Public Health England

Protecting and improving the nation's health

The impact of the COVID-19 pandemic on prevention, testing, diagnosis and care for sexually transmitted infections, HIV and viral hepatitis in England

Provisional data: January to September 2020

Contents

Summary

PHE has undertaken analyses to assess the impact of the COVID-19 pandemic response on sexually transmitted infection (STI), HIV and viral hepatitis service provision and epidemiology.

Between March and May 2020, there was a reduction in:

- consultations undertaken by sexual health services (SHSs) and specialised HIV services
- testing for viral hepatitis in drug services, prisons, general practice and SHSs
- testing for HIV and STIs in SHSs
- vaccination of gay, bisexual and other men who have sex with men (MSM) against Human Papillomavirus (HPV), hepatitis B (HBV) and hepatitis A (HAV)
- diagnoses of viral hepatitis, HIV and STIs
- and hepatitis C (HCV) treatment initiations

A resurgence in HIV, STIs and hepatitis tests and diagnoses, and an increase in hepatitis C virus (HCV) treatment initiations, were observed from June 2020, following the easing of national lockdown restrictions. This reflects a partial recovery in service provision and demand. Nevertheless, numbers of consultations, vaccinations, tests, diagnoses, and treatment initiations in the summer of 2020 were considerably lower than in corresponding months in 2019.

Innovation in service delivery such as online or tele-consultations for HIV and hepatitis, STI and blood-borne virus (BBV) self-sampling kits, and expanded community outreach testing and linkage to care for HCV, has happened at pace during 2020. While this has enabled access to services during the COVID-19 response, there is a critical need to evaluate the impact of these changes on health inequalities, as HCV, HIV and many STIs predominantly affect socially disadvantaged and/or marginalised groups who already experience poor health outcomes, including people who inject drugs (PWID) and experience homelessness, and certain black and Asian ethnic minorities. Of particular concern, HCV testing through traditional venues may not have reached those in greatest need and, while HIV and STI testing was accessed by those with high likelihood of infection, some population groups were under-represented. PHE has worked collaboratively with partner agencies to develop a suite of resources to support service provision and equitable access during the pandemic response. These resources are available on the Sexual Health, Reproductive Health and HIV K-Hub, the British Association for Sexual Health and HIV (BASHH) website and The Faculty of Sexual and Reproductive Health (FSRH) website.

These early findings indicate that the COVID-19 pandemic response, including social and physical distancing measures, has led to a re-prioritisation and disruption in

provision of, and patient access to, health services for HIV, STIs and viral hepatitis. Reduced demand for services during this time may have been influenced by compliance with social distancing measures as well as changes in risk perception and behaviour. The full impact on infection transmission and long term health outcomes will take time to emerge and evaluate.

Introduction

In response to the COVID-19 pandemic, in March 2020 the UK Government took steps to reduce transmission of SARS-CoV-2 (the virus which causes COVID-19) through the introduction of social and physical distancing measures. These measures and the redeployment of health staff to the pandemic response led to a reduction or reconfiguration of clinical services providing care for STIs, HIV and viral hepatitis. The Association of Directors of Public Health published recommendations on the prioritisation of sexual and reproductive health services in April. Similarly, calls for sustaining drug and alcohol services - essential providers of harm reduction and BBV testing for key risk groups - were made by the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) and PHE.

This report presents the results of analyses of national surveillance data to assess the impact of the COVID-19 pandemic to-date on STI, HIV and viral hepatitis service provision and epidemiology. Provisional data are presented up to June, August or September 2020, depending on the data source, recognising that at this time there is likely to be under reporting and delayed data submission for the most recent months due to the pandemic.

Data reporting and presentation in this report

Data for STIs and HIV (including consultations and vaccine provision) are compiled using STI surveillance data submitted by SHSs, HIV specialised services and for chlamydia only, tests and diagnoses submitted by laboratories [i]. At the time of writing this report, STI surveillance data were available for 86% of SHSs for January to March 2020, and 66% for April to June. Data on HIV outpatient care consultations were available from 56% of HIV specialised services from January to September 2020.

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i Data from specialist (Level 3) and non-specialist (Level 2) are based on SHSs' returns to the GUMCAD STI Surveillance System; further details on the levels of sexual healthcare provision are provided in the Appendix and in the BASHH Standards for the Management of STIs (Appendix B). Data from HIV specialised services are based on reports to the HIV and AIDS Reporting System (HARS). Data on all chlamydia tests from local authority (LA) and National Health Service (NHS) commissioned laboratories are submitted to the Chlamydia CTAD Surveillance System.

Similarly, chlamydia testing data were available for 89% of laboratories between January and June 2020. Further details are provided in the Appendix.

Missing data submissions will affect reported trends in service provision and outcomes. Therefore, data presented in this report compare figures from SHSs, HIV specialised services and chlamydia testing laboratories with complete data reported for both January to June/September 2019 and January to June/September 2020 to assess the impact of the COVID-19 pandemic response. Total figures from SHSs, HIV specialised services and laboratories for 2019 are presented to illustrate the extent of under-reporting.

Data for viral hepatitis come from various settings along the care pathway as prevention, testing, diagnosis and treatment are commissioned and provided by multiple organisations. Diagnoses are based on laboratories reporting to the Second Generation Surveillance System (SGSS). As SGSS de-duplicates to provide new diagnoses only from laboratories and does not provide the denominator, the relative contribution to the decline in reporting laboratories from under-reporting versus a true reduction in new diagnoses cannot be disentangled.

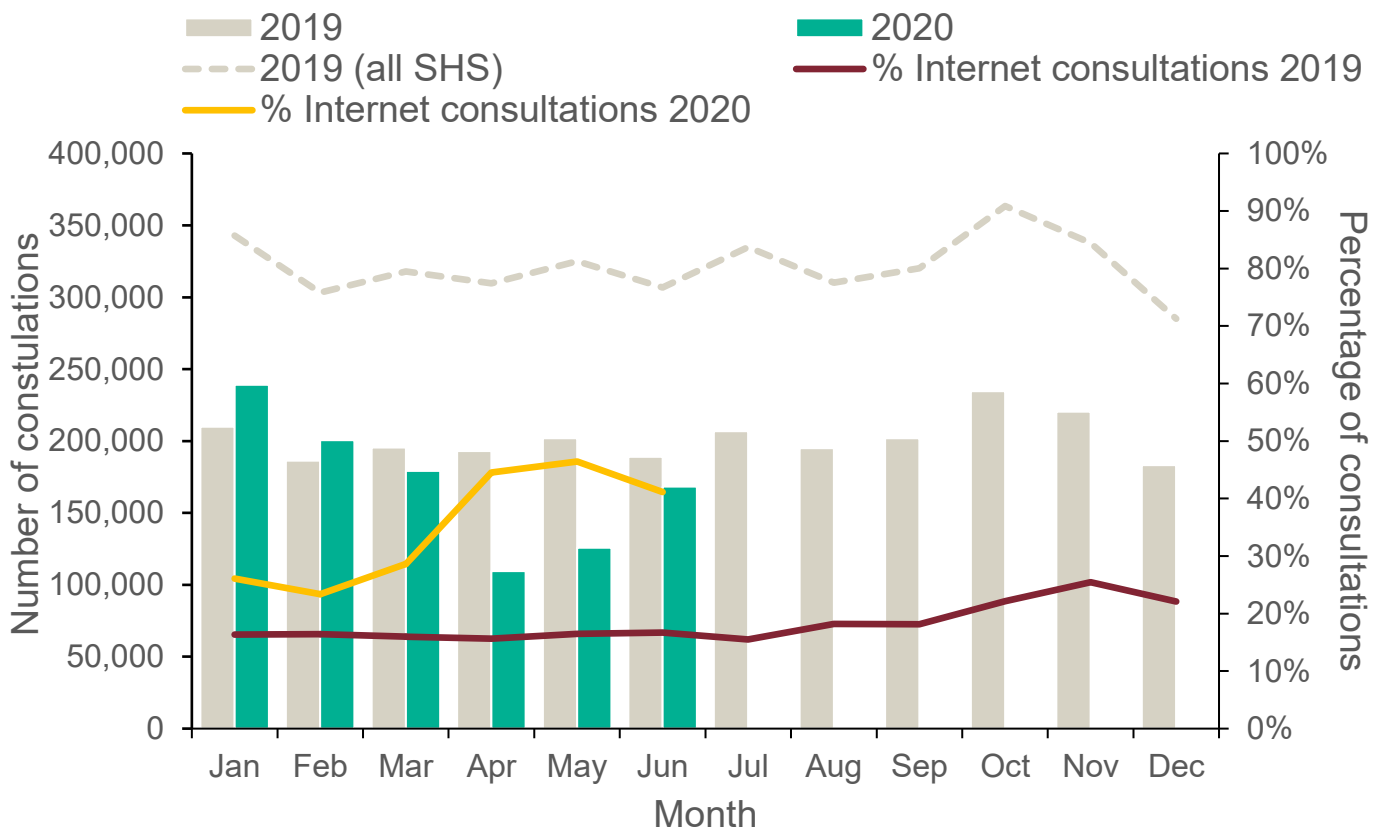
Service Provision

Trends in consultations undertaken by SHSs and specialised HIV services

Between January and June 2020, comparing data from SHSs with complete data reported for both January to June in 2019 and January to June in 2020, there was a 13% reduction in consultations at SHSs in England (including face to face and internet delivered consultations) compared to the same period in 2019 (Figure 1). There was a downward trend from January to April 2020, followed by a recovery in May and June, however, the number of consultations reported in June 2020 was 11% lower than in June 2019.

Most consultations undertaken by SHSs are in person, but there has been a two-fold increase in internet consultations since April 2020. Between January and March 2020, approximately 26% of consultations were delivered via the internet each month, compared to 45% in April, 46% in May, and 41% in June.

Figure 1: Number of consultations undertaken by sexual health services in England and proportion of internet consultations, January 2019 to June 2020

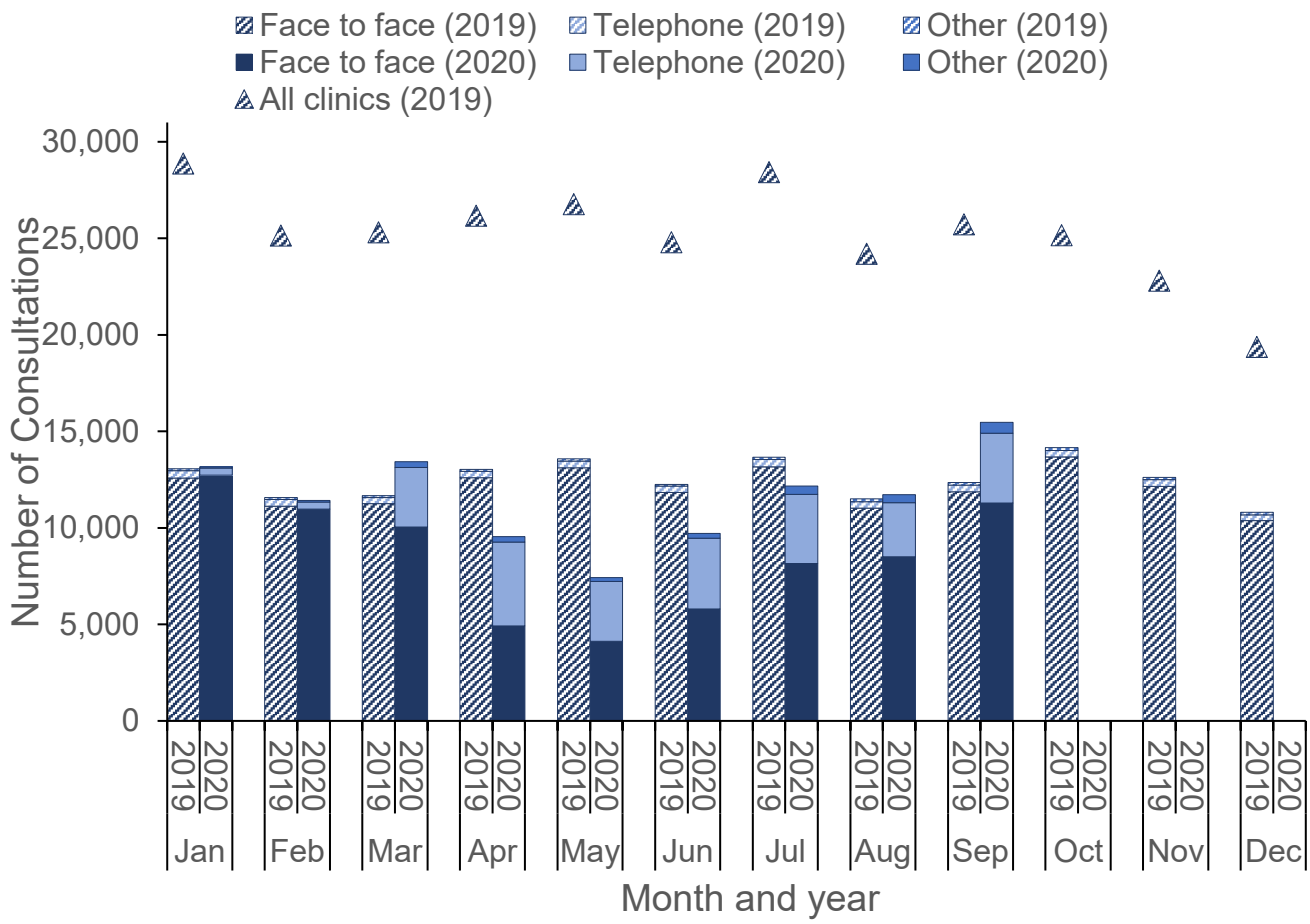


The bars compare data from SHSs which had complete data reported for both January to June in 2019 and January to June in 2020. The dotted line represents the total number of consultations reported in each month in 2019.

Trends in the number of consultations were similar across different age groups, gender and sexual risk groups, ethnic groups and deprivation levels (measured using the Index of Multiple Deprivation (IMD) quintile of residence [ii]). However, between April and June 2020, a slightly lower proportion of consultations undertaken by SHSs were among people aged 15 to 19 (10% vs 12%) and 45 to 64 years (8% vs 10%) and a higher proportion were among people aged 25 to 34 (39% vs 36%) and 20 to 24 years (27% vs 26%), than in January to March 2020 (Appendix Figures 1 to 5). Over the same period, a lower proportion of consultations were among heterosexuals (men 23% vs 25%; women 61% vs 62%), and a higher proportion were among MSM (15% vs 12%).

ii Index of Multiple Deprivation (IMD) is an overall measure of relative deprivation that combines information on seven domains of deprivation: 1) income 2) employment 3) health, skills and training, 4) crime 5) barriers to housing and services 6) health and disability and 7) living environment. IMD quintile is generated based on the Lower Level Super Output Area (LSOA) of Residence (small geographic areas designed to have a population size of between 1500 and 3000).

Figure 2: Number of consultations at sites providing HIV outpatient care in England by consultation medium, January 2019 to September 2020



The bars compare data from specialised HIV services which had complete data reported for both January to September in 2019 and January to September in 2020. The symbols represent the total number of consultations reported in each month in 2019.

