UK Health Security Agency

Public health evaluation of blood borne virus (BBV) opt-out testing in emergency departments (EDs) in England, data from April 2022 to March 2023

Blood Safety, Hepatitis, Sexually Transmitted Infections (STI) and HIV Division
UK Health Security Agency, London, UK, in collaboration with the University of Bristol and NHS England

Why is BBV opt-out testing in EDs important?

- The UK have committed to ending new HIV transmissions in England and eliminating viral hepatitis as a public health threat by 2030. A scale up of testing is needed to achieve these targets.
- ED opt-out testing is inclusive and can address inequalities in testing among people who may not identify themselves as at risk of a BBV.
- ED testing also offers an opportunity to reengage people previously diagnosed who are not currently in BBV care.

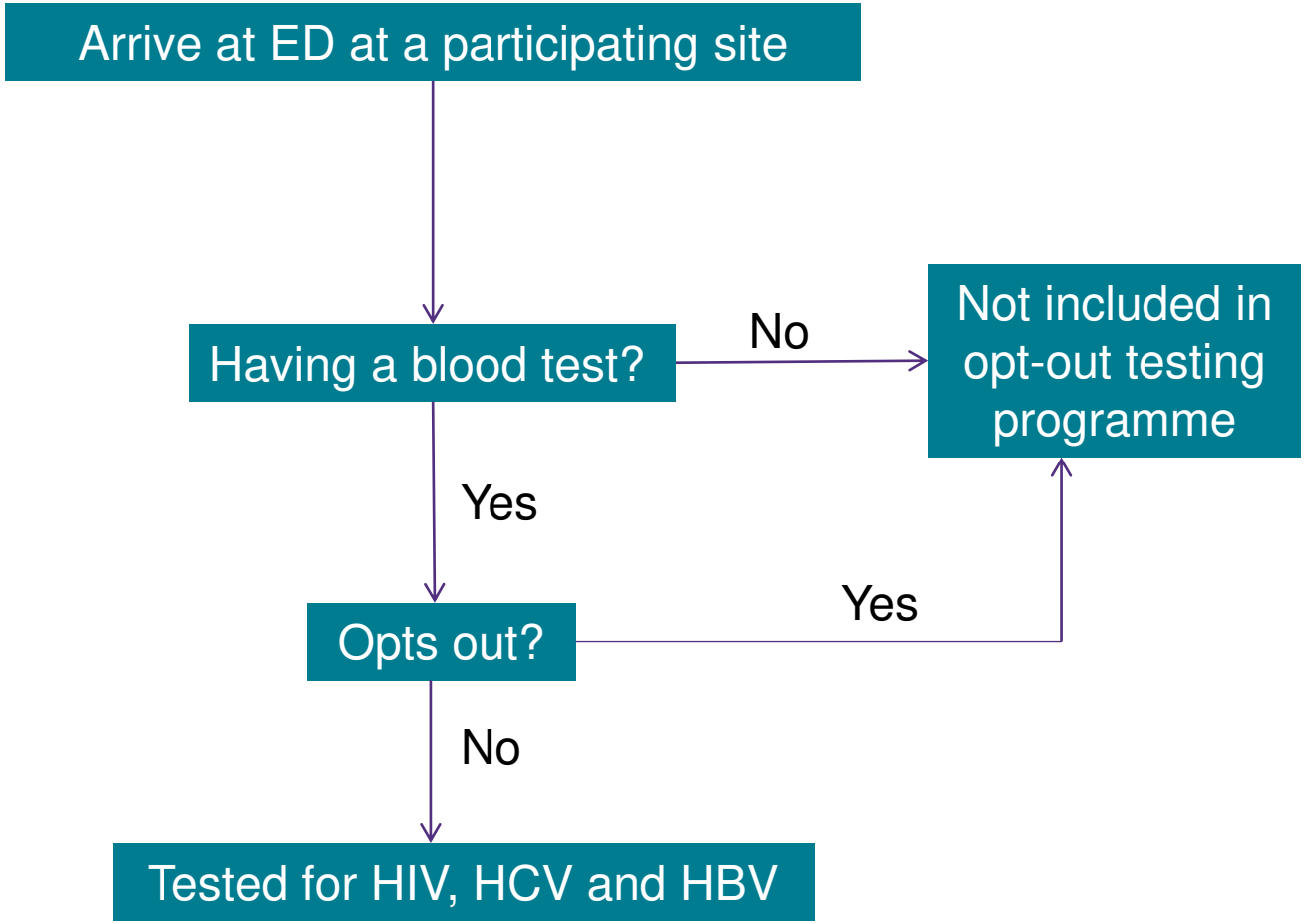
UK Health Security Agency: Emergency department opt out testing evaluation (published November 2023)

