing rates (Davies et al 2018). This one off training didn't lead to an increase in testing in the short term, but a qualitative study on health care professional feedback following the training, identified primary care training as valuable to HIV awareness and confidence and consideration of HIV testing (Kesten et al 2019).

An audit of very late HIV diagnoses in Bristol, Bournemouth and Poole identified that 73% of patients had clinical indicators for HIV and 91% had a risk factor for HIV acquisition (Womack et al 2016). This shows that there were opportunities to prevent a late diagnosis if testing had been undertaken sooner. The use of serious incident reporting (SIR) to identify and address reasons for the late diagnoses was found to provide an impetus for initiatives to address them. The use of this reporting enabled services to look back and potentially make changes to practice to improve future HIV testing. SIR was therefore identified as part of an effective strategy to prevent late diagnosis of HIV.

6 What services do we have to address HIV in Bristol?

6.1 HIV commissioning

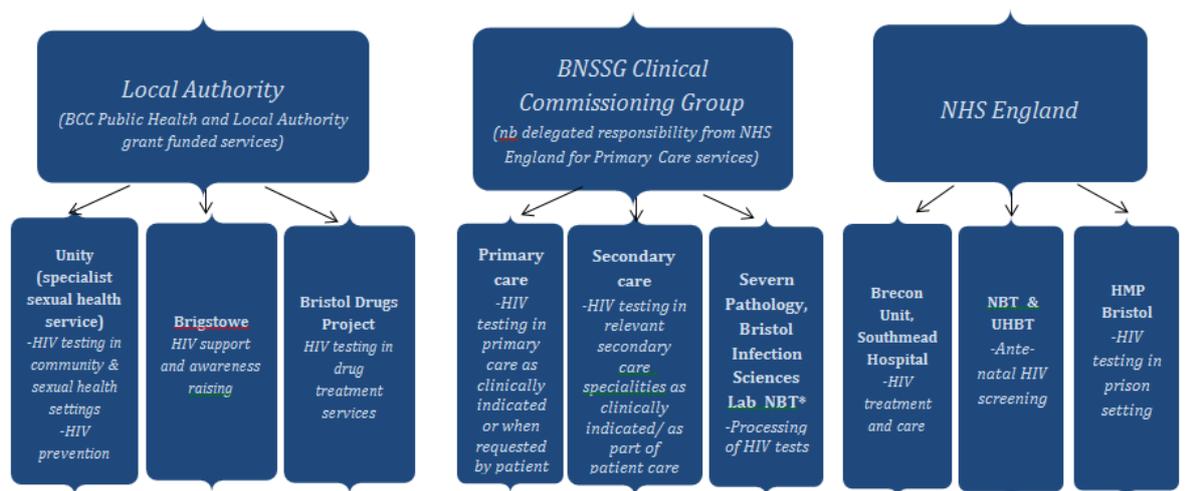
A report (Kings Fund 2017) looking at the challenges facing HIV services in four areas in England identified how health reforms in 2012 have led to fragmented commissioning structures with responsibility for HIV services divided across many organisations. The following diagram highlights the current commissioning structure of HIV services in England.



This has led to difficulty in coordinating HIV services and also in planning the future development of services. Due to people living with HIV now having a normal life expectancy when on treatment, the number of co-morbidities amongst a more ageing population will increase. This report highlighted that when needing treatment for co-morbidities from non HIV specialists it was frequently commented that patients felt they were being ‘passed from pillar to post’. It was also recognised that individual GP practices see very few people with HIV and therefore their involvement in HIV care is limited, despite their integral role in this pathway. The need for ‘shared care’, co-ordination between commissioners and closer partnerships with other services such as mental health and drug and alcohol services is essential to providing high quality HIV services and to reduce stigma for people living with HIV.

6.2 HIV commissioning and provision in Bristol

The following diagram shows the structure of HIV commissioning in Bristol. It follows what has been demonstrated in the Kinds Fund report above and highlights the fragmented nature of HIV commissioning.



6.2.1 Health promotion

Unity works in partnership with Brook to deliver education programmes in schools and health promotion to younger people. Unity provides teaching to healthcare professionals and promotion of evidence based information on HIV. Unity in partnership with THT provide health promotion outreach targeting high risk communities and also attending events in Bristol such as Bristol Pride. This provides an opportunity to educate the public, promote the U=U message and to raise awareness of sexual health services in Bristol.

Unity also provide the C-card scheme which is to enable under 20s to access condoms for free and an opportunity to increase education and awareness around sexual health. Condoms can be accessed from schools, colleges, youth centres, pharmacies and doctors surgeries.

Bristol Healthy schools is a programme run by the Public Health Team for all Bristol schools that wish to improve the health and wellbeing of their pupils, staff and local community. They are provided with information, teaching resources, training and advice. They offer awards which schools can achieve through demonstrating best practice in specific topics, with the PSHE (Personal, Social and health education) award including relationship and sex education. This varies depending on the age of the pupils but includes information of sexually transmitted infections.

6.2.2 HIV Testing

HIV testing by GPs- There are 48 GP practices in Bristol. Whilst GPs are not currently specifically commissioned by Public Health for HIV testing it should form part of routine patient care if clinically relevant or if the patient requests a test. HIV testing does routinely take place in primary care as part of the BNSSG non alcoholic fatty liver disease pathway where this test is completed as part of a series of blood tests.

2016 NICE guidance suggests that for area of high HIV prevalence, that all new GP registrations should undergo HIV testing but this is not currently commissioned. The exception to this is the Bristol University student health surgery who are commissioned to do targeted asymptomatic HIV screening for the following patients:

- all patients diagnosed with a sexually transmitted infection
- all sexual partners of men and women known to be HIV positive
- all men who have disclosed sexual contact with other men
- all female sexual contacts of men who have sex with men
- all patients reporting a history of injecting drug use
- all men and women known to be from a country of high HIV prevalence (>1%*)
- all men and women who report sexual contact abroad or in the UK with individuals from countries of high HIV prevalence

Preventx did provide an online HIV testing service to Bristol residents and was commissioned by Bristol Public Health until 2019. For the last financial year (2017/18) 369 HIV tests were returned, of which 2 were positive for HIV. Of the 369 tests returned, 62% were reported as 'homosexuals' whilst 5% were reported as 'African' ethnicity. 84% identified as being 'male'.

Bristol Drugs Project is a Bristol based charity providing support to people with alcohol and drugs misuse. They also offer HIV POCT testing.