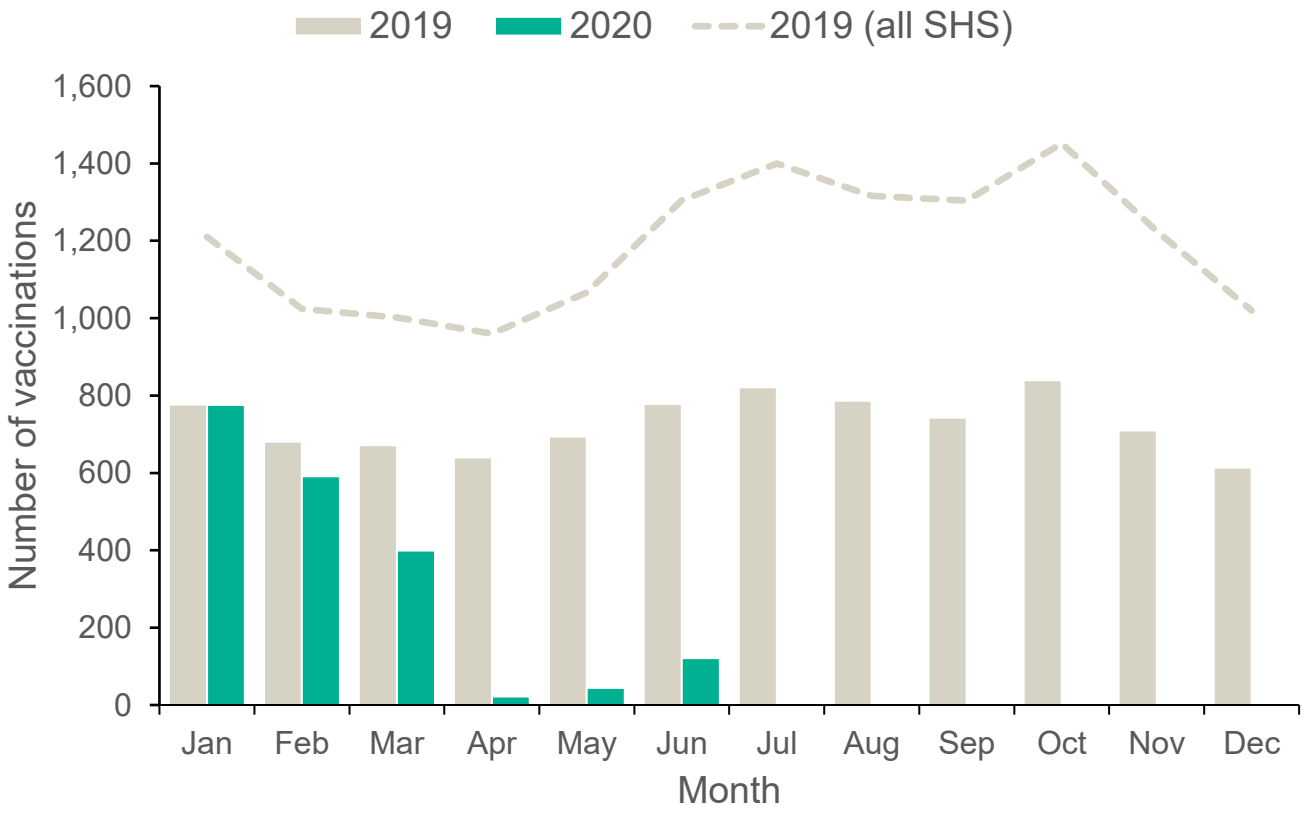
Between January and September 2020, comparing data from specialised HIV services with complete data reported for both January to September in 2019 and January to September in 2020, there was an 8% reduction in consultations for HIV outpatient care (including face to face and telephone consultations) compared to the same period in 2019 (Figure 2). There was a downward trend from March to May 2020, followed by a recovery from June to September. There were 45% fewer consultations reported in May 2020 than in May 2019. Consultations in September 2020 were 25% higher than in 2019.

Between January and September 2019, 96% of all consultations for HIV outpatient care were face to face. Between April and September 2020, face to face consultations constituted 64% of all consultations, with telephone consultations and other forms constituting 33% and 3% respectively.

Vaccine provision for MSM at SHSs

Between January and June 2020, the total number of vaccinations [iii] (first dose) administered to MSM for hepatitis A virus (HAV) was 54% lower, for hepatitis B virus (HBV) 48% lower and for human papillomavirus virus (HPV) 60% lower, compared with the same period in 2019 (Figures 3 to 5). Between January and April 2020, the number of vaccinations administered fell steeply, with a slight increase reported during May and June 2020. However, the number of vaccines delivered in June 2020 was markedly lower than in June 2019 (≥80% lower for all vaccine types).

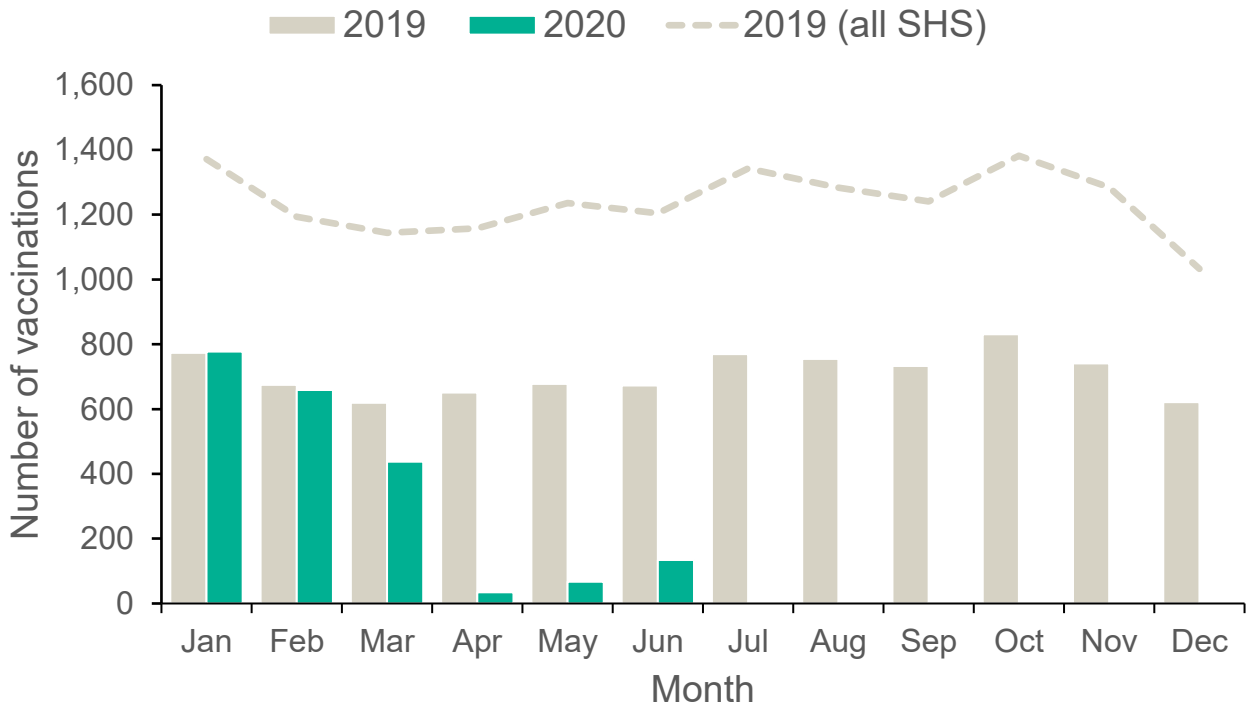
Figure 3: Number of first doses of Hepatitis A virus (HAV) vaccination among MSM, January 2019 to June 2020



The bars compare data from SHSs which had complete data reported for both January to June in 2019 and January to June in 2020. The dotted line represents the total number of first doses of HAV among MSM reported in each month in 2019.

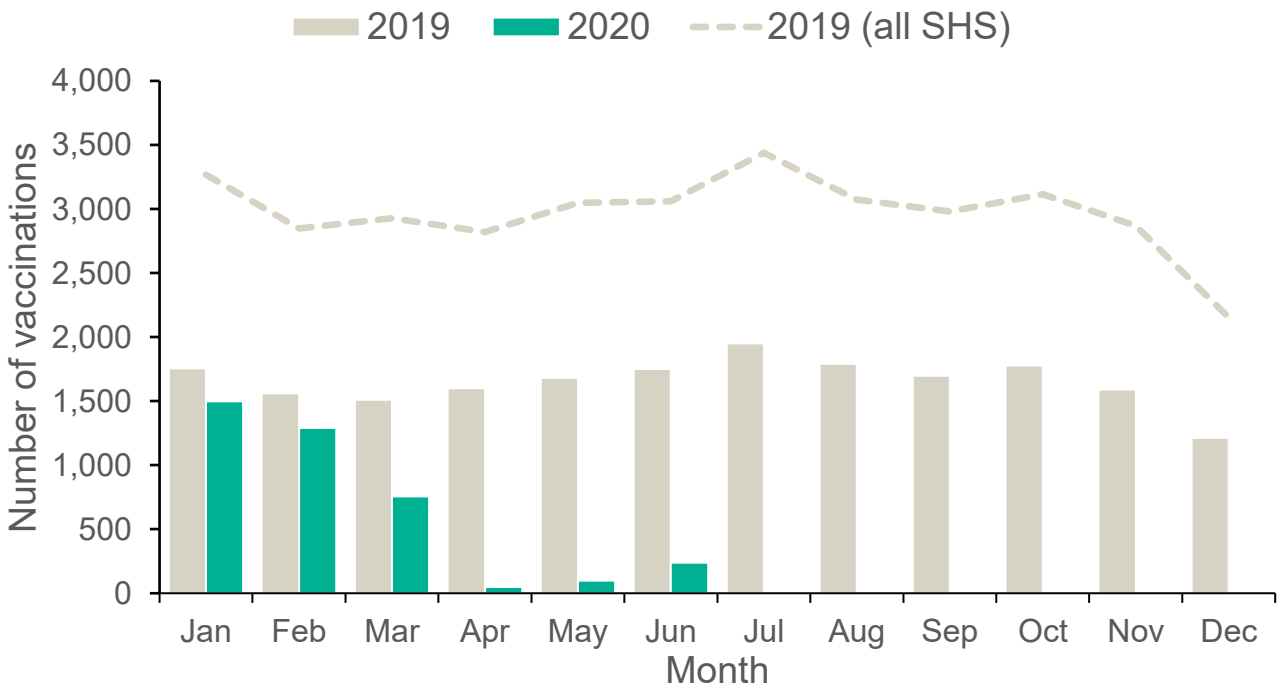
iii Data are based on the number of vaccinations recorded regardless of eligibility or vaccination history.

Figure 4: Number of first doses of Hepatitis B virus (HBV) vaccination among MSM, January 2019 to June 2020



The bars compare data from SHSs which had complete data reported for both January to June in 2019 and January to June in 2020. The dotted line represents the total number of first doses of HBV vaccination among MSM reported in each month in 2019.

Figure 5: Number of first doses of human papillomavirus (HPV) vaccination among MSM, January 2019 to June 2020



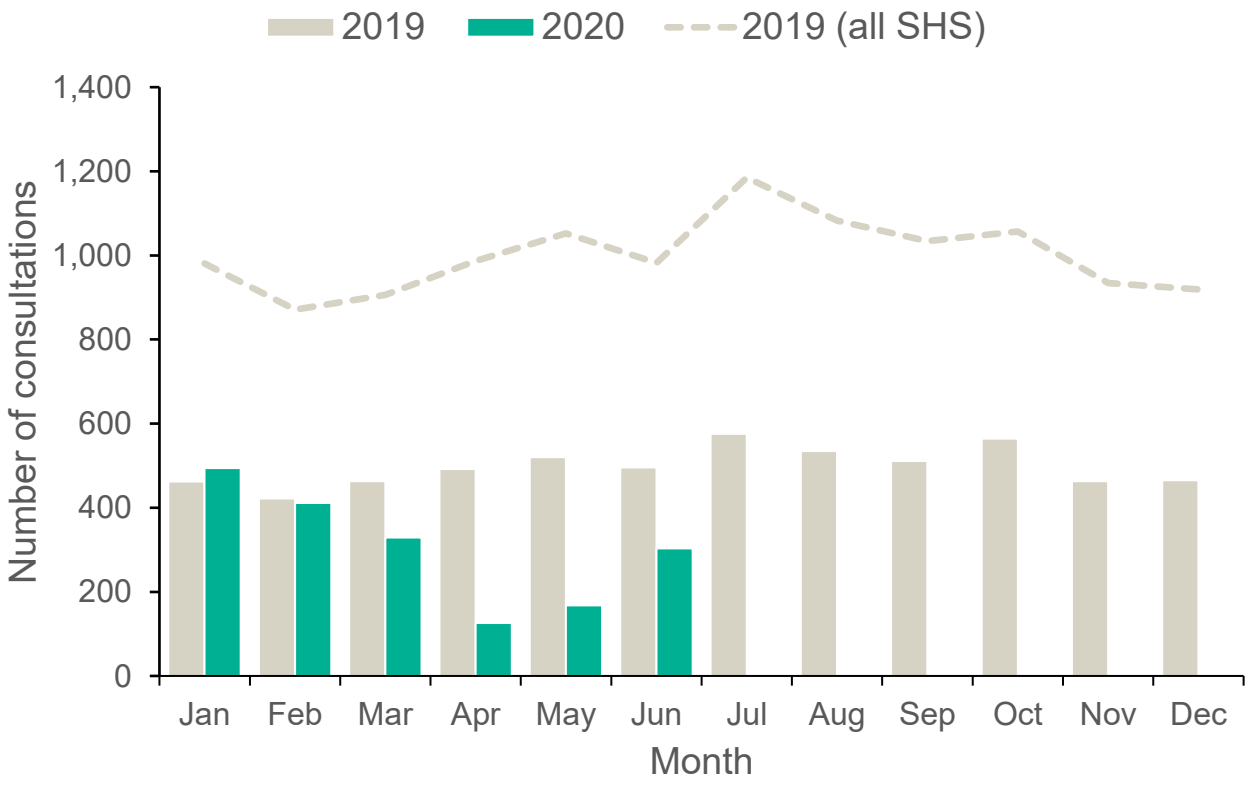
The bars compare data from SHSs which had complete data reported for both January to June in 2019 and January to June in 2020. The dotted line represents the total number of first doses of HPV among MSM reported in each month 2019.

HIV post-exposure prophylaxis in SHSs

HIV post-exposure prophylaxis following sexual exposure (PEPSE) is used to prevent HIV infection. A 28-day course of antiretroviral therapy may be prescribed up to 72 hours after sexual exposure where there is a high risk of HIV transmission, eg receptive condomless sex with a partner of unknown HIV status and from a known risk-group [1].

Between January and June 2020, consultations where PEPSE was prescribed were 36% lower than in the same period in 2019 (Figure 6). Between January and April 2020, the number of PEPSE prescriptions declined sharply, followed by a slight increase in May and June 2020. The number of prescriptions in June 2020 was 39% lower than in June 2019.

Figure 6: Number of consultations where HIV post-exposure prophylaxis following sexual exposure (PEPSE) was prescribed at sexual health services in England, January 2019 to June 2020



The bars compare data from SHSs which had complete data reported for both January to June in 2019 and January to June in 2020. The dotted line represents the total number of consultations where PEPSE was prescribed reported in each month in 2019.

Testing for STIs, HIV and Hepatitis

Testing for STIs and HIV

Between January and June 2020, comparing data from SHSs and chlamydia testing laboratories with complete data reported for both January to June in 2019 and January to June in 2020, there was a 30% reduction in tests for chlamydia, gonorrhoea and syphilis at SHSs compared to the same period in 2019 [iv] (excluding chlamydia tests in the age group targeted by the National Chlamydia Screening Programme [NCSP] [v]) (Figure 7). Similarly for HIV, there was a 35% reduction in tests at SHSs (Figure 8).

As with consultations at SHSs, the number of bacterial STI and HIV tests in SHSs declined sharply between January and April 2020, by 71% for STIs and 77% for HIV. There was a modest increase in testing from May 2020, but the number of tests performed in May and June 2020 was substantially lower than in May and June 2019. While testing has decreased overall during 2020, the proportion of bacterial STI and HIV tests accessed via internet services has increased substantially since April 2020 (Figures 7 and 8; please see Appendix Figures 6 to 8 for information on individual STIs).