Background

- In April 2022, implementation of a NHS England (NHSE) funded programme ('the Programme') of opt-out testing for blood borne viruses (BBVs) in emergency departments (EDs) in areas of very high diagnosed HIV prevalence began.
- The Programme provides testing for HIV, hepatitis B virus (HBV) and hepatitis C virus (HCV) for anyone aged 16 years or over (18 years and over at some sites) and having a routine blood test during their ED attendance, unless they opt out.
- To understand the impact of the Programme and inform its potential roll out to other sites, NHSE asked the UK Health Security Agency (UKHSA) to conduct the following evaluations:
  - a public health evaluation → Interim 12 months findings are in this presentation
  - an implementation evaluation (undertaken by the University of Bristol)
  - an economic evaluation (to be undertaken by the University of Bristol)

  } To follow
- This presentation highlights the key findings from the public health evaluation from the interim 12-month report

BBV opt-out testing in EDs flowchart of testing process



Programme scale

- The number of tests done in the Programme is equivalent to more than half of all BBV tests done in general practice (GP), sexual health, drug and prison services combined (calculated from tests reported to UKHSA sentinel surveillance of BBV testing (SSBBV)
- In its first year, the Programme was rolled out across 33 sites, which undertook a total of 1,697,562 tests, split as follows.

BBV	HIV	HCV	HBV
Number of tests done	857,117	473,723	366,722

Data source: programme data for 33 sites

Go live dates: testing started at different times within EDs and for each BBVs. The go live date is the date at which testing for the BBV started at each ED.

Aims of the public health evaluation

The primary aim of the 12-month evaluation is to evaluate the impact and effectiveness of the Programme over its first 12 months, from the go live start dates for testing for each BBV to the end of March 2023.

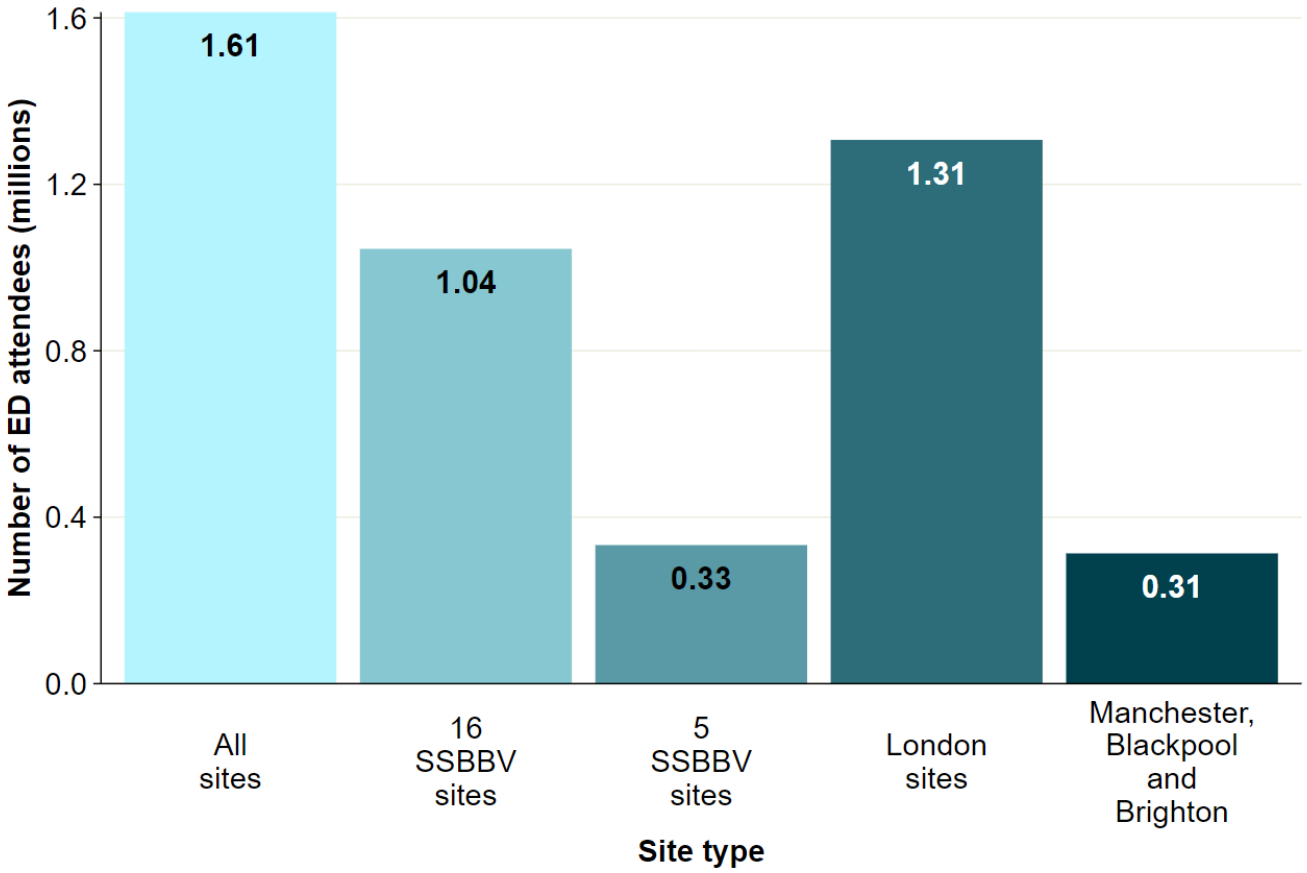
The secondary aims of the 12-month evaluation are:

- to use the operational data reported by the Programme to assess the completeness of available surveillance data sources and the feasibility of linking between datasets
- to assess the validity of the indicator definitions for the evaluation so that these can be refined if needed before the 24-month and final evaluation

Public health evaluation methodology

- The 12 month evaluation uses data from sentinel surveillance of blood borne virus testing (SSBBV), a voluntary sub-national surveillance system representing 16 out of 33 sites, 15 of which are London based.
- A deep dive analysis was done for 5 out of 33 sites (all London based) where there was more complete surveillance data for negative and positive tests to enable calculation of test uptake and positivity data.
- A descriptive approach was taken to summarise BBV testing, positivity and linkage to care for each virus, with counts and proportions provided.
- Data were stratified by site and by individual demographics including gender, age, ethnic group, and index of multiple deprivation (IMD) quintile.

Number of attendees at ED sites and coverage by data source



33 sites using ECDS data

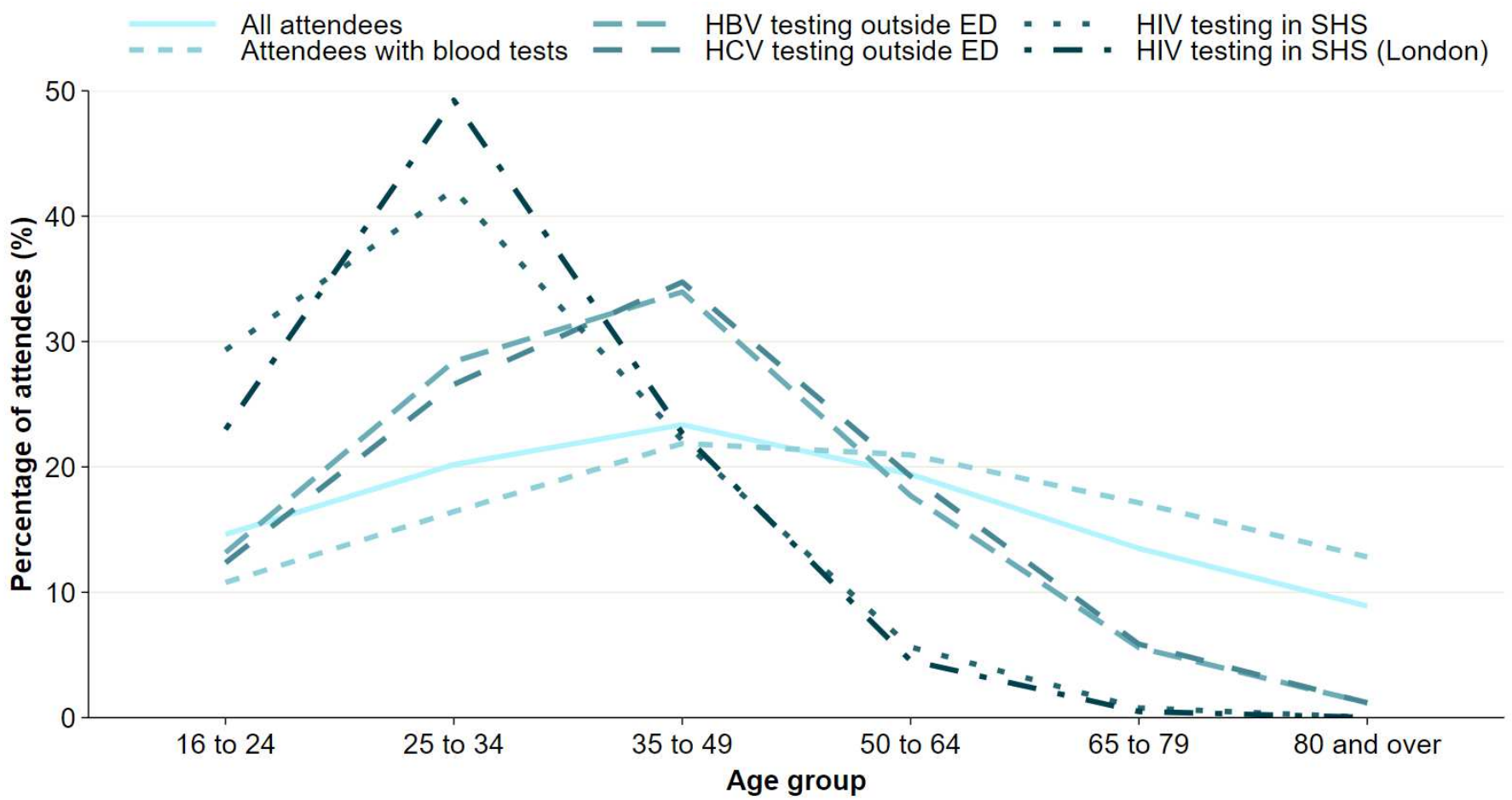
17 sites not in SSBBV surveillance

16 sites reporting to SSBBV with data on outcome following a positive test

11 sites with inadequate data on negative tests

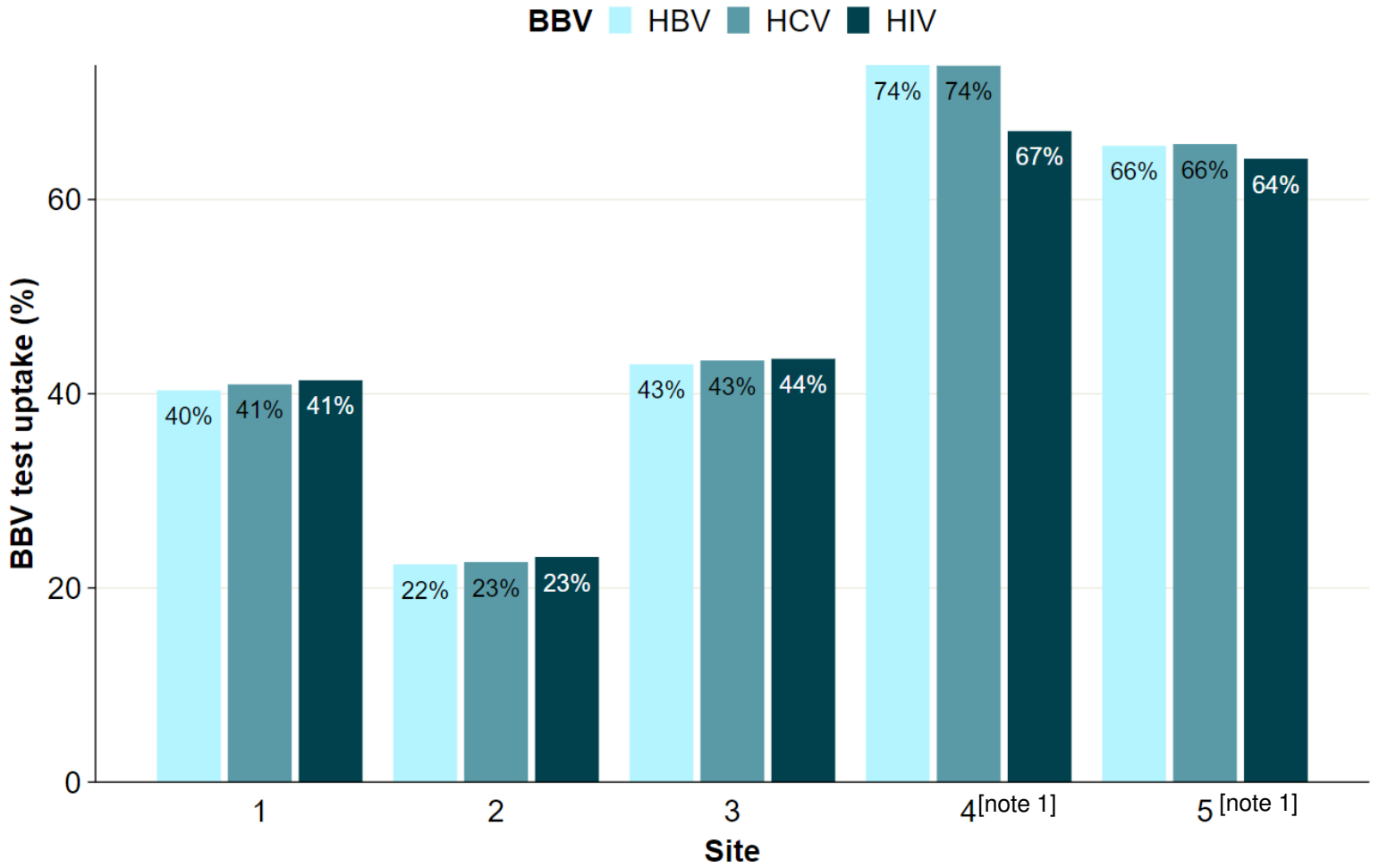
5 sites with complete data on positive and negative test results

The population eligible to be tested was older than the population tested for BBVs in other settings



Data source: Emergency Care Data Set, SSBBV, HARS, and GUMCAD data for 33 programme sites