One 25 is a charity in Bristol which provides support for street sex-working women. There is a sexual health drop in service once weekly at one 25 where HIV testing is offered.

Antenatal testing – Routine antenatal HIV testing was introduced in England in 1999. HIV testing is now a routine part of antenatal care for every pregnancy and takes place at the midwife booking appointment, ideally in the first trimester.

6.2.3 Unity Specialist Sexual Health Services

Unity Sexual Health is a partnership of service providers who have come together to design and deliver a new model of integrated sexual health for Bristol, North Somerset and South Gloucestershire. This partnership under the Unity umbrella includes:

- British Pregnancy Advisory Service
- Brook
- Marie Stopes UK
- North Bristol NHS Trust
- Terrence Higgins Trust (THT)
- Weston Area Health Trust (WISH)

Unity provide HIV testing across its clinics and services. They also provide access to online testing through the website, and Point of Care Testing (POCT) giving a result at the time of sampling at various community venues including:

Lads locker Room (men only Gay Sauna), Old Market

Dare 2 (LGBTQ+ Sauna), Old Market

PRISM/Midland Road (LGBT and alcohol and drug support), Old Market

Currently PrEP is not available on the NHS but England has a feasibility trial (IMPACT trial) looking at the implementation of PrEP in sexual health clinics. Unity is involved in this trial and also provides the follow up and monitoring for patients currently taking PrEP and also initiates PEP (post exposure prophylaxis).

Unity have HIV related performance indicators that they report on quarterly. These performance indicators look at whether HIV testing has been offered, whether HIV testing was accepted by the patient and also looks at exposure risk including MSM and black African ethnicity.

The following table shows the performance indicators that Unity report on and the grand total for the financial year 2018/2019 across Bristol:

Performance Indicator	Total number for 2018/19	Total % for 2018/19
Percentage of eligible first time service users (of clinic based services) offered an HIV test	4816	95.2%
Percentage of male eligible first time service users (of clinic based services) offered an HIV test	2586	95.9%
Percentage of female eligible first time service users (of clinic based services) offered an HIV test	2228	94.4%
Percentage of eligible first time service users (of clinic based services) accepted an HIV test	3821	75.5%
Percentage of male eligible first time service users (of clinic based services) accepted an HIV test	2147	79.6%
Percentage of female eligible first time service users (of clinic based services) accepted an HIV test	1672	70.9%
Percentage of MSM attending for a new episode of care offered an HIV test	415	94.8%
Percentage of MSM attending for a new episode of care accepted an HIV test	396	90.4%
Percentage of black African ethnicity/other risk group attending for a new episode of care offered an HIV test	79	97.5%
Percentage of black African ethnicity/other risk group attending for a new episode of care accepting an HIV test	68	84%

Table 6.2.3.1 HIV testing related performance indicators in the commissioned specialist sexual health service (UNITY)

6.2.4 HIV treatment

HIV treatment services are provided at the Brecon Unit at Southmead Hospital. This includes consultant led outpatient clinics, specialist nurse clinics for new diagnoses and patients who have been started onto PEP. There is also an outreach clinic at Weston General Hospital. Specialist clinics include the Bristol Royal Hospital for Children which is the regional centre in the South West for children with HIV. There is also HIV input at obstetric clinics and an HIV Hepatitis co-infection clinic. They are also involved in clinical research trials.

In 2017 there were 1,281 active patients at the Brecon Unit and of these 54 were newly diagnosed in 2017 (NB this includes people residing outside of Bristol). This shows a continued reduction in the number of new diagnoses each year. 25 of the new diagnoses in 2017 were classified as late diagnoses. There were 160 attendances for PEP in 2017 (largely referred from Unity sexual health).

For patients who have tested positive for HIV through Unity, GP or secondary care, they are referred to the Brecon unit at Southmead hospital. A thorough history and examination is undertaken and discussion of HIV and the principles of treatment. Patients are advised to commence antiretroviral therapy (ART) and if they are compliant with their medication then the aim is to reach an undetectable viral load and therefore prevent further complications of HIV and also prevent further transmissions of HIV. The Brecon unit has counselling available for patients with new diagnoses and also a team of HIV specialist nurses to provide support with initiation and maintenance of treatment.

The Brecon Unit have multiple performance indicators that they report on annually to PHE. This included information on the number of late diagnoses and the number of PLWH on treatment. There are also two indicators which relate to treatment adherence which is important as it is only the maintenance of an undetectable viral load which will prevent further transmission of HIV. These include HIV09aⁱⁱ which is the proportion of newly diagnosed adults retained in care in the year following diagnosis (retention in care – newly diagnosed) and HIV09bⁱⁱ which is the proportion of adults retained in care in the following year (Retention in care – all adults). The following table shows the HIV clinical dashboard for patients diagnosed and seen for care in 2017, which the Brecon report on to Public Health England.

Performance Indicator	Performance
Proportion of newly diagnosed adults with CD4 count of <350 (late HIV diagnosis)	35%
Proportion of newly diagnosed adults with a CD4 count of <200 (very late HIV diagnosis)	16%
Proportion of newly diagnosed adults with a first HIV clinic attendance or CD4 count test within one month of diagnosis date	100%
Proportion of adults who had an undetectable viral load at least one year after starting therapy	96%
Proportion of adults who had an undetectable viral load between 6 - 12 months after starting therapy	97%
Proportion of HIV diagnosed adults seen for HIV care and receiving ART (ART coverage – all adults in care)	98%
Proportion of HIV diagnosed adults with the last CD4<350 receiving ART (ART coverage – patients with the last CD4<350)	100%
Proportion of newly diagnosed adults retained in care in the year following diagnosis (Retention in care – newly diagnosed)	93%
Proportion of adults retained in care in the following year (Retention in care - all adults)	96%
Proportion of newly diagnosed adults starting ART within 3 months of diagnosis	75%

Table 6.2.4.1 HIV treatment related performance indicators in the HIV treatment service (Brecon)

The Positive Voices (2019) national survey of people living with HIV looked at satisfaction with HIV treatment. This survey reported very positive experiences for participants with their treatment at Southmead. Respondents rated the service from their clinic on a scale of 0 to 10 and the average rating was 9.4. Of those who had rated their clinic, 77% said their level of satisfaction with their HIV clinic had remained the same for the last two years, 18% said that their satisfaction had increased and 5% said their satisfaction had decreased.

