

Bristol Health Protection Annual Report 2023

April 2022 to March 2023



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08 February 2024

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Acronyms

AAA	Abdominal Aortic Aneurysm
ACH	African and Caribbean Heritage
AMR	Antimicrobial Resistance
AQMA	Air Quality Management Area
ARAP	Afghan Resettlement and Assistance Policy
ASR	Asylum Seeker and Refugees
BBV	Blood Borne Virus
BCC	Bristol City Council
BCG	Bacillus Calmette-Guerin
BDP	Bristol Drugs Project
BNSSG	Bristol, North Somerset and Gloucestershire
BPHA	Bristol Port Health Authority
BSI	Bloodstream infections
CAZ	Clean Air Zone
CCG	Clinical Commissioning Group
CDI	Clostridium difficile (C. difficile) infection
CIPFA	Chartered Institute of Public Finance and Accountancy
COVID-19	Coronavirus

DEFRA	Department for Environment Food & Rural Affairs
DfE	Department for Education
DTaP-IPV	Diphtheria, Tetanus and Pertussis - Inactivated Polio Virus
EHO	Environmental Health Officer
EPRR	Emergency preparedness, resilience and response
FSA	Food Standards Agency
HAZMAT	Hazardous Materials
HCAI	Healthcare associated infections
HEAT	Health Equity Assessment Tool
HIV	Human Immunodeficiency Virus
HPV	Human Papilloma Virus
ICB	Integrated Care Board
IPC	Infection, Prevention and Control
JCVI	Joint Committee on Vaccination and Immunisation
JSNA	Joint Strategic Needs Assessment
LHRP	Local Health Resilience Partnership
LMIC	Low-Medium Income Country
MenACWY	Meningitis ACWY vaccine
MDR	Multi Drug Resistant
MMR	Measles Mumps and Rubella
Mpox	Monkeypox
MRSA	Methicillin Resistant Staphylococcus Aureus
MSM	Men that have sex with men
MSSA	Methicillin-Sensitive Staphylococcus aureus
NBT	North Bristol Trust
NHSE	NHS England
OHID	Office for Health Improvement and Disparities
ONS	Office for National Statistics
PHE	Public Health England
PPV	Pneumococcal vaccine
PrEP	Pre-exposure prophylaxis
PTSD	Post Traumatic Stress Disorder
PWID	People Who Inject Drugs
RSHE	Relationships and Sexual Health Education
SARS	Severe Acute Respiratory Syndrome
STI	Sexually Transmitted Infections
SW	South West region
TB	Tuberculosis
ToR	Terms of Reference
UHBW	University Hospitals Bristol and Weston
UKHSA	UK Health Security Agency
UNAIDS	Joint United Nations Programme on HIV and AIDS
WHO	World Health Organisation

1. Introduction

This report covers the period of the 1st April 2022 to the 31st March 2023 and provides an overview of infectious diseases and environmental risks to our population. It reports on the health protection priorities, targets, and recommended actions identified by the Health Protection Committee.

The impact of the pandemic continues to be felt throughout our reporting, with ongoing consequences on the availability and interpretation of data for some sections. The reporting of immunisations, screening and TB have continued to be impacted by the delays in data provision. This has been noted in the sections affected and is a risk.

Finally, health protection covers an extensive range of exposures, risks, and diseases – from air quality to port health, and cancer screening to tuberculosis. However, there are many underlying and connecting themes, of which inequality and inclusion is particularly prominent. This year's report acts as a reminder that addressing health inequalities is critical to improving and protecting the whole population.

This report straddles a period when PHE was becoming UKHSA and OHID and the CCG was transitioning into becoming the BNSSG ICB, so both of these terms will be used throughout this report.

Our next assurance report will be produced in December 2024 covering the period from 1st April 2023 to 31st March 2024.

2. Executive Summary

Bristol stands as a dynamic and inclusive city, celebrated for its cultural diversity, vibrancy and energy. However, notable pockets of deprivation serve as drivers for health protection issues.

Distinct demographic differences to other South West local authority areas make it difficult to compare Bristol within this footprint, and therefore comparison with other statistically similar authorities, such as core cities, and national England averages have been used where possible.

The ongoing response and management of COVID-19 has impacted the availability of some data used in this report. The reporting of immunisations, screening and TB have been impacted by the delays in data provision, some of which is expected and will be noted where necessary.

An update on last years' priorities for each section of this report can be found in Appendix B.

Immunisation

The COVID-19 vaccination programme has continued to be delivered in line with the Joint Committee on Vaccination and Immunisation (JCVI) guidance and in addition to routine immunisation programmes.

There was a successful 2022-23 Autumn-Winter programme of flu and COVID-19 vaccinations, including a COVID-19 Spring Booster programme for those at higher risk. As of 29th March 2023, 75% of the population aged 16 years or over had received two doses of the COVID-19 vaccine and 61% have received a third/booster dose.