The shift to online service provision was also apparent through the National HIV and Syphilis Self-Sampling Service, an online service jointly commissioned by PHE and local authorities. HIV testing activity was highest during PHE-funded periods in January and February 2019 (National HIV Testing Week) and June and July 2020 (Breaking the Chain [vi]). Between January and August 2020, PHE tested just under 6,000 HIV and syphilis self-sampling kits to support the testing campaign (Appendix Table 1). Overall, a higher number of HIV tests were performed by the self-sampling service between January and August 2020 compared to the same period in 2019 (14,872 vs 13,064) (Appendix Figure 9). Whilst some of the increase between 2019 and 2020 was directly

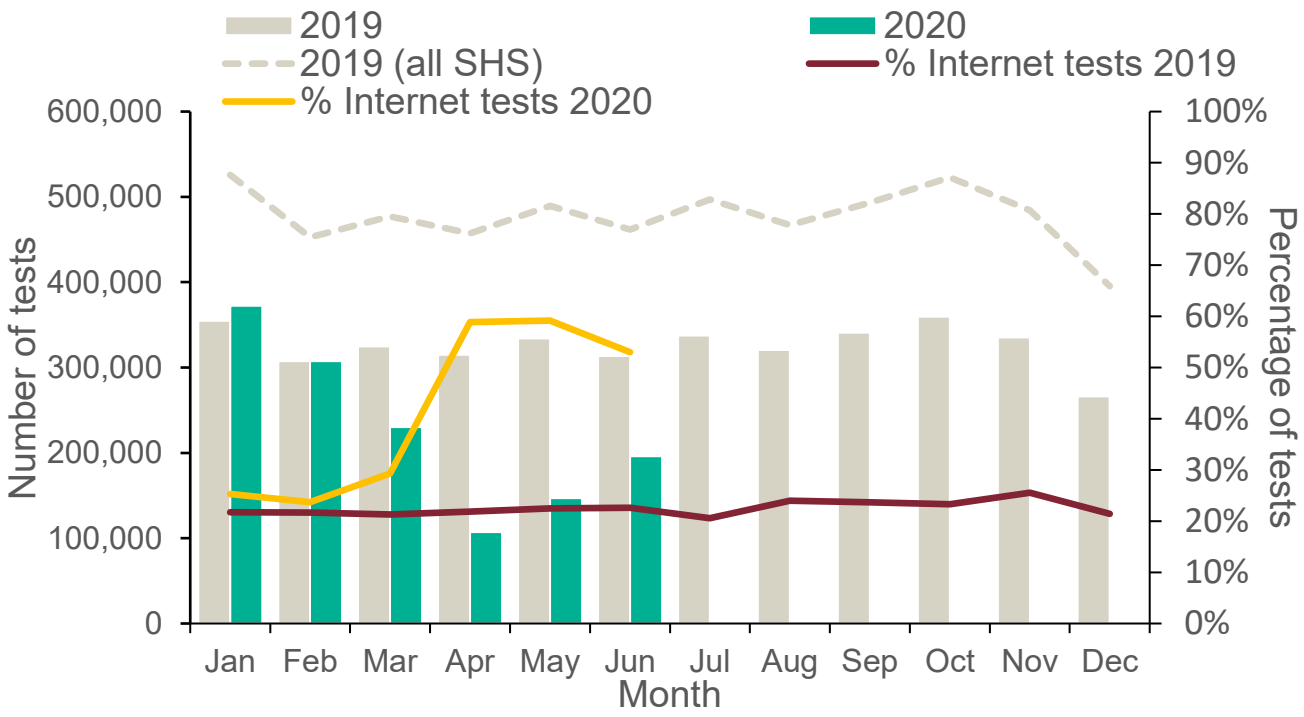
iv Data from routine specialist and non-specialist SHSs' returns to the GUMCAD STI Surveillance System and also, for chlamydia only, routine non-specialist SHSs' returns the CTAD Chlamydia Surveillance System. SHSs include both specialist (Level 3) and non-specialist (Level 1 and 2) SHSs. Further details on the levels of sexual healthcare provision are provided in the Appendix and in the BASHH Standards for the Management of STIs (Appendix B).

v Chlamydia testing and diagnoses in 15 to 24 year olds are considered as part of the National Chlamydia Screening Programme (NCSP) and discussed separately in this report. The NCSP provides opportunistic chlamydia screening to sexually active young people aged 15 to 24 years with the aim of reducing the prevalence of associated sequelae and increasing the detection of chlamydia infection.

vi 'Breaking the Chain: Time to Test' was a national campaign aiming to encourage people to test for HIV during the COVID-19 public health measures in England in June 2020. Further details of the campaign are given in the Discussion of this report.

due to campaign activity, around a third of additional tests delivered were driven by a general increase in demand for online testing.

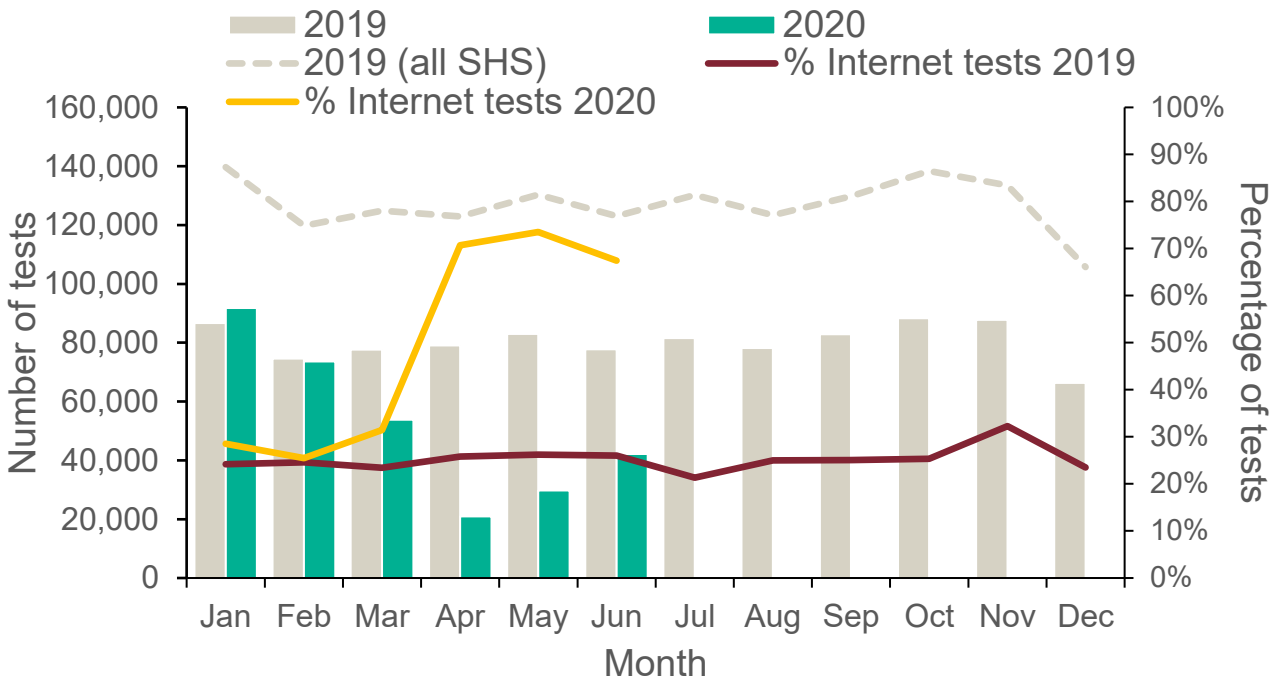
Figure 7. Number of bacterial STI tests (excluding chlamydia <25 year olds) [vii], and proportion accessed via internet services, at sexual health services in England, January 2019 to June 2020



The bars compare data from SHSs which had complete data reported for both January to June in 2019 and January to June in 2020. The dotted line represents the total number of bacterial STI tests reported in each month in 2019

vii Chlamydia testing and diagnoses in 15 to 24 year olds are considered as part of the National Chlamydia Screening Programme (NCSP) and discussed separately in this report.

Figure 8. Number of HIV tests, and proportion accessed via internet services, at sexual health services in England, January 2019 to June 2020



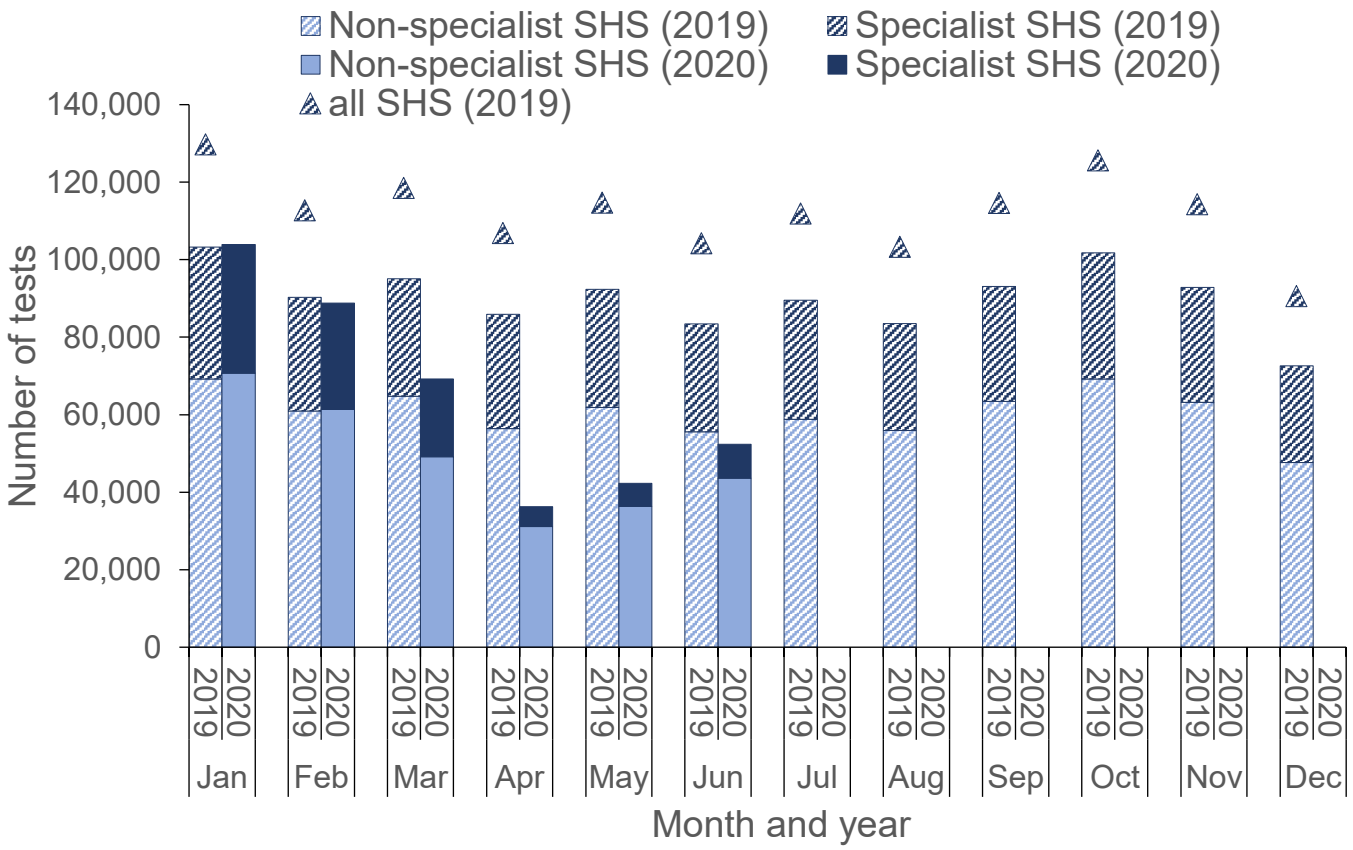
The bars compare data from SHSs which had complete data reported for both January to June in 2019 and January to June in 2020. The dotted line represents the total number of HIV tests in SHSs reported in each month in 2019.

Trends in the number of STI and HIV tests were similar across different age groups, gender and sexual risk groups, ethnic groups and deprivation levels. However, compared to January to March 2020, between April and June 2020 a higher proportion of STI tests [viii] were accessed by people aged 25 to 34 years (51% vs 47%) and a lower proportion by those in all other age groups (≤1% difference in each group). Over the same period, a lower proportion of STI tests were accessed by heterosexual men (26% vs 32%) and a higher proportion were accessed by MSM (19% vs 14%) (Appendix Figures 10 to 14). For HIV tests, between April and June 2020, a lower proportion were accessed by people aged 15 to 19 (7% vs 9%) and 20 to 24 years (25% vs 26%) and by heterosexuals (men 25% vs 33%; women 49% vs 52%), than between January and March 2020 (Appendix Figures 15 to 19). Over the same period, a higher proportion of HIV tests were accessed by people aged 25 to 34 years (43% vs 39%) and by MSM (24% vs 15%) than between January and March 2020.

viii Excluding chlamydia tests in ≤25 year olds. Chlamydia testing and diagnoses in 15 to 24 year olds are considered as part of the National Chlamydia Screening Programme (NCSP) and discussed separately in this report.

Between January and June 2020, the number of chlamydia tests carried out in 15 to 24 year olds through the NCSP was 29% lower than in the same period in 2019. There was a steep downward trend from January to April 2020, followed by a slight recovery in May and June, however, the number of tests reported in June 2020 was 37% lower than in June 2019. Between January and April 2020, the reduction in chlamydia testing was greater among specialist SHSs (85%) than in non-specialist SHSs (56%), largely due to the higher proportion of internet-delivered tests offered (Figures 9 and 10) [ix].