Half of eligible attendees had a BBV test with site variation from 22% to 74%



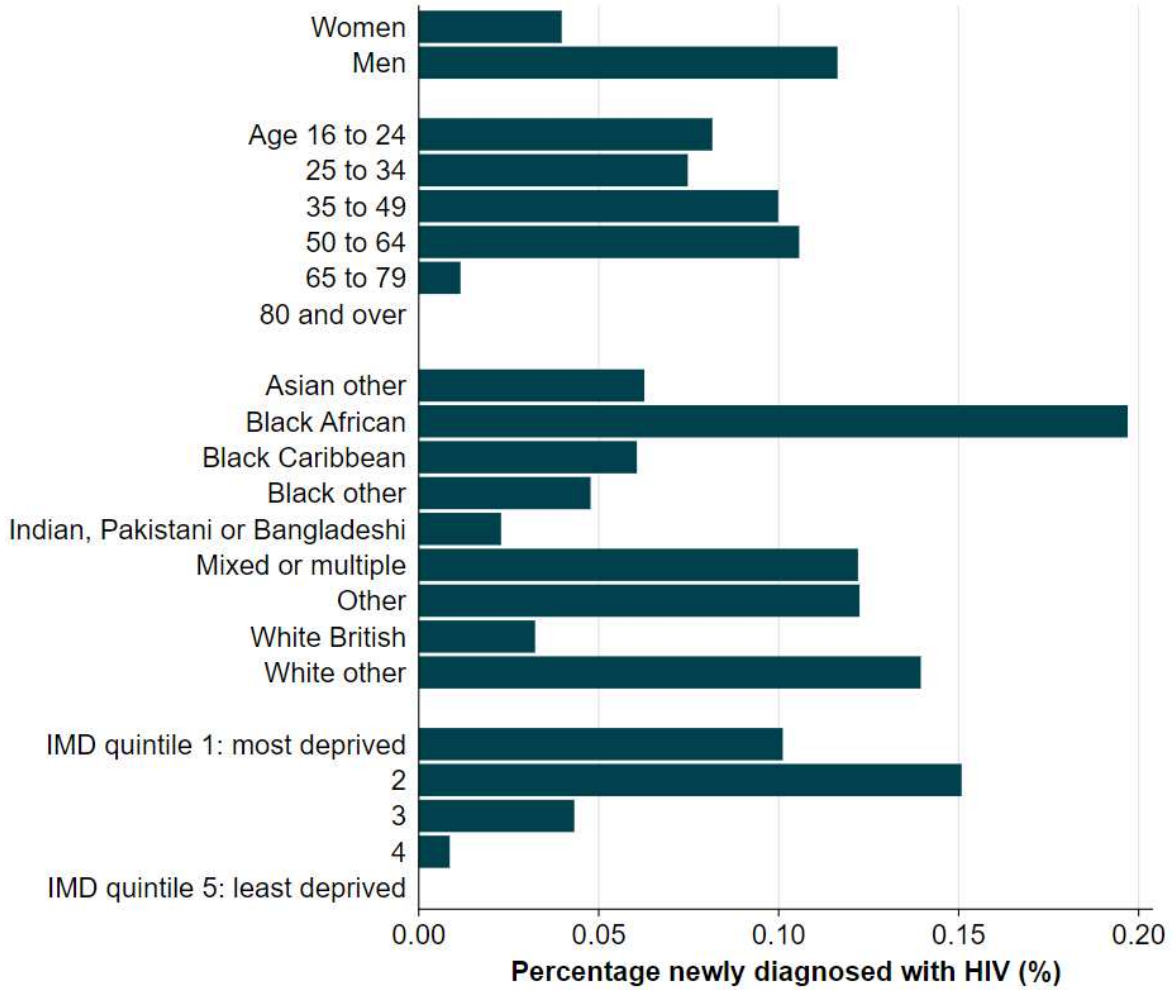
Note 1: sites with automated test ordering systems

Data source: 5 London sites with complete data for both positive and negative tests