6.2.5 HIV support

Terrence Higgins Trust (THT) is a national charity supporting people living with HIV. They are part of the Unity partnership. They currently offer support and therapy services from Easton Community Centre and are also based at UNITY Central Clinic to provide advice and online support, together with physical outreach in bars and public sex environments (e.g. saunas). They also partnered with Bristol Drugs Project to provide the PROMOTE project for male and trans sex workers. PROMOTE ran for 12 months to scope how best to support marginalised male sex workers and sex workers of other underserved genders. This was funded by the HIV Prevention Innovation Funding.

Terrence Higgins Trust (THT) conducted a survey on attitudes towards sexual health and HIV testing within a BAME cohort in Bristol (THT 2017/2018). Although consideration needs to be given to the small number of respondents (n=115), this identified that 40% were unsure whether HIV testing, treatment and care was free and 22% were not aware that this is confidential. Of note there was a poor response to an online survey promoted via social media but a much improved response with health promotion workers going into community settings for face-to-face engagement.

Brigstowe is a charity based in Easton with a mission to enhance the quality of life for people living with HIV. They work in partnership with Unity to provide support to PLWH. They are able to provide support groups, peer support, workshops and help with housing. Their annual report for 2017-2018 highlights that of the 89 clients they saw during this year, 73% had more stable, secure or suitable housing, 94% experiencing a reduction in poverty, 95% felt more connected and supported by other people living with HIV and 75% felt they had a better understanding of their HIV diagnosis.

The Haven is a 'first stop' primary healthcare clinic for newly arrived asylum seekers and refugees who are new to Bristol that operates out of Montpelier Health Centre. The Haven team consists of a GP and nurses who provide comprehensive health assessments for those who have not yet registered with a GP. Following an assessment individuals have access to the Haven GP and public health screening and immunisations, which includes testing for HIV. They also facilitate registration in to mainstream primary care practices.

7 What is on the horizon?

7.1 Population changes

Bristol's population is increasing at a higher rate than other similar UK cities. From 2007-2017, 28 % of the total increase in population took place in Central and Lawrence Hill wards alone. This trend is projected to continue increasing (Bristol City Council 2018/19).

Bristol continues to have a relatively young population which means sexual health is a priority for Bristol.

The population of Bristol has become increasingly diverse with at least 187 varying countries of birth and at least 91 main languages spoken. The proportion of the population who are not 'White British' increased from 12% in 2001 to 22% in 2011.

7.2 Living longer with HIV

Due to the suppression of viral load with ART, people are now living longer with HIV. This means that there may be new challenges on the horizon with regards to medical co-morbidities associated with an ageing population.

7.3 Treatment advances

There have been studies looking at the possibility of ART in injectable form. This would potentially be on a monthly basis and therefore reduce the need for daily oral medication and potentially improve patient quality of life. Bristol is also involved in the IMPACT trial which has recruited patients for this PrEP study with the hope that PrEP may soon become available on the NHS.

7.4 Improved access to testing

Use of online testing and rapid testing pathway through Unity will increase capacity and number of HIV tests performed.

8 Local views

8.1 Views from service providers, commissioners and professional experts

A semi-structured interview approach was used to gather local views from HIV service providers, support services, healthcare professionals, commissioners and Bristol academics involved in HIV research. Thematic analysis was used with key issues identified from these interviews and presented below. The questions asked in these interviews can be found in Appendix 3.

- Good links between HIV treatment and HIV testing services improves the pathway and care for patients. This includes training links between the two services. The Unity partnership of providers within the city has improved HIV testing and integration and also links with St Michaels obstetrics and gynaecology department. This **integration is key** to improving HIV care within the city.
- There are **a number of PLHV who do not engage with HIV treatment** and we need to explore different interventions to improve this engagement.
- The lack of **implementation of NICE recommendations** on HIV testing in A+E and for new GP registrations was raised in most discussions, however often the concept of a more targeted approach to **HIV testing in high risk exposure** groups was felt as a sensible alternative with the additional benefit of focusing resources. The issue of unmet need in less defined groups at risk such as swingers and the transgender population was also raised.
- The **changing landscape of sexual practices** was highlighted as an area to be aware of with mobile dating apps potentially changing and impacting on sexual health and HIV and the **impact of chemsex on HIV**.
- The need for further research on HIV with specific data for Bristol would enable **better understanding of our undiagnosed population** and also inform our health promotion work.
- The need for good **sexual health education in schools** was recognised repeatedly throughout the interviews and the benefit this will have on reducing stigma and educating the city on HIV and in particular, why to get tested.
- **Community outreach** was highlighted as an important way to access the undiagnosed population and also to reduce stigma within communities. The benefit of this outreach being integrated within the Unity partnership was highlighted.
- **Improved health promotion of the U=U campaign and PrEP** is needed in order to reduce

stigma, improve education and reduce the incidence of HIV. This is needed within the community but also within the workplace and within healthcare settings.

- **HIV testing needs to increase.** Unity has improved access to testing through online postal kits and rapid STI testing which has increased clinic capacity.
- Continued **funding of support services to address mental health, housing, isolation and social circumstance** is important for PLWH in the city.
- The **fragmented commissioning structure and the lack of funding** and resources impacts on HIV care and testing within the city.
- Addressing **social inequalities** is needed in order to address the goal of zero stigma and to address HIV within Bristol

8.2 Service user consultation

A consultation event was held in May 2019 with approximately 20 PLWH who were invited to attend through Brigstowe. This session explored how we could improve different aspects of HIV in Bristol if we were to become a Fast Track City. The raw feedback can be accessed in a separate document and the common themes have been highlighted here.

The need for improved communication was a strong theme of the consultation event. A need for **more information into the public domain** promoting the U=U message and more up to date information on HIV and testing. A key area identified was improved **awareness of U=U amongst healthcare professionals** to reduce stigma for PLWH when accessing services. **Education and awareness within the workplace** was also felt to be an important way of cascading the message throughout Bristol. It was also felt important in relation to our late diagnosis rate, to improve HIV awareness across different communities; **training of community ‘ambassadors’** with **positive language** to reach the many diverse communities of Bristol.

Promotion of HIV testing sites, free online testing and longer opening hours was felt to be needed to improve access to testing and improve the late diagnosis rate.

Stigma was continually highlighted as an area for improvement; fear due to lack of education, discrimination in the workplace and stigma within the community. **Better education** could help to address this.

The importance of **stable housing** and transport links was raised. The **cost of accessing hospital appointments** and treatment with rising transport costs can prove challenging and although these can be reclaimed at the hospital, it was felt to not be an easy process.