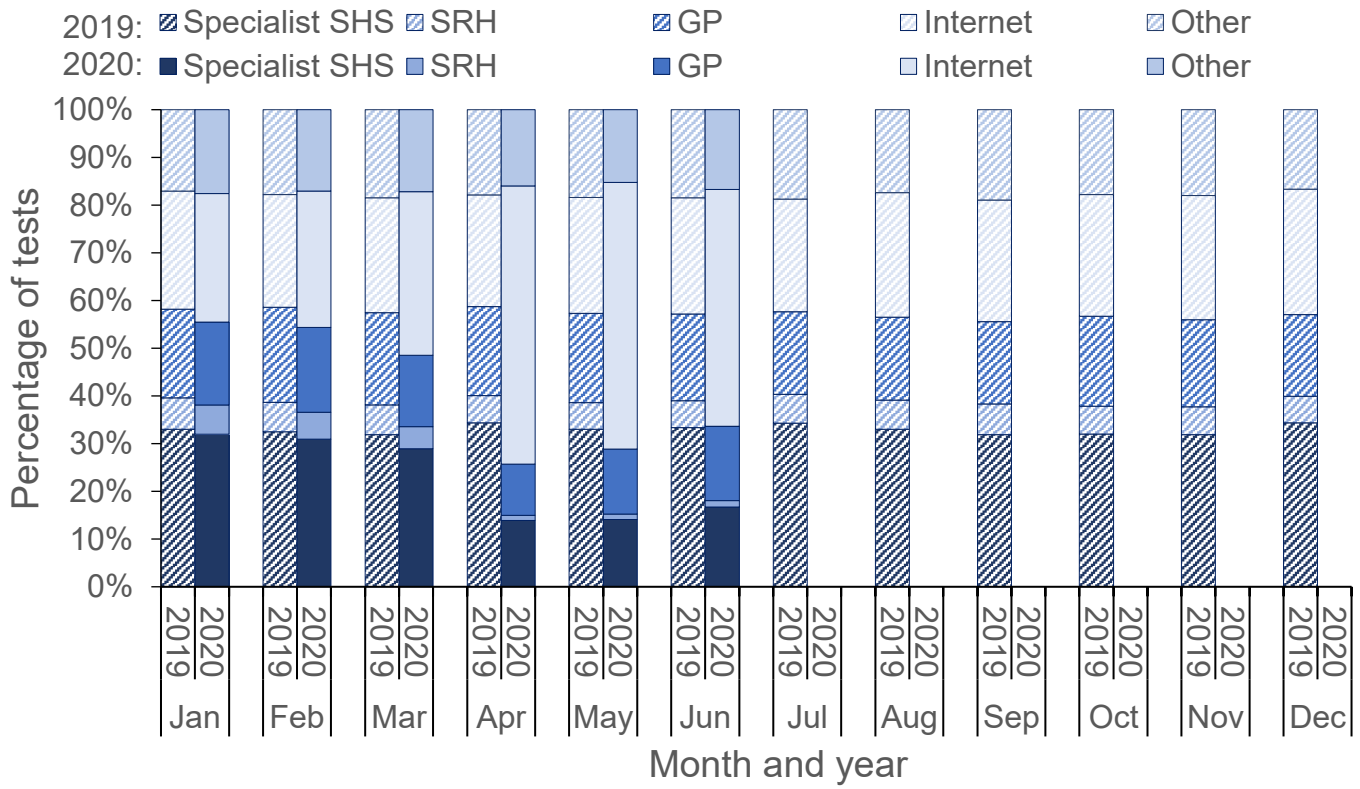
Figure 9: Number of chlamydia tests in 15 to 24 year olds at sexual health services in England, January 2019 to June 2020



The bars compare data from SHSs (specialist SHSs) and chlamydia testing laboratories (non-specialist SHSs) with complete data reported for both January to June in 2019 and January to June in 2020. The symbols represent the total number of tests in SHSs reported in each month in 2019.

ix Specialist (Level 3) SHSs refers to genitourinary medicine (GUM) and integrated GUM/sexual and reproductive health (SRH) services. Non-specialist (Level 1 and 2) SHSs refers to Sexual and Reproductive Health (SRH) services, young people's services, internet services, termination of pregnancy services, pharmacies, outreach, general practice, and other community-based settings.

Figure 10: Proportion of chlamydia tests in 15 to 24 year olds by testing service type, January 2019 to June 2020



The bars compare data from SHSs (specialist SHSs) and chlamydia testing laboratories (non-specialist SHSs) with complete data reported for both January to June in 2019 and January to June in 2020. SRH: Sexual and Reproductive Health Services. GP: General Practice. Other includes termination of pregnancy services, pharmacies and all other community-based settings.

Testing for HAV, HBV and HCV

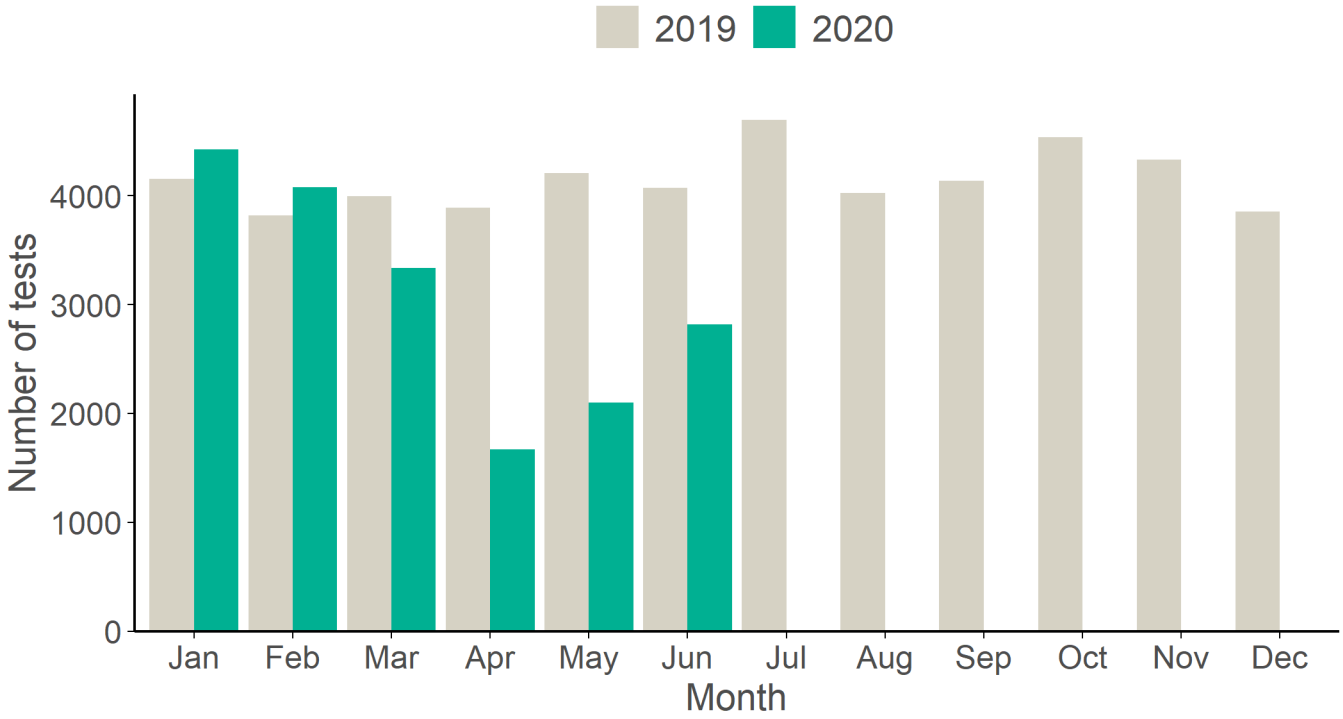
PHE's sentinel surveillance of blood borne virus testing (SSBBV) captures testing for HAV, HBV, HCV and HIV, from up to 23 participating laboratories in England, representing approximately 40% of the population. Frontline testing for 2019 was reported by 19 laboratories for HBV and HCV and 18 laboratories for HAV. The data presented for 2020 includes only 17 laboratories for HBV and HCV and 16 laboratories for HAV. Data from one London laboratory has yet to be received as data collection requires a site visit, which has not been possible due to COVID-19 restrictions.

Between January and June 2020, there was a 24% reduction in HAV IgM tests (which indicate the presence of acute infection) reported to SSBBV compared to the same period in 2019 (18,429 vs 24,133 total tests) (Figure 11). Between January and June 2020, there was a 31% reduction in HBV surface antigen (HBsAg) tests (which indicate

current infection) [x] reported to SSBBV compared to the same period in 2019 (235,858 vs 341,404) (Figure 12). Between January and June 2020, there was a 38% reduction in HCV antibody (anti-HCV) tests (which indicate if the person has ever been infected) [xi] reported compared to the same period in 2019 (161,148 vs 260,416) (Figure 13).

Between January and April 2020, the number of tests declined by 62% for HAV IgM (from 4,422 to 1,672), 61% for HBsAg (from 59,042 to 22,824) and 74% for anti-HCV (from 44,228 to 11,607). There was an increase in testing from May 2020, but the number of tests performed in May and June 2020 remained substantially lower than in May and June 2019. Testing in June 2020 compared to January 2020 was 36% lower (2,819 tests in June), 47% lower (31,242 tests in June) and 55% lower (19,761 tests in June) for HAV, HBV and HCV respectively.

Figure 11: Number of hepatitis A virus (HAV) tests, January 2019 to June 2020



x Presence of HBsAg indicates current infection but does not on its own indicate acute infection; the vast majority of HBsAg detected are in people with chronic persistent infection which does not tell us when the infection was acquired.

xi Presence of anti-HCV indicates the person has "ever" been infected but does not on its own indicate current infection (HCV RNA or Ag detection is also required).

Figure 12: Number of hepatitis B virus (HBV) tests, January 2019 to June 2020

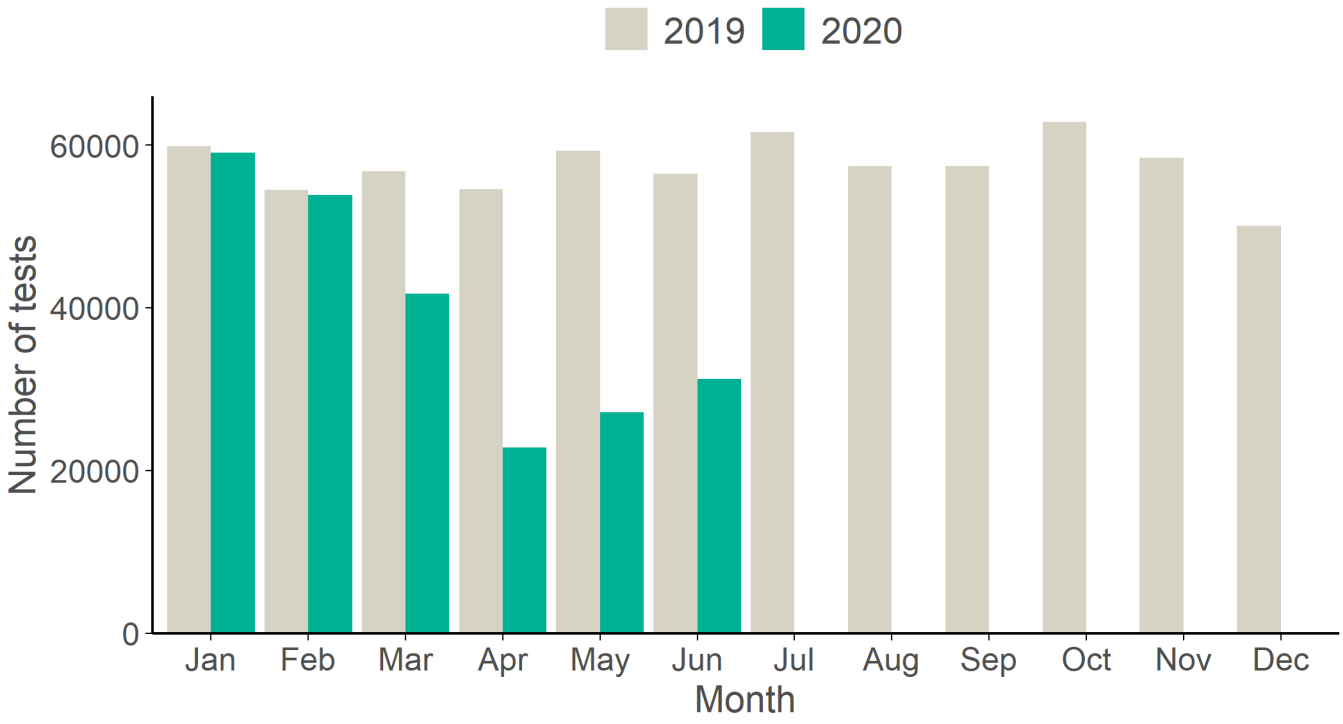
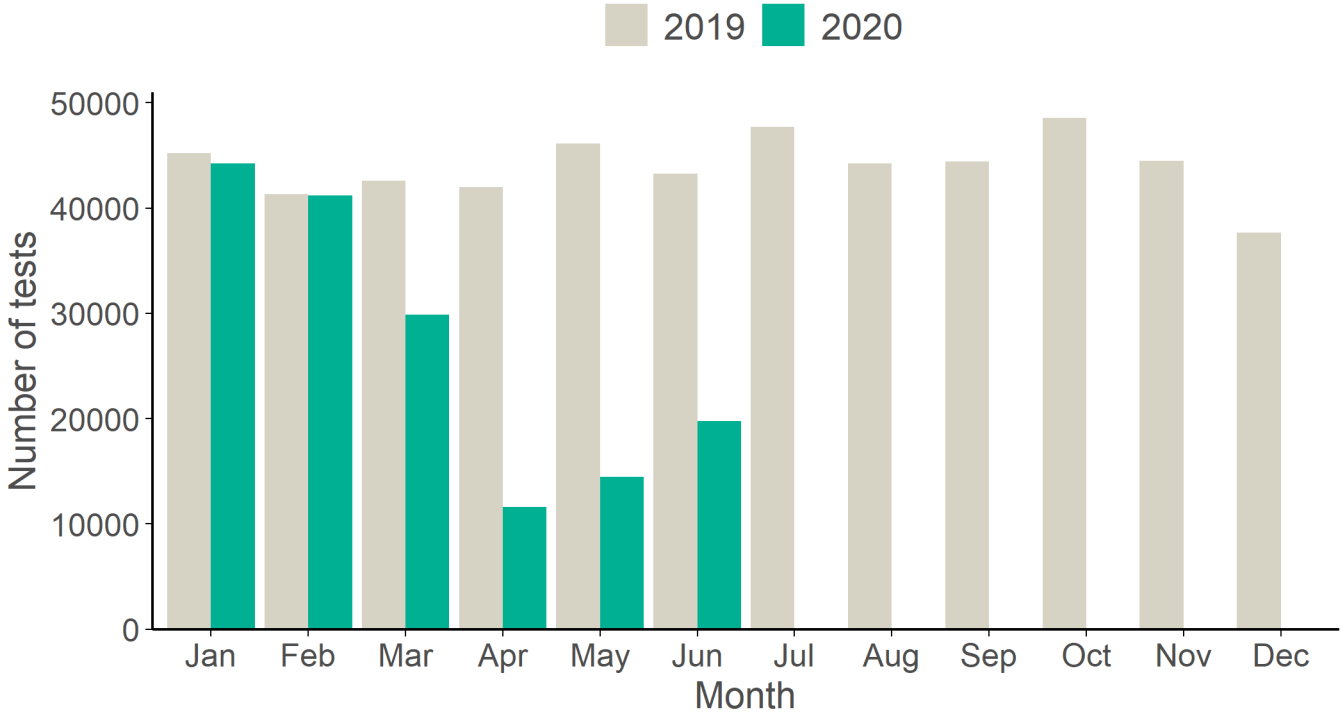