New diagnoses

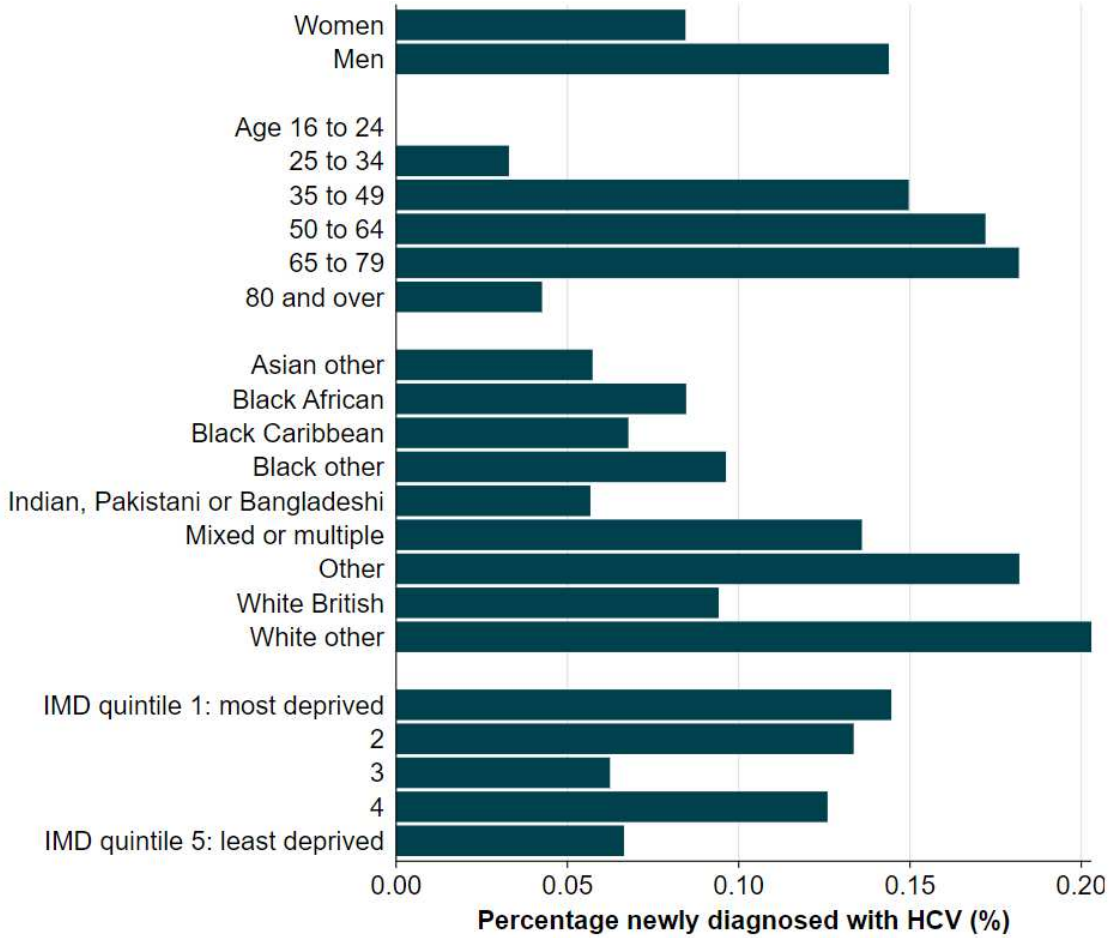
- The highest number and proportion of new diagnoses was for HBV, reflecting the higher prevalence of people living with undiagnosed HBV compared to HIV and HCV.
- There has been substantial effort and financial commitment to increase diagnosis and linkage to care for HIV and HCV in recent years, which needs to be replicated for HBV if the World Health Organisation (WHO) elimination targets by 2030 are to be reached.

New HIV diagnoses higher among men, people aged 35 to 64 and people of black African ethnicity



Data source: 5 London sites with complete data for both positive and negative tests

New HCV diagnoses higher among men, people aged 50 to 80 and people of white other ethnicity