In terms of seasonal influenza vaccinations there has been a decrease across the categories of; 65 and over, under 65 years and in an at-risk group, 50–65-year-olds and all 3-year-olds. There has been a marginal increase in the uptake of influenza vaccinations for all pregnant women and all 2-year-olds.

Nationally, childhood vaccine coverage in 2022–23 decreased compared to 2021–22, and none of the scheduled vaccines met the 95% target. Bristol presents similarly.

A System-level Maximising Immunisation Uptake Groups has been established and is working to implement an action plan to improve uptake and reduce inequalities of immunisation.

Priorities for the next reporting period

- Implementation of the national vaccination strategy once published.
- To work in collaboration with System colleagues to increase childhood immunisation uptake, particularly MMR.
- To maintain focus on COVID-19 and flu vaccine uptake across all eligible groups.

Screening

Cervical screening coverage remains a key focus for the SW NHSE Vaccination and Screening Team, and further targeted communications is planned to increase uptake of the offer.

The BNSSG bowel screening centre saw an increase in uptake during 2022-23 and continues to extend the eligible age cohort. The Bristol uptake of bowel screening remains below the regional and national levels, despite an increase in screenings this year.

AAA screenings and breast cancer screening offer which was impacted by COVID-19 has now been addressed and the backlog have been offered screening. The Avon breast screening programme took delivery of a new mobile screening unit in March 2023 which will bring additional screening capacity to the programme.

Staffing pressures and capacity within maternity have had varying degrees of impact on some screening functions throughout 2022-23.

The BNSSG Diabetic Eye Screening programme has good performance against its KPIs with an uptake of 81.3%

Priorities for the next reporting period

- To return to and overtake pre-pandemic screening uptake levels, including developing a strategy for cervical cancer elimination.
- To focus on inequalities in screening uptake.

Sexual Health

Bristol continues to see a higher incidence of STIs compared to the South West and England, and although there has been an increase in new STI diagnosis, this remained below pre-COVID-19 pandemic levels. Cases of HIV in Bristol also continued to decrease.

During the 2022-23 reporting period, sexual health services in Bristol responded to the Mpox outbreak and to a significant increase in gonorrhoea cases.

The 2023-2024 period will see the integrated sexual and reproductive health services for BNSSG recommissioned.

Priorities for the next reporting period

- Undertake the recommissioning of integrated sexual health services.
- Continue to monitor and encourage the recovery of STI and HIV testing in Bristol and the subsequent effects on numbers of new diagnoses.
- Support the development of communications materials to raise awareness of the C-Card condom distribution age extension and oversee their dissemination.
- In conjunction with local partners including populations at risk, determine the most appropriate interventions and channels to address the continuing rise in STIs.

Healthcare Associated Infections & Anti-Microbial Resistance

In Bristol, cases of MRSA, C. difficile and E.coli decreased from the previous year. With 21 cases of MRSA, which still remains above the target of 0 cases per year, 79 cases of Clostridium difficile, and 205 cases of E.coli.

This year also saw a decrease in cases of Pseudomonas aeruginosa and Klebsiella but saw an increase in MSSA and antibiotic prescriptions.

Priorities for the next reporting period

- A deep dive into HCAI to gain better insight into drivers of these infections.
 - Focus on MRSA and MSSA.

TB

This year's TB data has been difficult to obtain as only limited information has been published.

However, data from the UKHSA indicates that there has been an increase of TB diagnosis in the Southwest region, and Bristol's 3-year average remains higher than the England average.

The South West TB Control Board was launched in December 2022. The Board is responsible for setting strategic priorities in the South West and facilitate the delivery of the TB Action Plan 2021–2026.

The increased TB incidence, some linked to migration which has grown exponentially in this period, and the complexities in regard to wider risk factors, diagnosis and treatment is creating increased pressure on the local system.

Priorities for the next reporting period

- To undertake a rapid review of TB in Bristol to gain clarity on local profile to support commissioning and delivery.
- Develop a system pathway for those with no recourse to public funds who have TB or other high consequence infectious disease.

COVID-19

From April 2022, free community testing had ceased, and the numbers of tests completed reduced.

In the year from March 2022 to March 2023 there were 115 deaths from COVID-19.

Priorities for the next reporting period

- To continue to promote vaccination as the key preventative measure against severe illness but focussing on further aligning with flu vaccination programme 'winter vaccination' .
- To maintain oversight of epidemiology recognising new variants will emerge and action may be needed.

Environmental Health

There were 585 confirmed cases of notifiable food/water related infections and 148 service requests relating to suspect food poisoning.

Bristol's annual programme of inspections was impacted by COVID-19, causing a backlog. Inspections remain below the FSA's expectations, although approached normal capacity despite staffing issues.