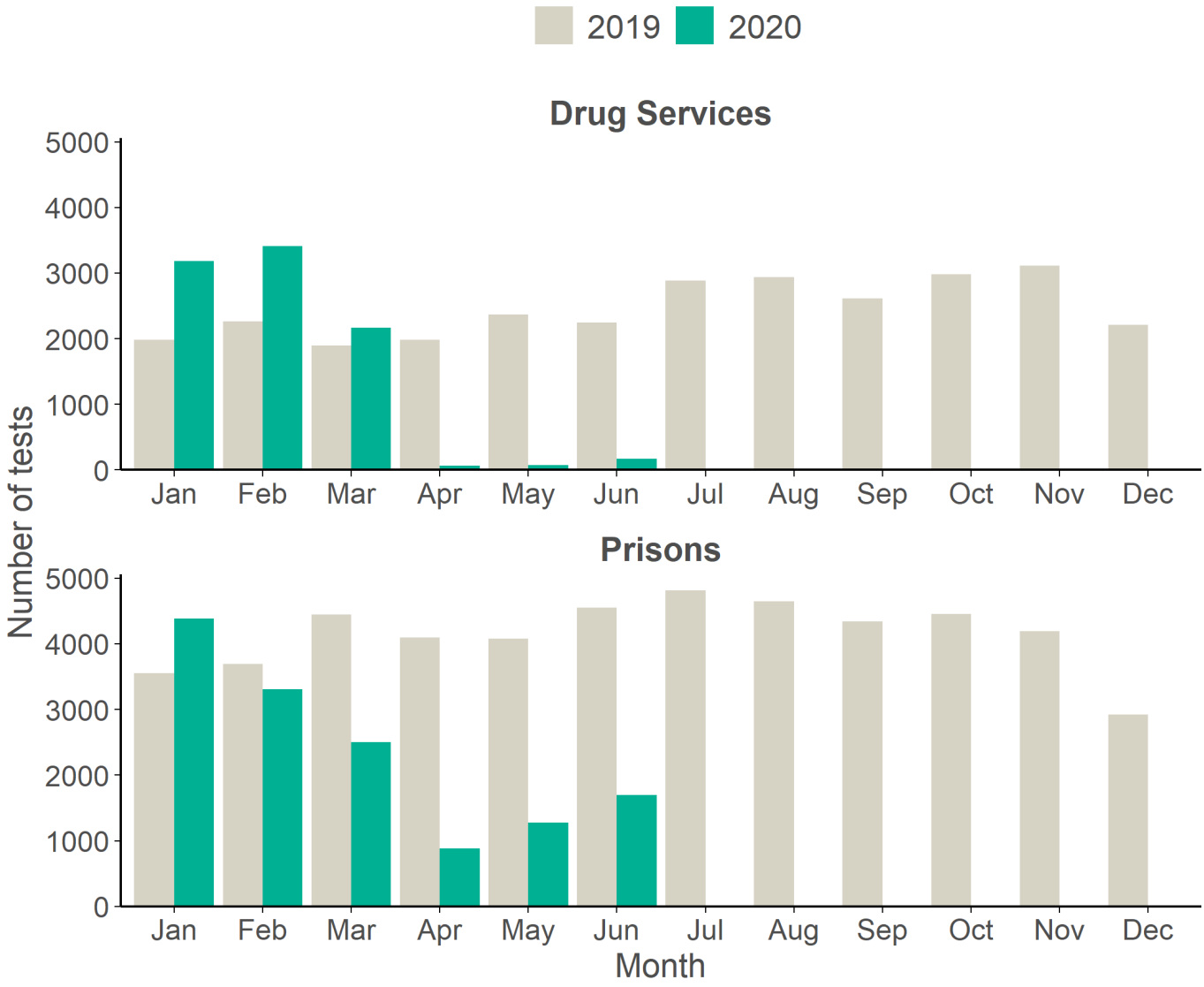
Figure 13: Number of hepatitis C virus (HCV) tests, January 2019 to June 2020



Declines in HAV, HBV and HCV testing were seen across age groups and genders between January and April 2020. The largest relative declines in HBV and HCV testing between January and April 2020 were in drug services, SHSs, general practices (GPs) and prisons (Appendix Figures 20 and 21). Testing in drug services saw the smallest relative recovery between April and June 2020 for both HBV and HCV.

Between January 2020 and April 2020, the number of HCV tests in drug services declined by 98% (from 3,175 to 62) and by 80% (from 4,386 to 879) in prisons. Compared to January 2020, HCV testing in June remained 95% lower (170 tests in June) in drug services, and 61% lower (1,694 tests in June) in prisons (Figure 14).

Figure 14: Number of hepatitis C virus (HCV) tests in drug services and prisons, January 2019 to June 2020



Diagnoses and proportion of people tested that are positive

HIV and STI diagnoses and positivity

As with consultations and testing at SHSs, there was an initial downward trend in the number of HIV and STI diagnoses from January 2020, with the lowest number of diagnoses reported in April and May respectively.

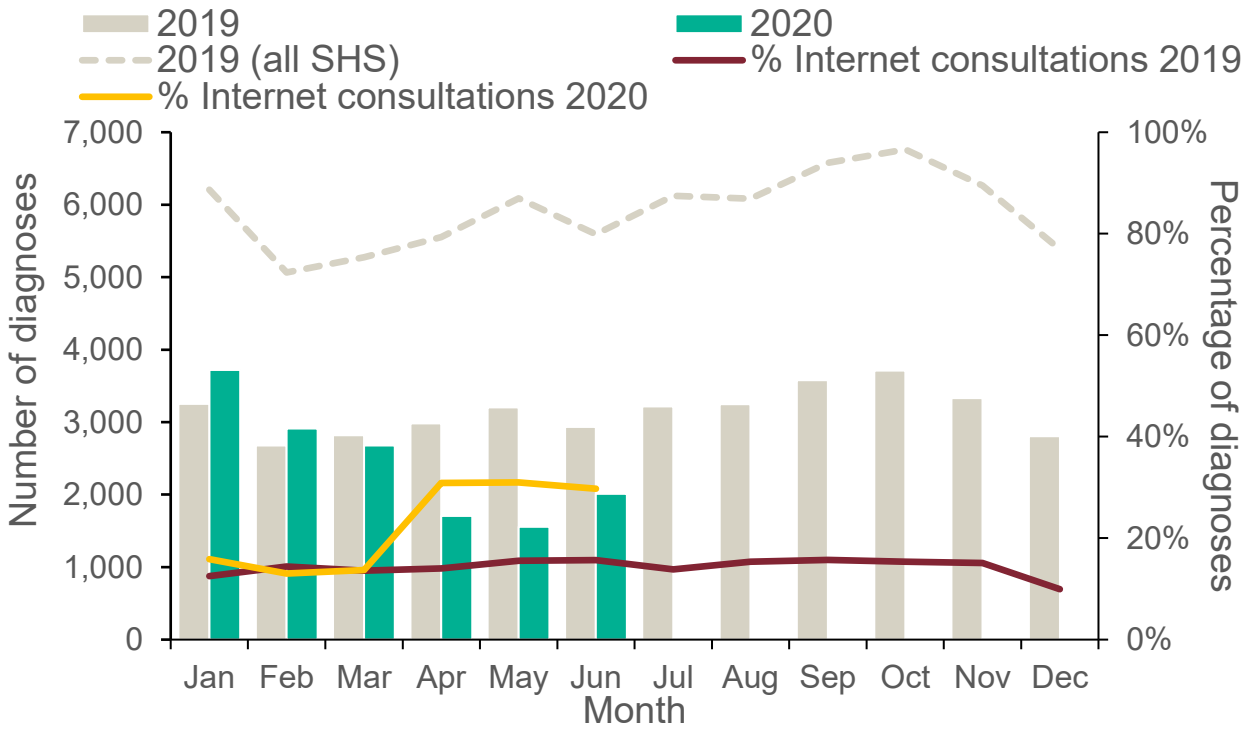
Comparing data from SHSs with complete data reported between January and June in 2019 and 2020, the number of gonorrhoea diagnoses fell by 18% (Figure 15). The number of gonorrhoea diagnoses declined by 58% between January and May 2020 and despite a slight increase in June 2020, the number of diagnoses was 31% lower than in June 2019.

For HIV, across SHSs with complete reporting, the number of diagnoses between January and June 2020 was 21% lower than in the same period in 2019 (Figure 16). There was slight increase in May and June 2020, however, the number of HIV diagnoses was 11% lower than in June 2019.

Similar trends were observed for other STIs (Appendix Figures 22 to 26).

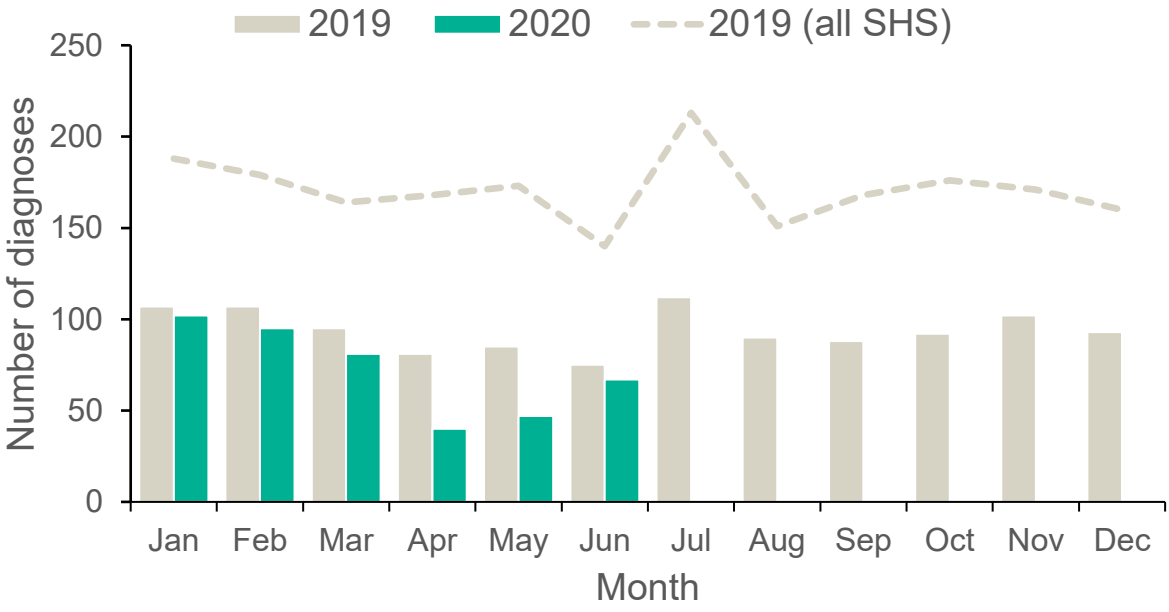
While HIV and STI diagnoses overall have declined during 2020, the proportion of diagnoses made via internet services has increased substantially since April 2020 (Figures 15 and 16). For gonorrhoea, there was a two-fold increase in the proportion of diagnoses made via internet services; 30% between April and June 2020 compared to 14% between January and March 2020.

Figure 15: Number of gonorrhoea diagnoses at sexual health services and proportion diagnosed via internet services in England, January 2019 to June 2020



The bars compare data from SHSs which had complete data reported for both January to June in 2019 and January to June in 2020. The dotted line represents the total number of gonorrhoea diagnoses reported in each month in 2019.

Figure 16: Number of new HIV diagnoses at sexual health services in England, January 2019 to June 2020

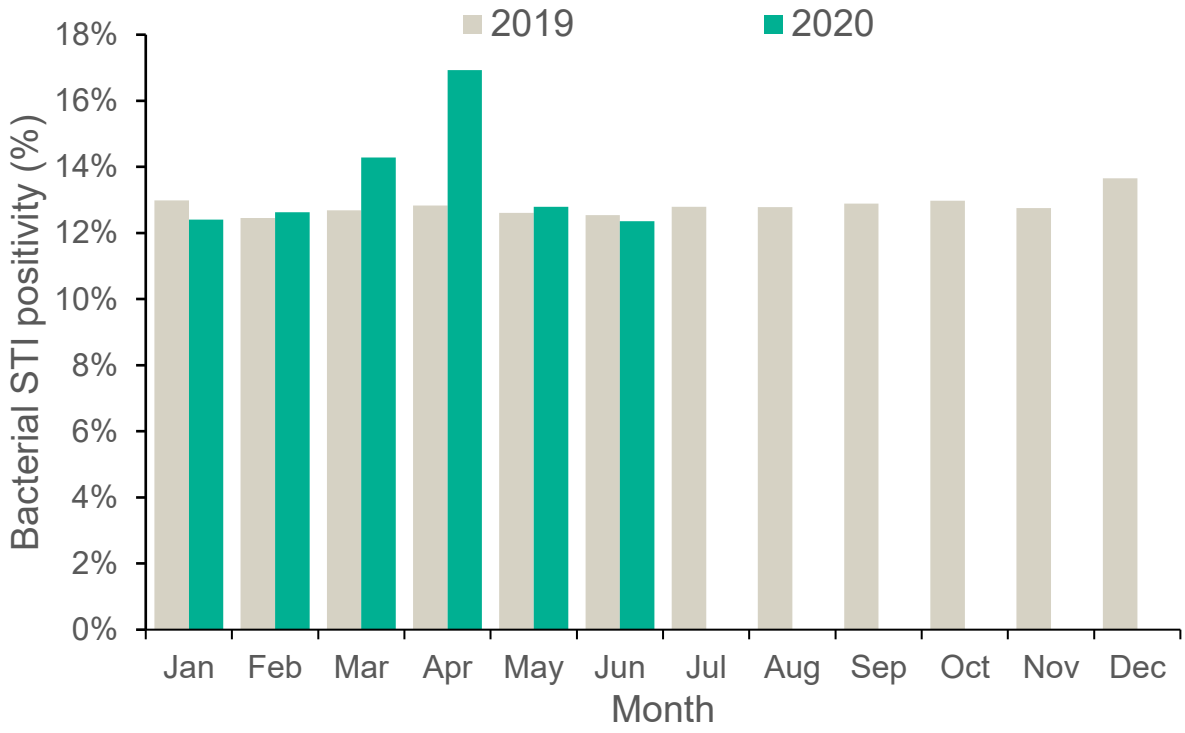


The bars compare data from SHSs which had complete data reported for both January to June in 2019 and January to June in 2020. The dotted line represents the total number of HIV diagnoses reported in each month in 2019.

Between January and February 2020, the proportion of bacterial STI tests (excluding blood tests) that were positive (test positivity) at SHSs was similar to January and February 2019 (Figure 17). Bacterial STI test positivity increased during March and April 2020; 17% of tests in April 2020 were positive compared to 13% in April 2019. Test positivity in May and June 2020 was similar to corresponding months in 2019. The increase in bacterial STI positivity in March and April 2020 may reflect the prioritisation of testing to those with symptoms [2].

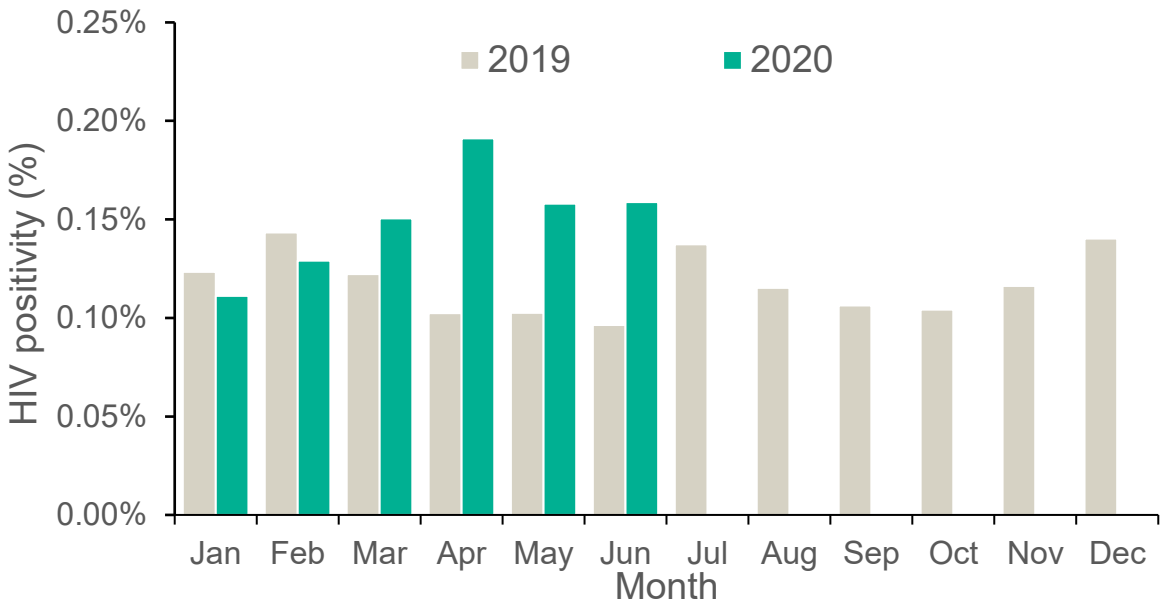
HIV test positivity increased slightly between January and March 2020 (from 0.11% to 0.15%) and peaked in April 2020 (0.19%) (Figure 18). This initial increase was followed by slight fluctuations in May and June, but positivity remained slightly higher than equivalent months in 2019.