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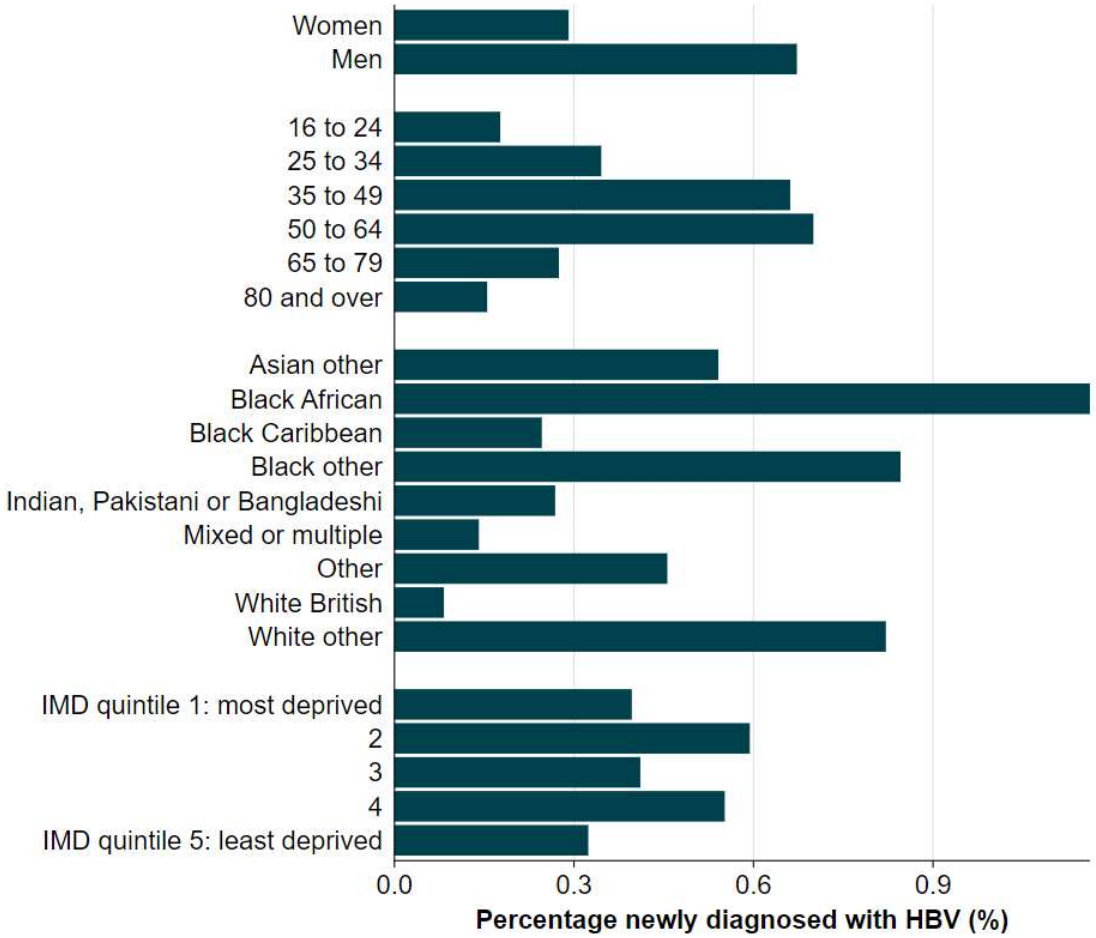
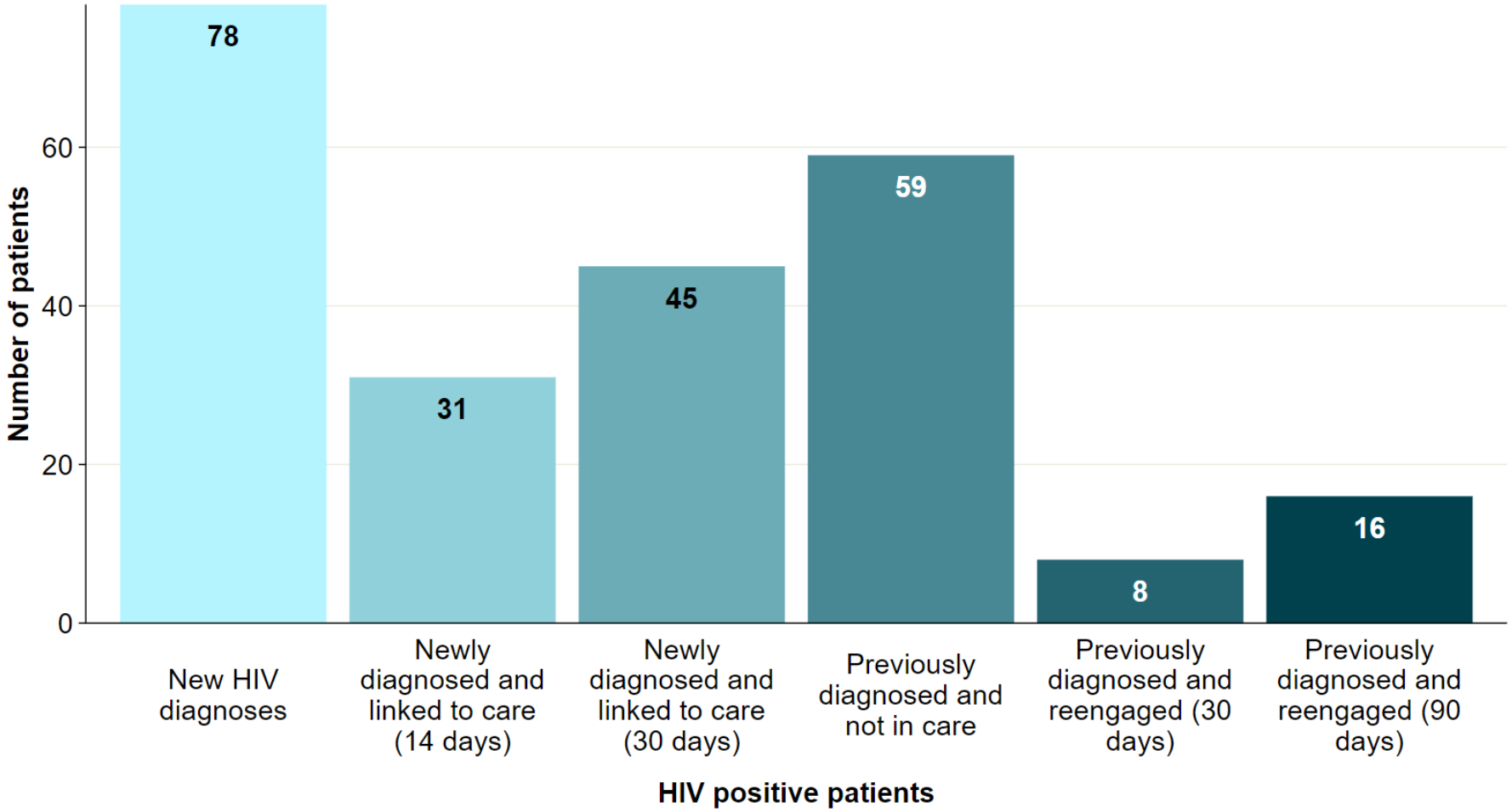