With PLWH now living longer, there is an increase in the number of **medical co-morbidities** and

therefore a need to ensure that HIV services have capacity and support to manage this.

The introduction of **routine testing of HIV in A+E and GP** surgeries was discussed and some felt that this may be necessary to target our late diagnosis rate.

Some reported **hate crime** from neighbours and within communities which again highlighted the issue of stigma for PLWH but also that often there is not enough evidence for police to act on this.

To engage with **schools and education programmes** to ensure good awareness of U=U and to reduce stigma for future generations.

It was felt that there was **a lack of support and counselling services** available for PLWH and also for family members and partners. The importance of **partners having correct information about HIV** played a significant role in the stigma and distress experienced.

The closure of the THT service on West street had been a loss to PLWH as an important hub for support services and drop in. It was emphasised how necessary **good HIV support services** are.

8.3 Fast Track Cities Consultation

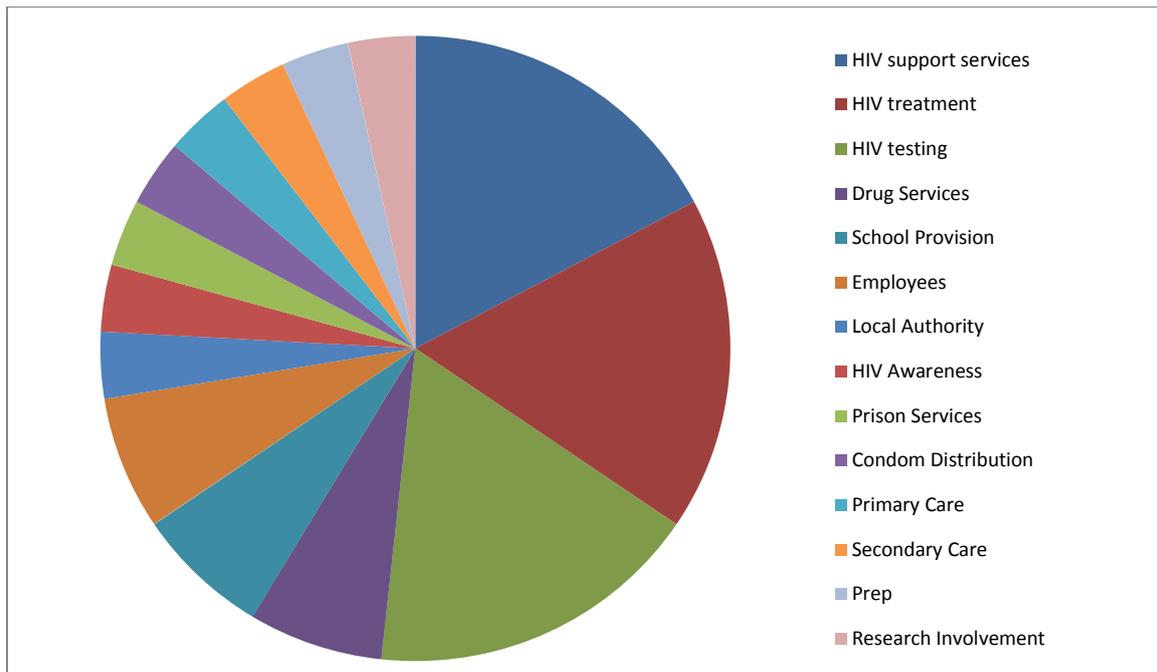
Two Fast Track Cities consultation sessions were held at Hamilton House on 22/10/19 (one in the afternoon and one in the evening). 60 people attended this event (24 in the afternoon, 36 in the evening). Attendees were asked the following 3 questions to inform and shape the Fast Track Cities Action Plan:

- 1) What is being done well in terms of HIV in Bristol?
- 2) What is not working well in terms of HIV in Bristol?
- 3) How do we improve on what is not working well in Bristol around HIV?

A thematic analysis on the feedback from these questions was conducted and coded in to categories. Data from this analysis is displayed below. Selected comments from the 3 most common categories from each question are also provided.

1) What is being done well in terms of HIV in Bristol?

The chart below displays themes around services/areas of work that received positive comments from the consultation event in relation to this question.



-HIV support services (this includes both Brigstowe & THT)

- Respect confidentiality and are accessible outside of working hours
- They are empowering
- They help with isolation and loneliness
- Tackling stigma
- Outreach testing
- Peer mentoring

-HIV Treatment (Brecon Unit)

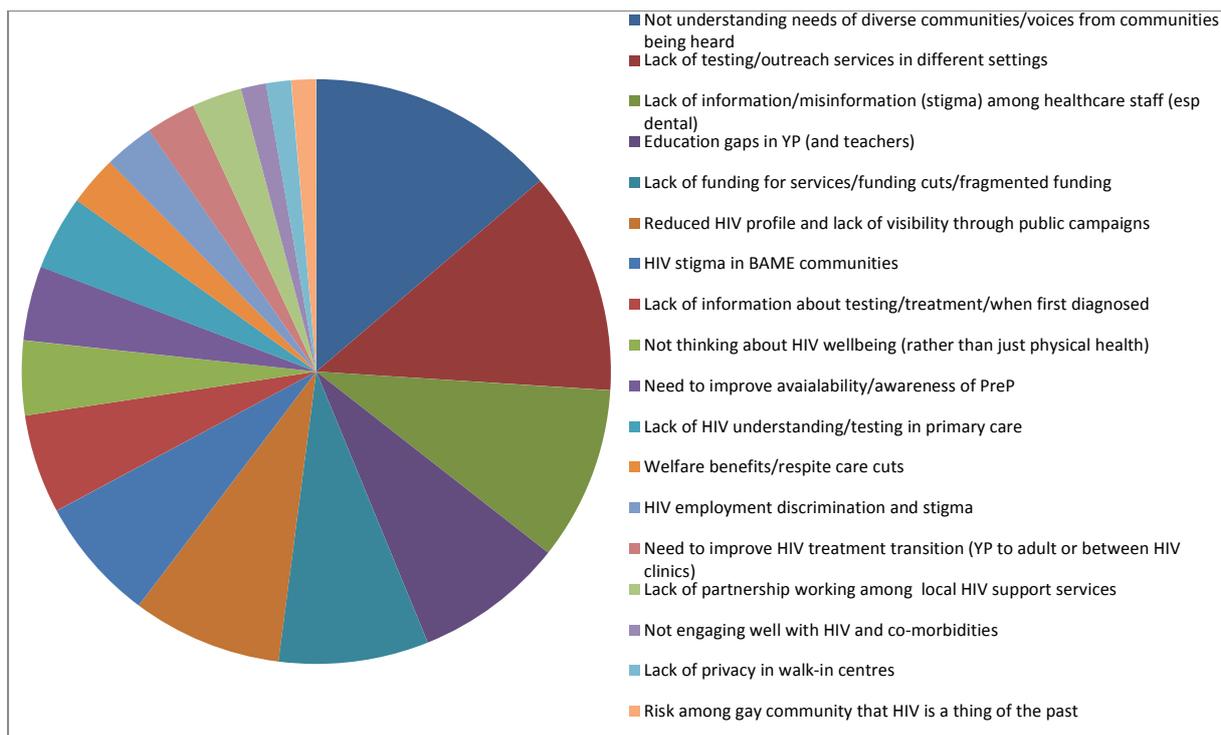
- Continuity of care with nurse or doctor assigned
- Really understanding and informative
- Good for PLHIV as they encourage honesty and are straight talking