Figure 17: Bacterial STI test positivity at sexual health services in England, January 2019 to June 2020



The bars compare data from SHSs which had complete data reported for both January to June in 2019 and January to June in 2020. Bacterial STI positivity was calculated using all bacterial STI diagnoses including chlamydia, gonorrhoea, *Mycoplasma genitalium*, *Lymphogranuloma venereum* (LGV), non-specific genital infection and pelvic inflammatory disease, as a proportion of all screens where a chlamydia and gonorrhoea test was performed. Infectious syphilis has been excluded as diagnosis usually requires a blood sample.

Figure 18: HIV test positivity at sexual health services in England, January 2019 to June 2020

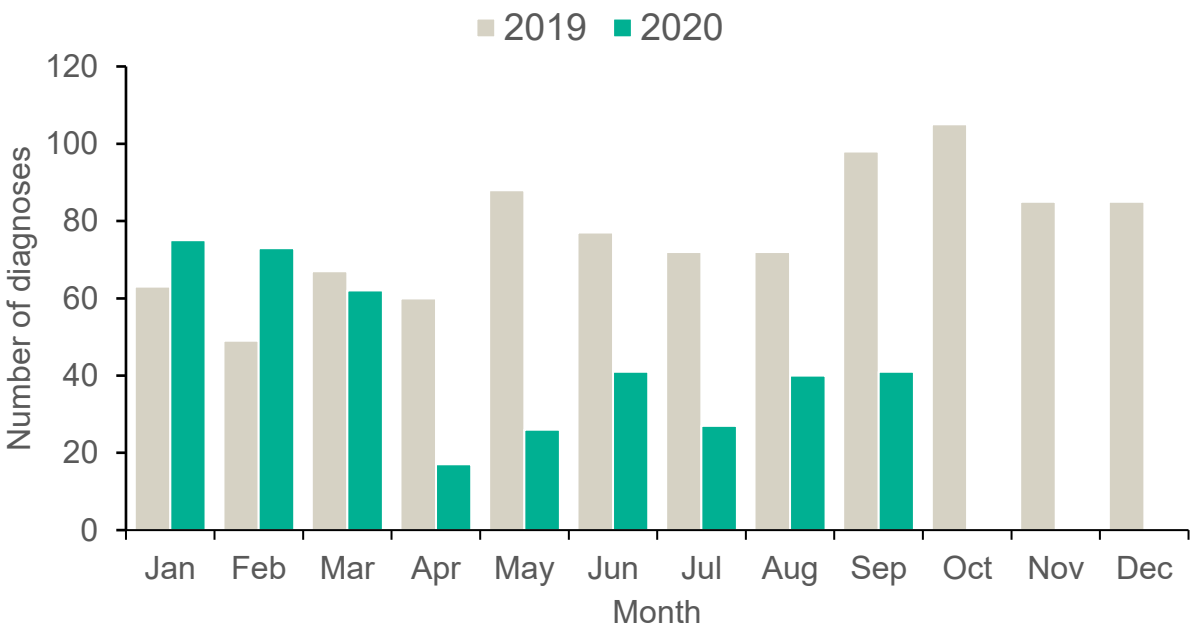


HIV positivity was calculated using all new HIV diagnoses as a proportion of all HIV tests performed. The bars compare data from SHSs which had complete data reported for both January to June in 2019 and January to June in 2020.

Shigella spp. are transmitted via the faecal-oral route and can cause severe dysentery. In England, many cases are associated with travel to endemic areas. However, *Shigella* spp. can also be transmitted through sexual contact. MSM are particularly at risk and there has been an increase in sexual transmission in MSM within the last 10 years [3,4]. Laboratory confirmed diagnoses of *Shigella* spp are reported in near real-time through SGSS from all NHS laboratories. These data do not include information on sexual identity or behaviour, so diagnoses among adult men who have not reported foreign travel are used as a proxy for sexual transmission in MSM [5].

Between January and April 2020, the number of *Shigella* spp diagnoses probably associated with MSM decreased by 77% (from 75 to 17), followed by increases in May and June (Figure 19). Between June and September, monthly *Shigella* spp. diagnoses continued to occur but were lower than the equivalent months in 2019. The notification of these acute infections, indicates continuing risks of transmission during the period of lockdown and afterwards, but also a potential overall decline in the burden of shigellosis.

Figure 19: Diagnoses of non-travel associated *Shigella* spp. in adult men in England, January 2019 to June 2020



Hepatitis diagnoses and positivity

Laboratory confirmed positive reports of HAV, HBV and HCV are reported through SGSS from all NHS laboratories and are deduplicated to identify new diagnoses. Reported diagnoses of HAV refer to positive anti-HAV IgM tests, for HBV these refer to positive HBsAg and/or anti-HBc IgM tests, and for HCV these refer to positive HCV RNA and/or anti-HCV positive tests.

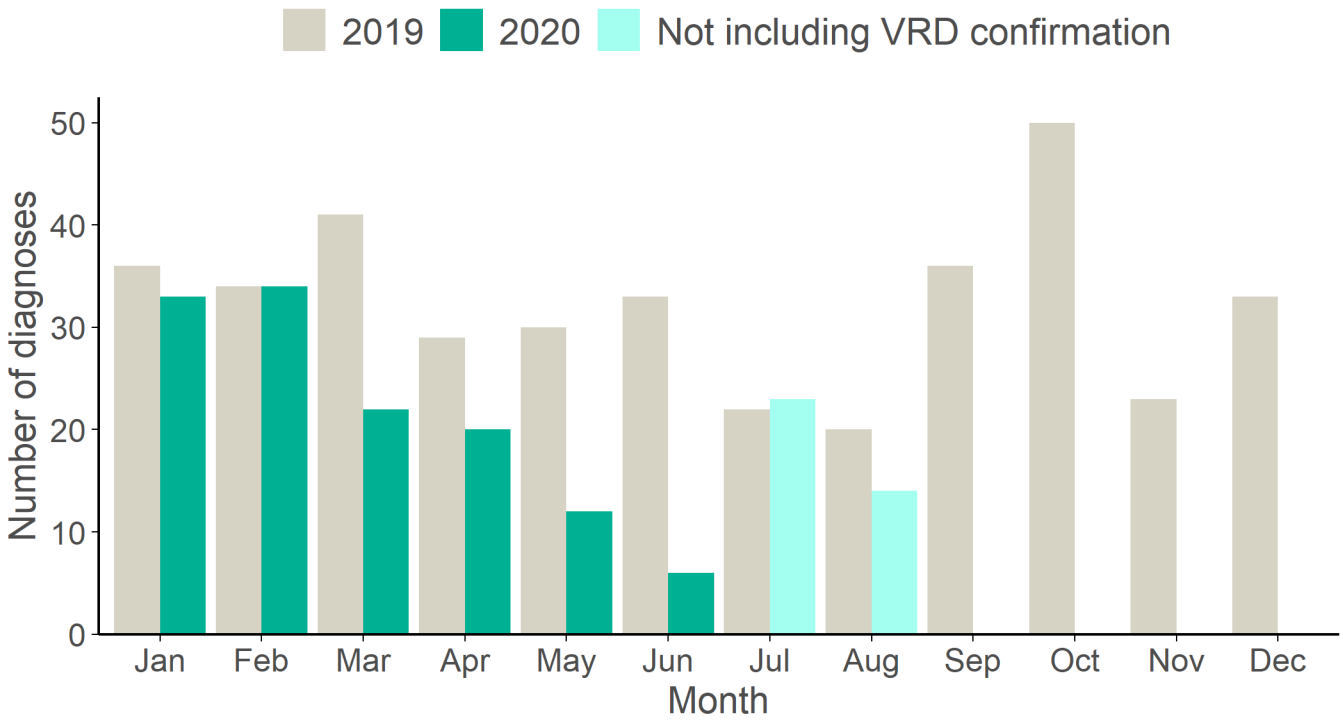
Like *Shigella* spp, HAV is transmitted by the faecal-oral route (including in MSM) and is mainly associated with travel to endemic areas and / or food contamination. Therefore, seasonality in HAV diagnoses and clusters are often observed following holiday periods or availability of seasonal produce. HAV presents as an acute symptomatic infection and so an HAV diagnosis indicates a new acquisition of infection. However, HBV and HCV are blood-borne viruses and mainly manifest as asymptomatic chronic infections, so an HBV or HCV diagnosis, in the absence of clinical features, is largely indicative of past acquisition.

The number of different source laboratories reporting HAV diagnoses to SGSS fell by 38% between January and June 2020 (from 24 in January to 15 in June) before increasing in July (18 in July, 25% decline from January to July). The number of different source laboratories reporting HBV and HCV diagnoses to SGSS fell by 27% (from 78 in January to 57 in April) and 54% (from 92 in January to 74 in April), respectively, and remained at similar numbers between April and August. However, laboratories are only

counted if they report new diagnoses to SGSS so caution is required in interpretation as the decline may be a combination of underreporting as well as decreased diagnoses.

Between January and June 2020, there was a 37% reduction in new diagnoses of HAV compared to the same period in 2019 (127 vs 203) (Figure 20). Between January and June 2020, the number of new diagnoses of HAV declined by 82% (from 33 to 6) [xii].

Figure 20: Number of new hepatitis A (HAV) diagnoses in England, January 2019 to June 2020



Between January and August 2020 there was a 34% reduction in new diagnoses of HBV reported compared to the same period in 2019 (3,754 vs 5,719) (Figure 21). For HCV, there was a 45% reduction in new diagnoses compared to the same period in 2019 (6,050 vs 11,005) (Figure 22). Between January and April 2020, HBV and HCV new diagnoses declined by 75% (from 873 to 218) and 85% (from 1,466 to 227), respectively.

xii New HAV diagnoses from SGSS are reconciled with the results of confirmatory testing undertaken at the PHE Virus Reference Department (VRD) in Colindale in order to remove false positive HAV IgM results that can occur due to cross-reactivity and lower specificity of the test in some people. It is not possible to interpret data after June 2020 as reconciliation with confirmatory testing by the reference laboratory have not been completed; usually the numbers of new diagnoses decline as false positives are removed.

Unlike new HAV diagnoses which continued to decline until June, the initial decline in new HBV and HCV diagnoses was followed by an increase in new diagnoses between April and July 2020, however, both new HBV and HCV diagnoses in July were 56% lower (385 and 642 in July, respectively) than in January 2020. New diagnoses of HBV and HCV declined slightly again between July and August 2020, but this may reflect reporting delays. The number of new diagnoses each month of HAV, HBV and HCV since March 2020 have remained lower than in the equivalent months in 2019.

The large relative declines in new HAV diagnoses between January and June 2020 and in new HBV and HCV diagnoses between January 2020 and April 2020 were generally seen in both men and women, across all age groups and regions, and, for HCV, across all specialities and settings. There were, however, some notable exceptions; the relative decline in new HCV diagnoses between January and April 2020 was markedly greater in drug services, and smaller in London and in people aged 65 years and over. The relative decline in new HBV diagnoses between January and April 2020 was slightly greater in men than women, in Yorkshire and Humber, the East Midlands and the North West, and smaller in individuals aged 65 years and over.

Figure 21: Number of new hepatitis B (HBV) diagnoses in England, January 2019 to June 2020

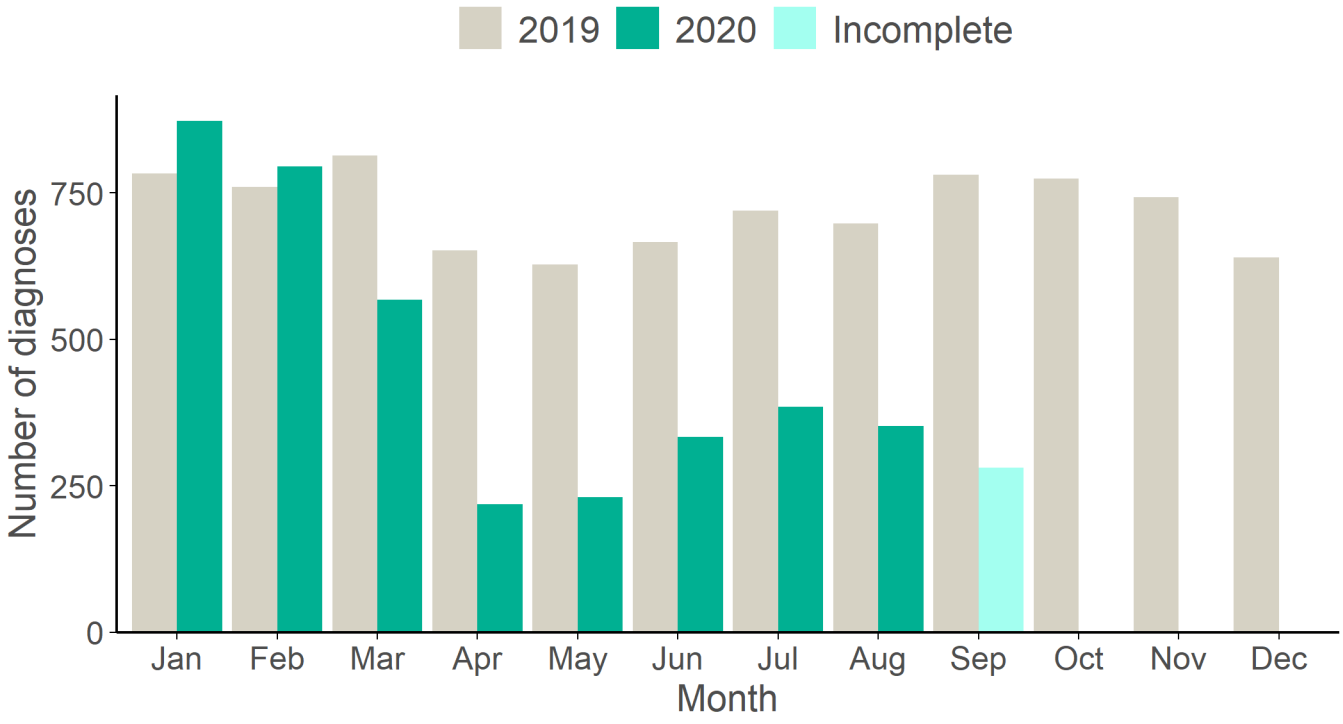
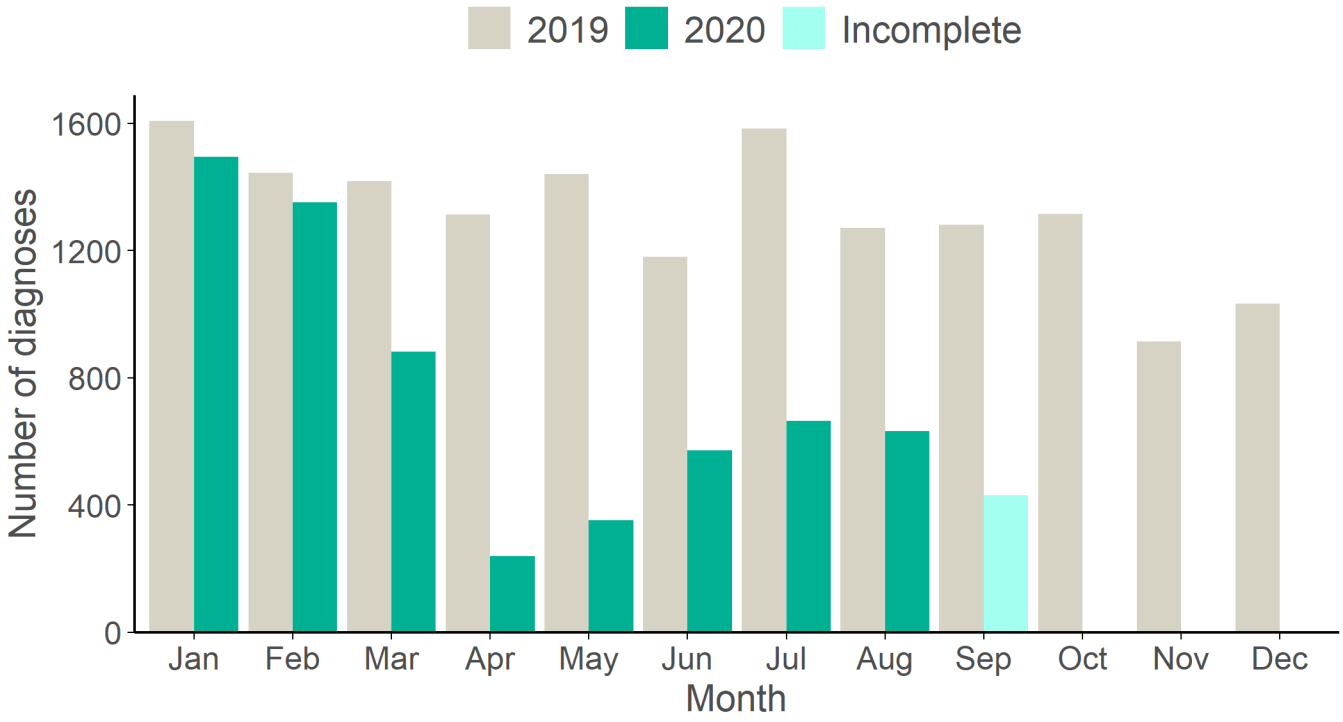


Figure 22: Number of new hepatitis C (HCV) diagnoses in England, January 2019 to June 2020



The proportion of individuals testing positive (test positivity) is calculated from positive and negative tests reported through PHE's sentinel surveillance of blood borne virus testing (SSBBV). Positivity is useful particularly for chronic infections such as HBV and HCV as an indication of whether testing and diagnostic services are reaching higher risk populations.