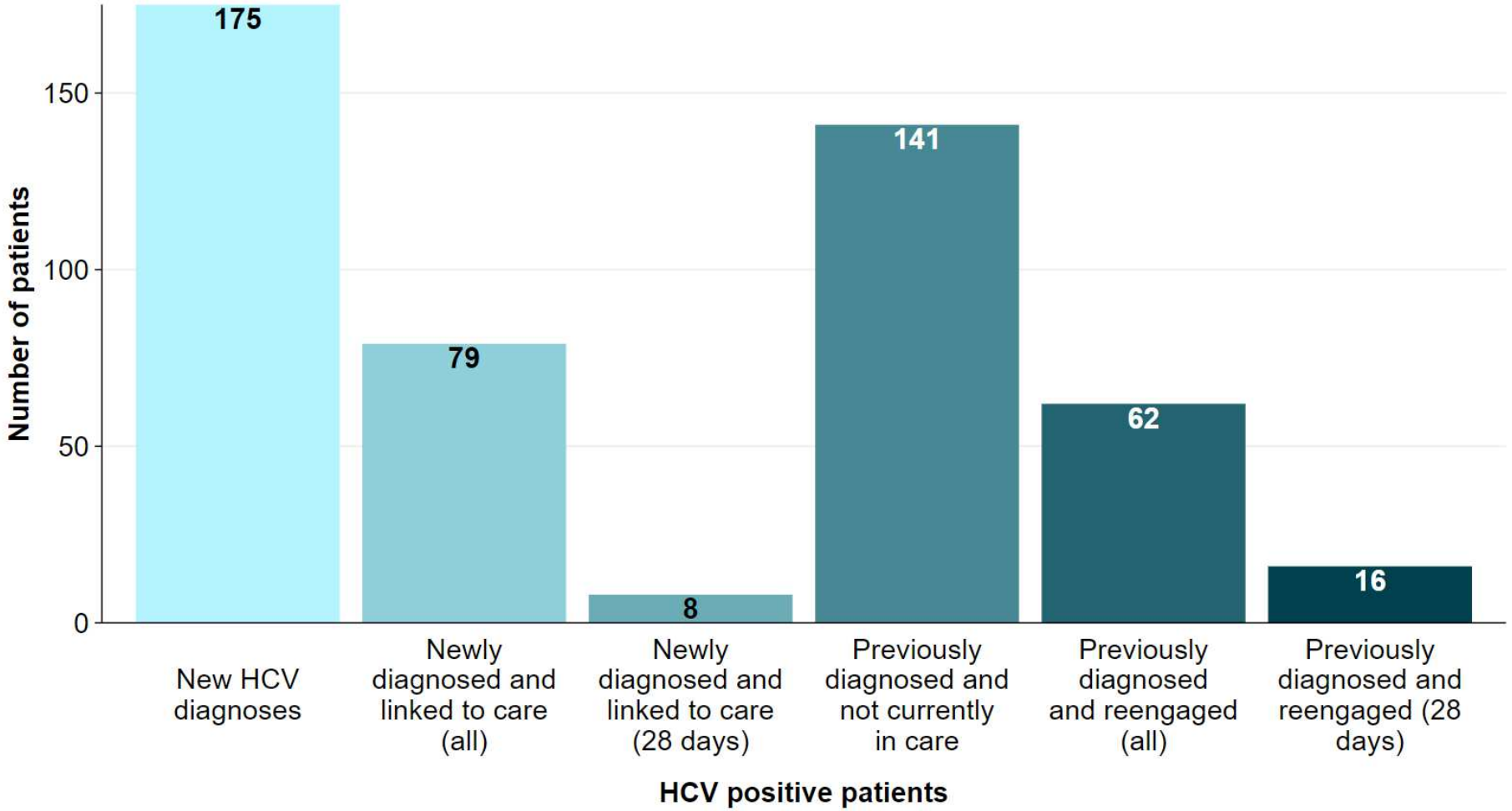
Data source: 5 London sites with complete data for both positive and negative tests

Linkage to care for people newly diagnosed with HIV was lower than reported in national data and higher than among people who were previously diagnosed



Data source: 16 SSBBV sites with data on outcome following a positive test

Linkage to care was lower for HCV than for HIV, and lower than reported in national surveillance for HCV



Data source: 16 SSBBV sites with data on outcome following a positive test

Linkage to care for people diagnosed with HBV

Number of people newly diagnosed with HBV or previously diagnosed and not in care	Proportion notified and offered follow up	Proportion who attended a hepatology clinic
1,323	98%	38%

Data source: programme data for 33 sites

Data limitations

- Indicators on testing and diagnosis were feasible to produce from surveillance data for all 3 BBVs.
- Surveillance data for BBV tests and diagnoses is sub-national and only covered some of the sites in the Programme, with 16 out of 33 sites having diagnosis data.
- Only 5 out of 33 had complete data on negative (as well as positive) tests to enable analysis of test uptake and positivity.
- Linkage to care for HBV cannot currently be identified in surveillance data because there is currently no large-scale HBV treatment dataset available to monitor HBV care.

Summary of interim recommendations

- Reduce testing uptake variation and increase this where it is low; automated test ordering may help with this.
- Map and optimise care pathways for people newly diagnosed in EDs and improve linkage to care, particularly for people diagnosed with HBV.
- Collaborate with laboratories and clinics to improve the capture of essential data items to facilitate better evaluation of the programme.
- Continue to share existing practices and learn from each other by sharing areas of good practice that individual sites may have.

Acknowledgments

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