-HIV Testing (Unity)

- Range of testing options and have walk-in centres
- Postal kits are more convenient
- Point of care testing giving quick results

2) What is not working well in terms of HIV in Bristol?

The chart below displays themes of the negative comments raised at the consultation event in relation to this question.



-Not understanding the needs of diverse communities/voices from communities being heard

- Not testing and engaging with Black African/Caribbean communities
- Trans/gender diverse communities not presenting to HIV related services
- No longer have a 50+ group to engage older people living with HIV

-Lack of testing/outreach in different settings

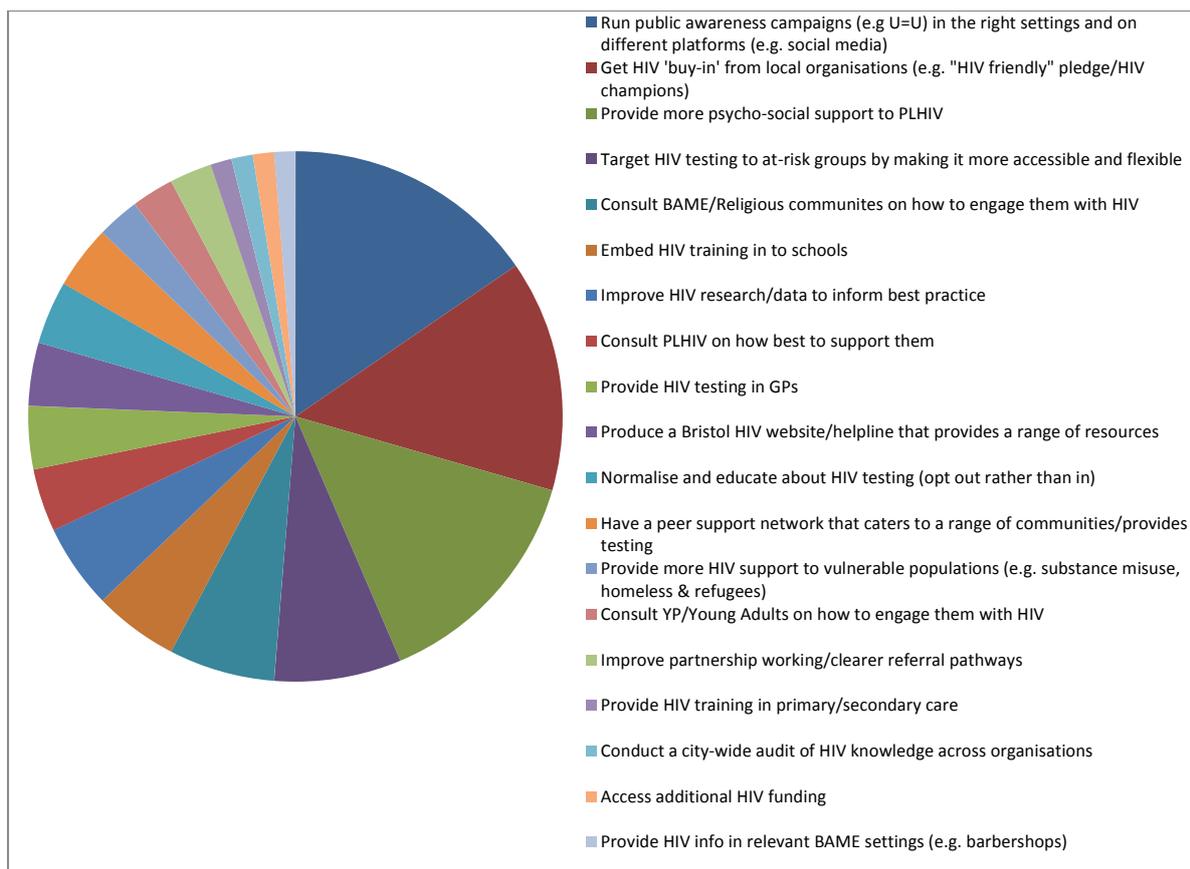
- More testing needs to take place in other support services (non-sexual health). HIV testing should become the standard.
- More areas for 'self-testing' within Bristol – bars, clubs etc (not just LGBT+ bars)
- Need more testing centres for sexual health in community centres (e.g. churches)

-Lack of information/misinformation (stigma) among healthcare staff (esp dental)

- Healthcare providers are lacking in knowledge
- Misinformation within other medical fields e.g. dentists still asking on sign up paperwork
- Other health services should be ensuring that the treatment they are giving does not react to HIV medication

3) How do we improve on what is not working well in Bristol around HIV?

The chart below displays themes on how we can improve on the areas that received the negative comments at the consultation event



- Run public awareness campaigns (e.g U=U) in the right settings and on different platforms (e.g. social media)

- More work with the press in updating the public on the U=U campaign.
- Public city-wide campaigns- in creative locations; not just bus shelters/ in deprived areas; urban and suburban- not just central/ targeting specific marginalised or misinformed social groups
- Improve visibility and knowledge of what is available. Social media, events, flyers, attending community groups and events

-Get HIV 'buy-in' from local organisations (e.g. "HIV friendly" pledge/HIV champions)

- Have HIV Champions within local authority social work teams
- Need to educate services to be non-judgemental around HIV across all communities
- Reach out to organisations signed up to the Bristol Equality Charter as this pledges to challenge stigma and discrimination

-Provide more psycho-social support to PLHIV

- Designate more support time with clients when visiting the Brecon unit
- Empower people to take charge and understand their own healthcare and rights
- Provide more 1:1/Support groups for PLHIV

9 Key issues and gaps

In order to determine the key issues around HIV in Bristol, the epidemiological data was considered alongside an understanding of local services, views from stakeholders and the evidence base.