Between January and March 2020, test positivity increased (from 0.8% in January to 0.9% in March) for HBV (Figure 23) and remained stable for HCV antibody (around 2.8%) (Figure 24). Positivity fell in April for both HBV and HCV, by 44% (to 0.4% in April) and 51% (to 1.4% in April), respectively, when compared to January 2020.

Test positivity for HBV and HCV increased between April and June 2020 but was lower than in the same period in 2019. Compared to January 2020, positivity in June 2020 was 34% lower (0.5% positivity in June) for HBV and 40% lower (1.7% positivity in June) for HCV. The drop in positivity during April to June 2020 compared to January to March 2020 and the equivalent period in 2019 may indicate that people at lower risk were accessing service provider venue-based testing, whilst those at greatest need were not.

Figure 23: Hepatitis B virus (HBV) positivity and number of people tested in England, January 2019 to June 2020

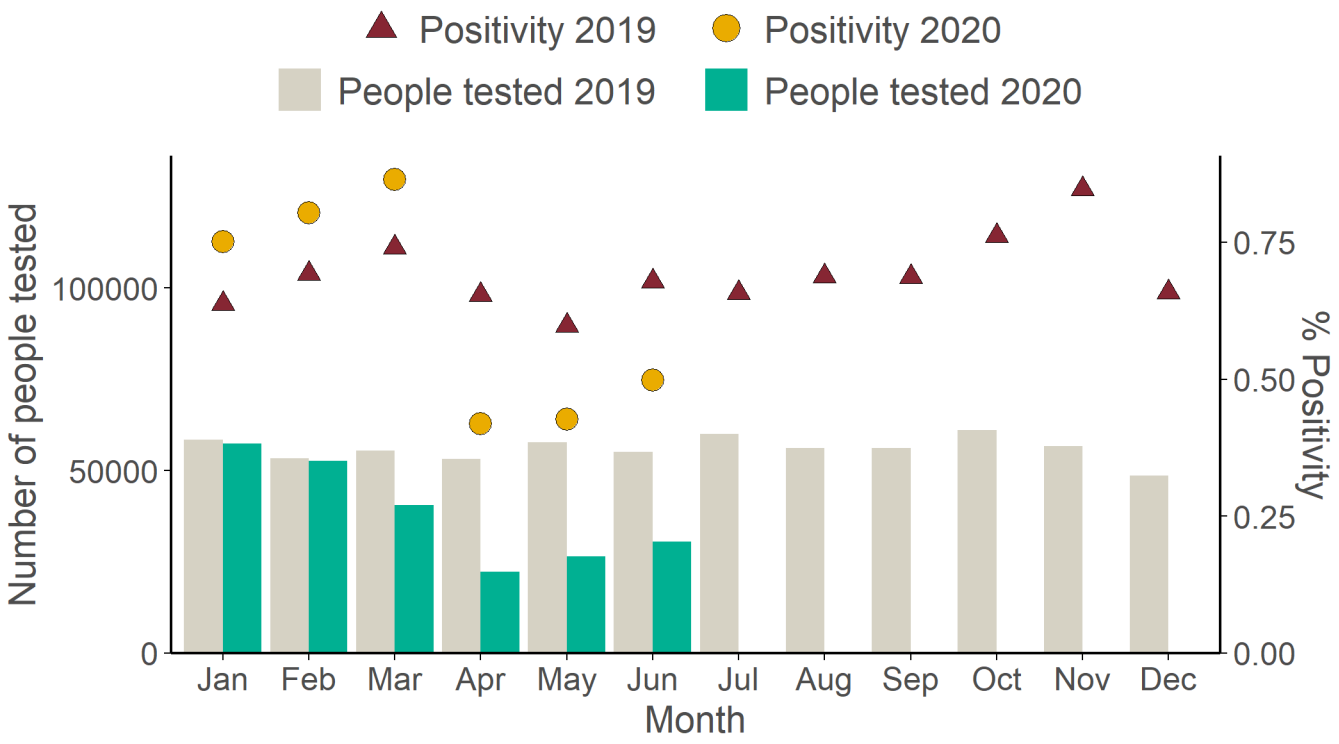
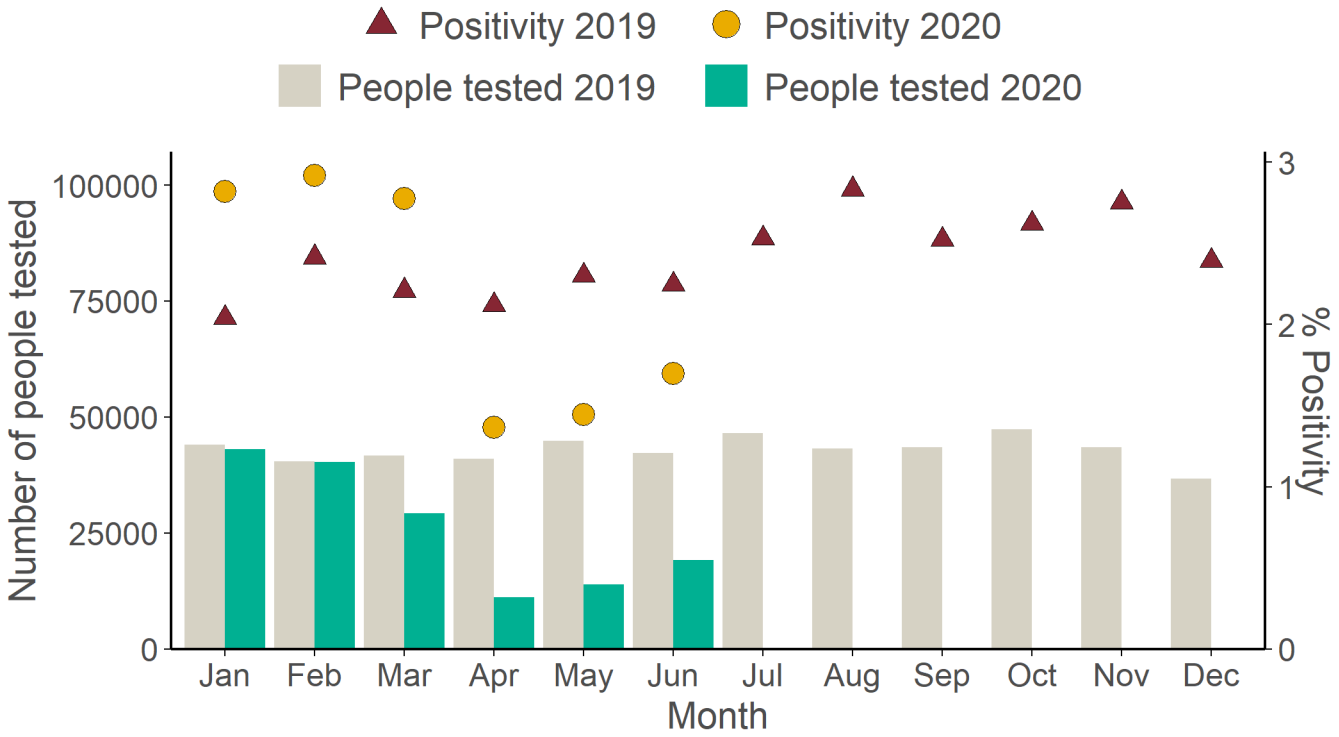


Figure 24: Hepatitis C virus (HCV) positivity and number of people tested in England, January 2019 to June 2020

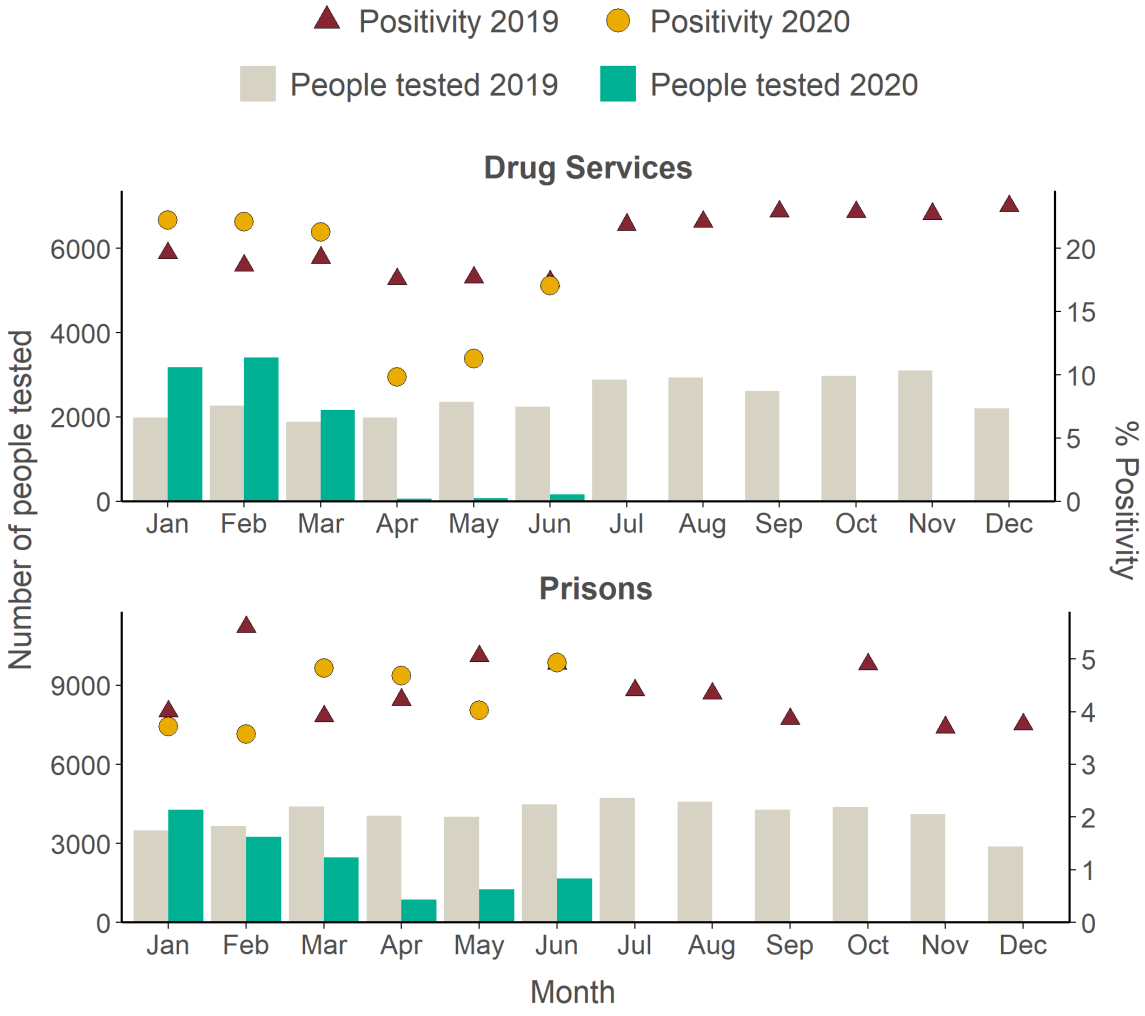


Declines in HBV positivity from April 2020 were observed across all ethnic groups although a substantial proportion of cases had unreported ethnicity (Appendix Figure 27).

The decrease in HCV positivity was not uniform across test settings. Prisons and drug services test higher risk groups, ie people who inject drugs. HCV positivity among those tested in drug services fell by 56% between January and April 2020 (from 22.2% to 9.8%) before increasing in June to levels comparable to June 2019 (17.1% in June 2020) (Figure 25). By contrast, HCV positivity among those tested in prisons remained relatively stable between January and June 2020 (fluctuating between 3.7% and 4.8%) and was comparable to the same period in 2019.

While positivity should be interpreted with caution given the drop in the numbers tested in drug services from April to June 2020, the observation that positivity was stable in prison services but fell in drug services may reflect sustained provision of testing in the closed prison environment, whereas drug services in the community may have been less accessible to those at highest risk.

Figure 25: Hepatitis C virus (HCV) people tested and positivity in England in drug services and prisons, January 2019 to June 2020



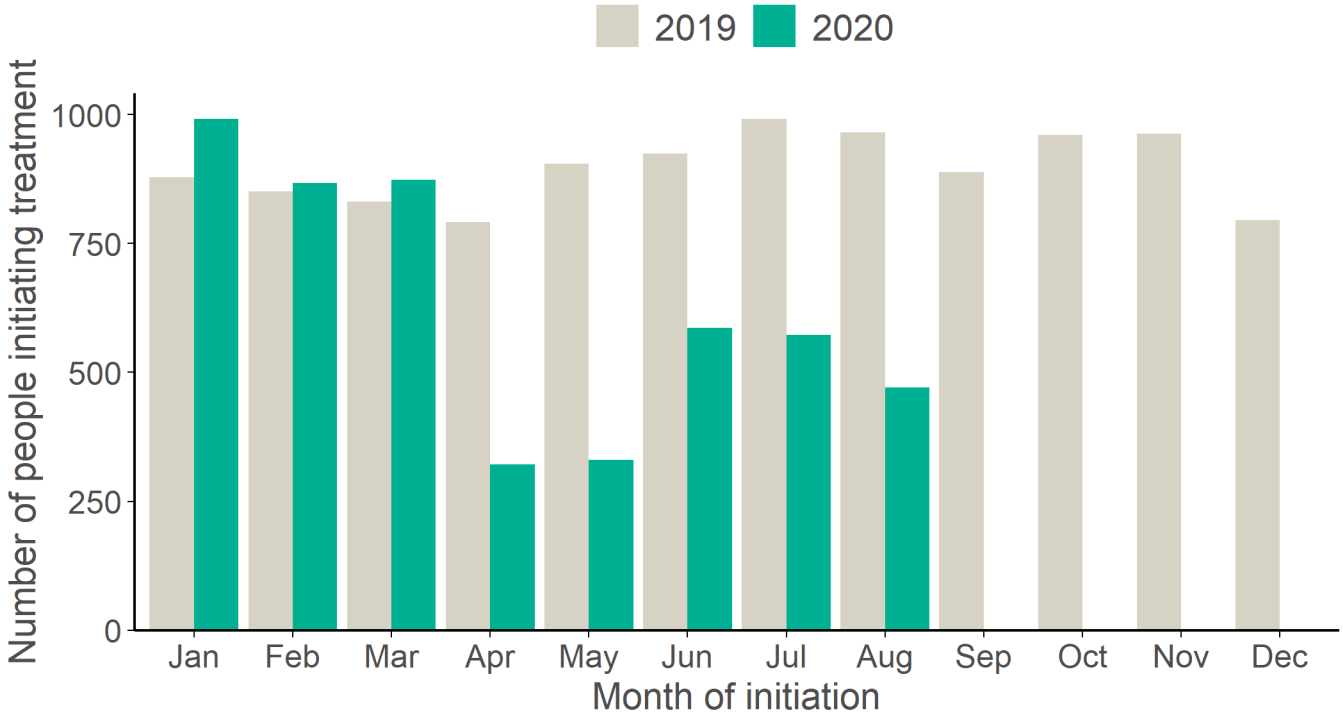
Treatment and care

Patient HCV treatment episodes are reported to PHE through NHS England's Hepatitis C Patient Registry and Treatment Outcome System. Data for the most recent months are subject to change as a result of delayed reporting.