Key issues identified from this needs assessment include:

9.1 Insufficient HIV Testing

NICE Guidelines for high prevalence HIV areas (>2.0 per 1,000) recommend performing HIV testing on new GP practice registrations, GP patients undergoing blood tests for another reason and all patients admitted to hospital already undergoing blood tests for another reason who have not previously been diagnosed with HIV. These guidelines are not currently being followed in Bristol. The financial implications of adopting these guidelines and fragmented HIV commissioning responsibilities are likely barriers to this.

Although HIV testing is already available through a number of routes in Bristol- sexual health clinics, on line, GP and outreach services there is further scope to maximise these testing opportunities.

9.2 A high rate of undiagnosis and late diagnosis

It is estimated that around 80 people in Bristol are currently unaware of their diagnosis which increases the risk of late diagnosis and onward transmission. The proportion of late diagnoses in Bristol remains high, particularly in Black African heterosexual people.

9.3 Persistent stigma

Stigma and discrimination remains a persistent issue that impacts on HIV testing rates, late diagnoses and overall quality of life for PLHIV. This was raised within all consultation events. THT's BAME survey re-emphasised that HIV stigma is still particularly common among some BAME communities.

9.4 A lack of understanding of HIV among both healthcare professionals and the general population

A lack of understanding amongst healthcare staff and the public was raised by all consultation groups and better education has been highlighted as an important consideration for Bristol through schools, for high risk groups and for healthcare professionals. The service user consultation highlighted that stigma needs to be addressed within the healthcare setting and again reinforces better education of healthcare professionals is needed in Bristol. A lack of awareness of the U=U campaign was highlighted multiple times from service users to staff within HIV services.

9.5 Fragmented HIV commissioning

It is recognised that HIV commissioning arrangements have been fragmented nationally which impacts on PLWH. A lack of ring-fenced dedicated HIV funding has also had further impact. An integrated approach is essential for Bristol to ensure the best outcomes for PLWH and the local authority and the NHS will need to collaborate and fully explore options around any future treatment and prevention.

9.6 Levels of provision of support services

HIV treatment and support services for Bristol residents are highly rated, but there is a need to ensure adequate provision particularly of support services (including peer support) to address wellbeing issues as well as addressing wider needs such as housing. Mental health of people at highest risk of and living with diagnosed HIV has been highlighted as an unmet need alongside support for healthy lifestyles and long term conditions as people with HIV live longer.

9.7 Lack of availability of NHS funded PrEP (pre-exposure prophylaxis)

PrEP is known to be a very effective way of preventing HIV transmission but despite this it is not yet available on the NHS. Knowledge of PrEP needs to be more widely disseminated into other 'at risk' groups and not just the MSM community. The Department for Health & Social Care (DHSC) is currently exploring options for routine commissioning at the end of this trial. Bristol will need to ensure that there are effective commissioning arrangements in place that both meet the needs of local residents and are aligned with any national recommendations. Clinicians will need to explore how to address any potential impacts of increasing PrEP use on STI rates especially syphilis.

9.7 Limited understanding of how changing sexual behaviour may impact HIV

The changing landscape of sexual practices- such as dating apps and chemsex are likely to impact on HIV rates in Bristol and further research is needed to explore these.

10 Knowledge gaps

Key areas for development include further research into:

- The true number of undiagnosed people living with HIV in Bristol
- More accurate data on the numbers of LGBTQ+ community within Bristol
- The impact that mobile dating apps have on sexual behaviour and HIV
- The extent, impact and consequences of chemsex on HIV transmission
- The rates of PrEP use in Bristol within exposure risk groups
- The prevalence of HIV within the population with low exposure risk factors

11 Recommendations for consideration

11.1 Develop Systems Leadership for HIV

10. Need to be aware of the likely future needs of HIV treatment service commissioning now that PLWH are **living longer with more medical comorbidities** requiring more resources.
11. To ensure that an **integrated approach** is taken to HIV care, HIV prevention, and stigma reduction within Bristol. Clinical services, support services and commissioners need to work in partnership to reduce the potential fragmented nature of the HIV pathway.
12. Be abreast of changes to the **commissioning of PrEP**, taking account of findings from the IMPACT and CHOP studies.
13. Ensure that services prioritise the **mental health and psychological wellbeing** of PLWH and those at greatest risk of HIV acquisition. Special consideration should be given to how this is addressed in primary care but also needs to be addressed within an integrated HIV pathway.
14. Continue to **support increased HIV outreach testing** in services working with high risk groups (e.g. substance misusers and street sex workers) that are located in community settings
15. Ensure adequate **access to HIV support services** in Bristol including peer support
16. Conduct a **review of resources** that fund HIV treatment, prevention and support in Bristol.
17. Consider conducting a study to give more **robust data on the number of PLWH who remain undiagnosed** within Bristol, rather than relying on the PHE estimates.
18. Explore **interventions to engage PLWH not in HIV treatment**

11.2 Prevent HIV

5. Improve the **promotion of PrEP within at risk groups** (not only MSM).
6. **Improve the knowledge of HIV amongst healthcare professionals** to reduce the late diagnosis rate and improve HIV testing rates.
7. Ensure good quality HIV teaching is included in the **relationships and sex education (RSE) teaching in schools**, in line with the change to now compulsory sex education in schools from 2020.
8. Undertake **research to consider how mobile dating apps and chemsex** are influencing sexual practices and STI risk in Bristol and how this will impact on HIV rates.

11.3 Test the right people and diagnose early

7. **Target HIV screening at GP surgeries within high HIV prevalence wards.** As there is now free postal kit testing for HIV in Bristol provided through Unity, a shifting of resources to a

more targeted approach may reduce late diagnoses and improve the targeting of 'at risk' groups.

8. Consider conducting routine **late diagnosis lookbacks** in primary care to encourage learning with the aim of reducing future late diagnoses.
9. Consider implementing the NICE guidance on **HIV testing in A+E**.
10. Improve **access and availability of HIV testing within high risk and diverse groups** (including BAME populations, older people and transgender people) . This could be achieved by **raising awareness, creating social conditions where it is safe to discuss prevention and promoting testing** across community settings.
11. Ensure opportunities for testing and partner notification within **existing HIV testing services are maximised** .
12. Provide accessible information for the public so they know **how to access** HIV testing.

11.4 Treat people with HIV effectively and holistically

4. Ensure adequate investment **in HIV support services including peer support** to improve the quality of life for PLWH and those most at risk of HIV exposure
5. Improve the **links between HIV services and lifestyle services** such as smoking cessation provision to improve the health outcomes of PLWH who smoke.
6. Ensure access to services for people with HIV to address quality of life and **inequality** issues such as housing.

11.5 Reduce HIV Stigma

1. Tackle the stigma associated with HIV through **promotion of U=U** for the whole of Bristol and not just within high risk exposure groups.
2. Undertake targeted work to tackle the stigma associated with HIV and HIV testing within the **under-served and marginalised communities**.
4. Provide **education opportunities to improve the knowledge of HIV amongst healthcare professionals**
5. Ensure **good quality HIV teaching is included in the relationships and sex education (RSE)** teaching in Bristol schools including how to access local services.
5. Work with local businesses to address **stigma and discrimination within the workplace**

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13 Appendices

13.1 Appendix 1 Calculating undiagnosed people in Bristol methodology 1

Further details on deriving estimates of the overall numbers of people living with HIV in Bristol, and those that are unaware of their diagnosis – Method 1: Applying national estimates of the population prevalence of HIV to local estimates of the population, in total and broken down by exposure groups.

This methodology was applied to derive estimates for three exposure groups known to be at an elevated risk of HIV infection (Black Africans, people who inject drugs, and men that have sex with other men) as well as the total population of the city.

Estimating the Black African population living with HIV

Data from the 2011 Bristol Census (Bristol City Council 2011), summarised in chart 4 below, indicated that 3,855 Black African men and 3,754 Black African women (15-74 years) were resident in Bristol at that time. This figure is likely to be an underestimate of the total number of people of Black African ethnicity in Bristol due to population changes since 2011 and the category of 'black other' not being included, which a considerable proportion of the Black African population are known to select when reporting their ethnicity. These estimates should therefore be viewed as the lower end of range in which the 'real' population numbers will lie. In order to provide an upper limit to this range including 'Black Other' in the estimates provides totals of 5,990 Black African and Black Other men, and 5,674 Black African and Black Other women, aged between 15 and 74 years of age. Although these estimates date from 2011, they are the most current at the required level of detail to use to estimate HIV population prevalence for individual ethnic groups, and are used for this purpose below.

The estimated national HIV prevalence amongst Black African men and women for 2017 taken from the 'Progress towards ending the HIV epidemic in the United Kingdom: 2018 report' (PHE 2018a) was 25/1000 for Black African men and 47/1000 for Black African women. Applying this national prevalence of HIV to the 2011 population estimates suggests that 96 - 150 Black African men and 176 - 267 Black African women in Bristol are living with HIV (a total of 272 - 417). Applying the national estimate of Black African men and women who are unaware of their positive HIV diagnosis suggests 5 - 8 Black African men and 11 - 16 Black African women living in Bristol will be HIV positive but unaware of their diagnosis.

When comparing this to the HARS data, the estimate gives a higher number of Black African residents living with HIV and aware of their diagnosis. This could suggest that national

prevalence estimates are too high for the population of Bristol or that our detection rates are poorer. Limitations of this data include it being from the 2011 Census and population demographics may have changed during this time.

Estimating the population who inject drugs (PWID) living with HIV

A University of Bristol project 'Problem drug use prevalence estimation revisited: heterogeneity in capture-recapture and the role of external evidence' (Jones 2016) estimated the PWID prevalence rate in Bristol to be 9 per 1,000 (15-64 years). Of estimates found in literature this was the most recent and was based in Bristol and therefore was taken as the most robust figure to use for this estimation. Using this with the 2017 population data gives a rough estimate of 2,863 PWID in Bristol. Applying this to the national HIV prevalence rate in PWID's from the 2015 HIV in the UK report, of 2.2 per 1,000 (15-44 years) and 11% of whom are undiagnosed, would give a figure of between 4 and 6 people with HIV in the PWID population of Bristol. This concurs with the LASER report (PHE 2017a) which highlighted 1-5 cases in the PWID exposure group in Bristol and may account for the 11% undiagnosed (one person).

Bristol Drugs Project provided data over a 9 month period since implementation of HIV testing. From the 384 HIV tests undertaken during this time, 3 were positive. This is also broadly in line with the LASER report data.

As stated in the national data, there are varying estimations from PHE publications as to the prevalence of HIV amongst PWID. Variations in the prevalence rates lead to significant changes in the data when applied to Bristol. If taking the PWID population of Bristol to be 2,863 and apply a prevalence of between 0.87% and 1.7% then the estimate ranges from 25 – 49 people living with HIV in the PWID population of Bristol. Due to the significant variation in nationally reported prevalence rate, it is difficult to combine this into local estimates and significant caution should be used when interpreting this estimated data.

Estimating the population of men who have sex with men (MSM) living with HIV

Using estimated figures from the Office for National Statistics (ONS 2017) and the Bristol Quality of Life survey (Bristol City Council 2015/16) a range from 4-6% of the Bristol adult male population identify as being gay or bisexual. Applying this to the 2017 Bristol population data would give a range of 7,000 to 10,500 people identifying as gay or bisexual. Estimates of MSM living with HIV in Bristol vary greatly depending on the prevalence used. The PHE report 'Progress towards ending the HIV

epidemic in the United Kingdom’ (PHE 2018a) gives a prevalence rate of HIV in the MSM population (15-74 years) to nationally be 83 per 1,000. Applying this to the above MSM figures for Bristol would give a range between 500 – 1000 people. This PHE report estimates that nationally 9% are unaware of their HIV status. This would give a rough estimation of between 30-160 men living with HIV in Bristol who are unaware of their diagnosis.

Taking 2018 Bristol Quality of Life data into consideration however, gives a much higher estimate of the proportion of MSM living in Bristol. This gives a higher upper limit of 11.5% of the male population which is 21,000 men. The range therefore increases from 7,000 – 21,000 MSM living in Bristol. Due to the significant large variations in estimates it is therefore very difficult to draw conclusions on local estimates from this.

The HARS data set indicated that 400 MSM are living in Bristol with HIV. This is a lower figure than the estimates derived above. This could be due to many factors including a fewer number of MSM in Bristol than was used for the above estimation, that the HIV prevalence in MSM is lower than PHE estimates and/ or that the number undiagnosed is higher than PHE estimates.