Between January and August 2020, there was a 30% reduction in treatment initiations reported compared to the same period in 2019 (5,013 vs 7,136) (Figure 26). Between January and April 2020, reported treatment initiations declined by 68% (from 991 to 322). The number of treatment initiations increased from April to June, however, treatment initiations in June 2020 remained 41% lower (586 in June) than in January 2020. The number of reported monthly treatment initiations since April 2020 has remained lower compared to the same period in 2019. Although declines in HCV tests and diagnoses began in February 2020, large falls in HCV treatment initiations did not begin until April.

The decline in treatment initiations occurred across age groups, for men and women, for people reporting and not reporting injecting drug use, and across sources of treatment referral. Sustained treatment initiations in March 2020 likely reflect continued referrals from drug services and an increase in prison referrals between January and March 2020 (Appendix Figure 28). The rebound in treatment initiations in June 2020 was driven by referrals from all settings including primary and secondary care.

Figure 26: Hepatitis C (HCV) treatment initiations in England, January 2019 to August 2020



Evidence from service user and community surveys

People who inject drugs

Preliminary data from the PHE Unlinked Anonymous Monitoring (UAM) Survey of People Who Inject Drugs (PWID) indicate that the COVID-19 response has affected access to essential services for PWID in England. Just over a third (61/166) of PWID participants reported that in 2020 drug and alcohol services were more difficult to access than in 2019, with 22% (30/136) reporting difficulties accessing HIV and/or hepatitis testing and accessing equipment for safely using and/or injecting drugs (29%; 40/137). Eleven per cent (10/87) of participating PWID reported some form of HCV treatment disruption. More detailed analysis from the survey will be published in 2021.

Men who have sex with men

An online community-based survey conducted through the National Institute of Health Research Health Protection Research Unit in Blood Borne and Sexually Transmitted Infections suggested that, although there had been a decline, there was ongoing risk of STI and HIV acquisition and need of healthcare among MSM, including HIV pre-exposure prophylaxis (PrEP), during nationwide restriction measures ('lockdown') implemented in response to the COVID-19 pandemic [xiii]. The survey found that during lockdown beginning in mid-March, 47% (447/956) of MSM reported one or more new sexual partners and 20% (194/956) reported condomless sex with multiple partners. This compared to 71% (1127/1585) and 31% (559/1812), respectively, from the same period in the equivalent survey conducted during 2017. Of the MSM reporting condomless sex with multiple partners during lockdown, 57% had not accessed STI testing at time of survey completion. The full findings from this study will be published in due course.

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xiii The research was funded by the National Institute for Health Research Health Protection Research Unit (NIHR HPRU) in Blood Borne and Sexually Transmitted Infections at University College London in partnership with Public Health England (PHE). The views expressed are those of the authors and not necessarily those of the NIHR, the Department of Health and Social Care or Public Health England. We acknowledge members of the NIHR HPRU in BBSTI Steering Committee: Professor Caroline Sabin (HPRU Director), Dr John Saunders (PHE Lead), Professor Catherine Mercer, Professor Gwenda Hughes, Professor Greta Raita, Dr Ruth Simmons, Professor William Rosenberg, Dr Tamyo Mbisa, Professor Rosalind Raine, Dr Sema Mandal, Dr Rosamund Yu, Dr Samreen Ijaz, Dr Fabiana Lorencatto, Dr Rachel Hunter, Dr Kirsty Foster and Dr Mamooma Tahir. We are grateful to Dr Alison Howarth at University College London who led the MSM survey and performed the analyses presented here.

Discussion

National surveillance data from multiple settings show a decline since March 2020 in consultations at SHSs and HIV specialised services; tests and diagnoses for STIs, HIV and viral hepatitis; vaccinations of MSM; and HCV treatment initiations. These changes follow the implementation of nationwide social and physical distancing measures, including the emphasis on staying at home, and a reduction in capacity and throughput at services. The greatest fall was seen in services which cannot be provided remotely, such as vaccination and HCV testing. Test positivity at SHSs was also highest in April 2020, likely due to the prioritisation of services for those at higher risk, who are clinically vulnerable, or who have STI-related symptoms [2].

These analyses provide strong evidence that the COVID-19 pandemic response, including social and physical distancing measures, led to a re-prioritisation and disruption in provision of, and patient access to, health services for HIV, STIs and hepatitis. The findings are supported by surveys from the British Association for Sexual Health and HIV [6], the British HIV Association, the PHE UAM survey of PWID [7], PHE/HCV Action survey of HCV peer supporters [8], as well as anecdotal reports from hepatitis treatment providers, drug and alcohol and prison services that indicated significant disruption to services and re-deployment of staff. There have also been reports of disruption to supplies of laboratory consumables due to increased demand which have impacted on testing service capacity. In addition, there has likely been some reduction in infections and service need following compliance with social distancing measures, resulting in fewer opportunities for travelling and meeting sexual partners, and reduced risk of exposure; for example, some early evidence from an NIHR HPRU study on MSM reported here suggests there was a decline in risk behaviours during this period that may have contributed to the fall in diagnoses.

Innovations in service delivery have happened at pace and, from April 2020, there was a marked shift towards remote and outreach service provision to maintain access during the COVID-19 pandemic. Harm reduction services for PWID and HCV testing and treatment largely shifted to a community outreach model of provision, through peer supporters, outreach nurses and postal delivery [8]. Our analyses also show that SHSs and HIV specialised services increased provision of online and tele-consultations and self-sampling kits, with 44% of SHS consultations delivered via the internet between April and June.

The decline in diagnoses reported results from a combination of reduced testing, delayed reporting and a reduction in infections. The full impact of the COVID-19 measures on infection transmission and longer-term health outcomes will take time to emerge. A modest rebound in HIV, STIs and hepatitis diagnoses and HCV treatment initiations since June might indicate a recovery in service provision and demand, the latter also potentially influenced by changes in risk perception and behaviour. However,

the respective numbers of consultations, vaccinations, tests, diagnoses, and treatment initiations in the summer were considerably lower compared to the corresponding months in 2019. Evidence of recovery in HCV treatment initiation is reassuring, but further evaluation of treatment outcomes is needed.

Impact on health inequalities

Internet, telephone and community outreach initiatives have the potential to increase access to hepatitis, STI and HIV testing, but care is required to ensure that services remain widely accessible, particularly to underserved populations (eg certain Black, Asian, and minority ethnic groups, migrants, PWID, sex workers, homeless persons, prisoners) who are disproportionately affected by hepatitis or have greater sexual health needs.

Our findings suggest that there has been a shift in the demographic distribution of people accessing HIV, STI and viral hepatitis testing during 2020 and there are early indications that access to harm reduction and BBV testing services for PWID have been adversely affected. This is concerning given existing inequalities in sexual health and the disproportionate burden of viral hepatitis on marginalised communities.

Our analyses show that, among those testing for STIs and HIV, heterosexuals and, particularly in the case of HIV, teenagers, have been under-represented since April 2020 compared to January to March 2020. Further investigations are needed to explore these changes, but there is evidence that young people, the age group with the highest burden of STIs, may experience greater difficulty in finding, accessing and engaging with relevant online sexual health information [9]. Among those accessing drug services, the decline in HCV positivity since March 2020 among those tested suggests a shift in access away from those at greatest need of testing and linkage to HCV care through traditional services, although the full impact of community outreach models on mitigating this is yet to be fully understood.

There is a critical need to evaluate the impact of changes in service delivery on health inequalities, particularly as some infections predominantly affect socially disadvantaged and excluded groups, where disparities in health outcomes already exist.

Mitigations to address the impact of COVID-19

Several initiatives were launched, by PHE and our partners, to counter the detrimental impact of COVID-19 on the control of STIs, on elimination goals for HIV and viral hepatitis, and in tackling inequalities. Some of these campaigns and innovation in service access and delivery are described below:

The impact of the COVID-19 pandemic on prevention, testing, diagnosis and care for sexually transmitted infections, HIV and viral hepatitis in England

- in April 2020, PHE contributed to the publication of a set of recommendations from the Association of the Directors of Public Health on the prioritisation of sexual and reproductive health services, including the protection of essential services, and the changes in delivery likely required due to the COVID-19 pandemic

- 'Breaking the Chain: Time to Test' was a national campaign founded by 56 Dean Street to encourage people to test for HIV in June 2020. The campaign sought to identify people with undiagnosed HIV so they could start treatment early, improve their health, and prevent them from passing on HIV. Through the National HIV and Syphilis Sampling Service, PHE provided up to 10,000 free HIV self-sampling kits, including syphilis opt-out testing over June 2020. PHE's HIV Prevention England programme (delivered by Terrence Higgins Trust and local partners) promoted the campaign through 'It Starts With Me'. Promotion was focused on black African people and gay and bisexual men

- PHE has worked with a range of partners including Central North West London (CNWL) NHS Trust to develop a suite of resources for use by local providers and commissioners to help them understand the impact of service changes and inform recovery and renewal plans. The suite of resources include specialist sexual health services rapid evaluation tool, sample service user and healthcare staff survey questionnaires. The resources are available on the Sexual Health, Reproductive Health and HIV K-Hub; BASHH website and FSRH website

- PHE established a National Framework for e-Sexual and Reproductive Healthcare in August 2020 to support local authority commissioners in rapidly providing an internet service for HIV/STI self-sampling, BBV testing, condom provision and a range of contraception options

- following initial suspension of NHS hepatology outpatient clinics, HCV Operational Delivery Networks explored new ways of providing services through remote clinics, telephone consultations, BBV self sampling, and home visits for fibroscans [8]

- outreach HCV testing to people temporarily housed in hostels and hotels as part of the government's "everybody in" policy was expanded in 2020 to reach PWID and experiencing homelessness who are at particularly high risk of HCV infection [8]

- PHE undertook a rapid evidence review of harm reduction interventions and messaging for PWID during pandemic events to support policy makers, commissioners and providers to respond to the needs of this marginalised group [10], which has been shared with commissioners and providers of harm reduction services

Future work

Further analyses are planned to monitor the impact of the COVID-19 pandemic response on HIV, STIs and viral hepatitis including STI-related sequelae, trends in new HIV diagnoses and people receiving HIV-related care, trends in antimicrobial resistance, and treatment outcomes for HCV. These analyses will be supplemented with improved data on sexual behaviour available through the national GUMCAD STI Surveillance System and ongoing community surveys to monitor changes in behaviour and the likely impact on infection transmission.

PHE are working with partners to assess the potential role of chronic viral hepatitis infection and HIV on COVID-19 infection and outcomes, and the impact of COVID-19 on the mental and physical health of people with chronic viral hepatitis and HIV. Data from the annual UAM survey of PWID, which includes additional COVID-19 questions in 2020/21, and repeat surveys by PHE and HCV Action of The Hepatitis C Trust peer supporters will be used to explore the impact of the pandemic on this particularly vulnerable population group.

Key messages to communicate to patients and service users

It is important that health promotion and service access messages are sustained and reinforced. Key messages that health professionals can convey to their patients and service users are summarised below:

- sexual and reproductive health services are still open and offer free and confidential HIV/STI testing, vaccination and contraception advice. Further advice on HIV, viral hepatitis and STIs, including how to access sexual and reproductive health services, is available through Sexwise and the national sexual health helpline on 0300 123 7123 (9am-8pm Mon-Fri, 11am-4pm Sat-Sun)

- testing and treatment for viral hepatitis is available and anyone with risk factors for, or symptoms of, infection should be tested. Further information on testing and treatment is available on the NHS website: hepatitis A, hepatitis B and hepatitis C, and through The Hepatitis C Trust

- using condoms protects against HIV, other STIs such as chlamydia, gonorrhoea and syphilis, and unplanned pregnancy

- people at risk of HIV can also protect themselves by using HIV Pre-exposure Prophylaxis (PrEP)

- people with HIV are unable to pass on the infection sexually if they are on treatment and have undetectable levels of the virus: Undetectable=Untransmittable or “U=U”

- vaccination against HPV (MSM and school-aged adolescents), hepatitis A and hepatitis B (for MSM and and others with greater sexual health needs) will protect against these viruses and prevent spread of infection

- regular testing for HIV and STIs is essential for good sexual health and everyone should have an STI screen, including an HIV test, annually if having condomless sex with new or casual partners. In addition:
  - anyone under 25 who is sexually active should be screened for chlamydia on change of sexual partner or annually, and
  - MSM should test annually for HIV and STIs and every three months if having condomless sex with new or casual partners

- people who inject drugs should be supported to continue accessing local drug services for needle and syringe exchange, opiate substitution therapies, immunisation against hepatitis B, and testing for blood-borne viruses like hepatitis C

- to reduce the risk of COVID-19, people should avoid close contact and remain socially distant from anyone they do not live with or who is not in your support bubble. This also means limiting their number of sexual partners

- the best way to reduce the risk of COVID-19 as well as hepatitis B or C, HIV or other STIs is by only having sex with a main partner (a member of the same household or support bubble)

Appendix

The appendix to accompany this report can be found here: https://www.gov.uk/government/publications/covid-19-impact-on-stis-hiv-and-viral-hepatitis

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Public Health England
Wellington House
133-155 Waterloo Road
London SE1 8UG
Tel: 020 7654 8000

www.gov.uk/phe
Twitter: @PHE_uk
www.facebook.com/PublicHealthEngland

Prepared by: Blood Safety, Hepatitis, Sexually Transmitted Infections (STI) and HIV Division, National Infection Service and Sexual Health, Reproductive Health and HIV Priorities and Programmes Division, Health Improvement Directorate

Natasha Ratna, Holly Mitchell, Tatiana Vilaplana, Ana Harb, Megan Glancy, Ammi Shah, Galena Kuyumdzhieva, Alireza Talebi, Stephen Duffell, Mateo Prochazka, Louise Thorn, Hannah Charles, Freja Kirsebom, Celia Penman, Annastella Costella, Koye Balogun, Rebecca Wilkinson, Ruth Simmons, Sara Croxford, Claire Edmundson, Alison Brown, Mark McCall, Louise Logan, Adam Winter, Helen Harris, Kate Folkard, Valerie Delpech, Emily Phipps, Hamish Mohammed, Katy Sinka, Sema Mandal and Gwenda Hughes

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