Summary

Table 5 shows a summary highlighting the data estimates in Bristol per exposure risk group. As mentioned above, caution needs to be used when interpreting this data due to varying estimates from differing sources.

Table 5:

Exposure Group	PLWH in Bristol	Undiagnosed
Black African	272 - 417	16 - 24
PWID	4-6	1
MSM	500-1000	30-160

13.2 Appendix 2 service user feedback

Needs and Services

- Late diagnosis often leads to poor general health which can lead to a reliance on benefits
- Stable housing is crucial

- Problems accessing services due to shame or worried about being seen
- Cost of accessing treatment and support services is difficult with rising transport costs. Travel fares can be reclaimed at hospital but it's not an easy process. People from a wide area need to go to Southmead Hospital. Could treatment be delivered closer to home? Would have to balance this with having a centre of excellence
- Confusion, lack of information and emotional difficulties at time of diagnosis. Need comprehensive support for people living with HIV at point of diagnosis – a holistic assessment of their needs from housing to mental and physical health.
- Not enough counselling available
- Counselling / information needed for family members / partner to get correct information about HIV and come to terms with it. Lots of distress can be suffered when partners don't have the right information.
- Peer mentoring is really helpful but it's just one organisation providing it and the training is too infrequent (annually).
- Reduced services for people living with HIV has been a problem following the closure of the THT centre on West Street. This was an important hub used for support services, HIV community testing and a weekly drop-in (no longer exists).
- Changes (cuts) in services taking place – we need more investment from Westminster and not cuts.
- As people age with HIV, they have more long term conditions than general population. We need an HIV specific service that can offer one-to-one support when needed
- Need to look at stigma before you can consider improving services as this is a barrier to people accessing them.
- Need to get more positive messages and information out in the public domain to improve services being accessed. This could be done by:
 - Promoting the U=U message and other HIV/general testing campaigns. Need to get larger organisations (e.g. BCC & Police) to cascade these messages internally to have a ripple effect on people in Bristol.
 - Especially need to get messages out to general healthcare workers (e.g. doctors and dentists) as the experiences of some of the group have been poor in relation to their general lack of knowledge of HIV and related stigma of this.
 - Need to provide more positive voices training and peer support across Bristol.

- Need to ensure that HIV services are more visible across different communities to ensure that people access them. Some services have become less visible over the past few years.

Testing and Late Diagnosis

- We need routine testing of blood samples at GP practices and A&E. This is being done in other areas and it works. This will cost money but we need to commit funding to testing if we're serious about reducing late diagnoses
- Also, should consider why we have higher than average late diagnosis rate. We live in a very diverse city with 97 languages spoken.
- Pre-counselling for HIV testing. HIV is made this huge thing (maybe this is a historic approach based on the past when HIV was a death sentence). Is this approach needed? Does it scare people off?
- "Barber shop" approach where men talk to men could be used to encourage Afro-Caribbean men to test. This approach is being used for prostate cancer.
- How do we inform communities? We need to train up "community ambassadors" to reach different and diverse communities. These people can make every contact count. We need to make sure that people are using positive language and providing people with information about how to get tested.
- Underrepresentation in the workplace. "At work, we have days to fundraise / raise awareness of cancer etc, but when I suggested HIV, it all went quiet. People still seem to feel uncomfortable talking about HIV."
- Late diagnosis Rather than the need for other more invasive tests e.g. eye hospital and lumbar puncture, one simple blood test could stop the effects of HIV late diagnosis. This would be preventative, saving money for NHS and improving the quality of life of people living with HIV by avoiding the development of other long term health conditions / disabilities.
- We need to improve access to testing. There are barriers to accessing appointments for HIV testing in primary care/ specialist sexual health services as they are very busy services. It's also not clear about how THT now operating their testing service: who, when and where?
- There is a risk that only focussing on high risk groups is a dangerous strategy. Need to promote testing for everyone to normalise it and carefully consider the language that is used.
- We need to improve the promotion of testing. This could be done by:
 - Promoting the U=U message more widely.

- Promote positive messages about testing in the public (including the 'hetero' community)
 - Need to improve the education that is provided for HIV testing to reduce anxiety/stigma of it
 - Consider doing pop-up testing at bars or from a van (e.g. like needle exchange bus).
 - Promote testing on all dating apps to get positive messages out there and testing information.
- Need to improve awareness of access to free HIV testing (Preventx as well as Unity). Need to be more effective at promoting this to Bristol residents.

Stigma and Discrimination

- Lots of fear due to lack of education
- Stigma and discrimination in the work place is still a massive issue which causes huge problems. "It caused me awful problems that I won't go into now but I had to leave my job in the end."
- My dentist misinformed me about adverse effects of my HIV medication on my dental health which was wrong and really upset me.
- Still stigma and discrimination within the NHS e.g. lack of confidentiality and being put to end of the day's list for operations. Need to focus on healthcare settings to improve their knowledge through training.
- Great that HIV organisations have a presence at Bristol Pride but awareness raising needs to be much wider than this.
- Need to do HIV road shows – taking the information out to people.
- Need to do more HIV awareness sessions for companies (work places) and community groups. Why is there no funding for this? Although the group also recognised that it can be hard to engage the general public if they don't feel it's relevant to them
- Lots of difficulties for people living with HIV about who to tell. Once you tell someone, you can't "untell" them and you lose control of the information.
- Experience of stigma within communities e.g. people from Africa. Can be hard to keep it secret, people get it out of you, they keep asking what's your hospital appointment for?
- Hate crime from neighbours can be a problem if they find out your status, although there isn't always enough evidence for the police to do anything about it.
- Need to consider how we can engage with community leaders to get up to date information out in to the public domain. Should consider having an open workshop every year.

- Need to engage with schools to ensure that we talk about HIV from an early age and tackle stigma long term.
- Need to also work on self-stigma, especially for recently diagnosed individuals.

13.3 Appendix 3 Semi- structured interview with service providers

Background info on HIV fast track cities was given at the beginning of the interview. The following questions were asked however, the interview allowed service providers scope to discuss their views outside of these questions which were also included in the feedback.

In relation to HIV in Bristol:

What do you feel works well?

What do you feel the city needs to improve on?

How do you feel we could improve the stigma associated with HIV in the city?

What are the key issues you feel Bristol needs to address?

Can you foresee any changes on the horizon that Bristol as an HIV fast track city should be aware of?

How do you feel Bristol could tackle its late diagnosis rate?