Priorities for the next reporting period

- Focus on recovering the backlog of food inspections in addition to programmed visits and anticipated new business registrations.

Global Population Health

There is growing concern of the risk of measles transmission. Bristol, which has an MMR coverage level more similar to London and other cities, is at greater risk.

The COVID-19 pandemic continues to display a negative impact on the essential immunisation programme in a global context. Delivery and strengthening of this programme remains a priority for the World Health Organisation.

Between 2022 and 2023 we saw the international emergence of Mpox, of which Bristol saw very few cases.

Priorities for the next reporting period

- Continued focus on immunisations as a core prevention activity – engagement with underserved communities to narrow the gap in coverage and reduce inequalities.

Asylum Seekers & Refugees

The city of Bristol has continued to welcome and meet the health needs of both asylum seekers and refugees (ASRs) during the reporting period.

The number of ASR is expected to continue to increase in the year 2023–24 which will create additional demand and system pressure on local services.

Priorities for the next reporting period

- Contribute to a local TB action plan so that any gaps in the latent TB screening of asylum seekers and refugees are identified and rectified.

Non-communicable Environmental Health Risks

In November 2022, Bristol's Clean Air Zone (CAZ) commenced. It charges polluting vehicles to enter a zone in Bristol's city centre.

National data indicates that emissions from domestic wood burning have been increasing in the last decade, which increases risks of long-term diseases and deaths.

Priorities for the next reporting period

- Priorities will be reviewed and agreed once the new administration is in place (from May 2024.).

Emergency Preparedness, Resilience and Response

The Emergency Preparedness Response Team (EPRT) responded to 37 incidents throughout the reporting period, including 13 fires, 5 Road Traffic Collisions and two floods. One fire that broke out was on the top floor flat of Twinnell House.

This year, Bristol saw a number of industrial action strikes, including those working in health and the NHS.

A Summer Preparedness Severe Weather Group was established to assess the impacts of heatwaves and high temperatures.

Priorities for the next reporting period

- Continue to strengthen our preparedness by re-establishing LHRP in light of system level changes and developing a clear plan of priorities for the whole health system, including social care.
- Maintain and increase our staff training and exercising of emergency response and capability to act.
- Validate the Recovery Guide and Humanitarian Assistance Guide.
- Review the Corporate Business Continuity Response Framework.

3. Immunisations

3.1 Overview

Immunisations are one of the most significant public health developments in the prevention of infectious disease.¹ The routine vaccine schedule in the UK is available from:

<https://www.gov.uk/government/publications/the-complete-routine-immunisation-schedule/the-complete-routine-immunisation-schedule-from-february-2022> .

¹ ONS (2015) How has life expectancy changed over time? Available from:

<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/lifeexpectancies/articles/howhaslifeexpectancychangedovertime/2015-09-09>

In addition to the routine immunisation programmes, the COVID-19 vaccination programme has continued to be delivered in line with the Joint Committee on Vaccination and Immunisation (JCVI) guidance. In 2022-23 there was a successful Autumn-Winter programme, and a Spring Booster programme for those at higher risk.

Performance and quality indicators are monitored by the NHSE Vaccination and Screening Team, and assurance provided to the Bristol Health Protection Committee.

3.2 Childhood immunisations

Nationally, childhood vaccine coverage in 2022–23 decreased compared to 2021–22, and none of the scheduled vaccines met the 95% target. In Bristol, the uptake of the MMR and DTaP-IPV 2nd vaccines among 5-year-olds is of concern, which was less than 90% (84.3% and 83.1% respectively) (Figure 1). This represents a very slight increase in coverage of both vaccines compared to the last reporting period (2021–22), (Figure 2). However, coverage remains below the pre-2018-19 level.

The UK-wide Measles and Rubella Elimination Strategy² was released in 2019 and a South West-wide action plan was developed to support implementation of the plan following a regional conference on measles held in February 2020. Following a pause during the COVID-19 pandemic, the regional strategy has now been updated and is being shared with all stakeholders to ensure a co-ordinated, collaborative approach that includes both local, regional and national objectives and priorities.

2022–23 saw the development of System-level Maximising Immunisation Uptake Groups, led by the NHS England (NHSE) Screening and Immunisation Team, with a key focus on increasing the uptake of childhood immunisations, particularly MMR and pre-school booster vaccines. This group, which has been developed into the Immunisations Strategic Oversight Group in BNSSG, has developed an evidence-based action plan that identifies targeted interventions to improve uptake. In Bristol, this work includes projects to deliver catch up MMR clinics to individuals aged 17-30, working with GP practices to improve uptake, and a comms strategy to support MMR awareness and uptake.

² UKHSA (2019) Measles and rubella elimination UK strategy. Available from: <https://www.gov.uk/government/publications/measles-and-rubella-elimination-uk-strategy>

Figure 1: Childhood Vaccination Coverage in Bristol, South West, and England, 2022–23³

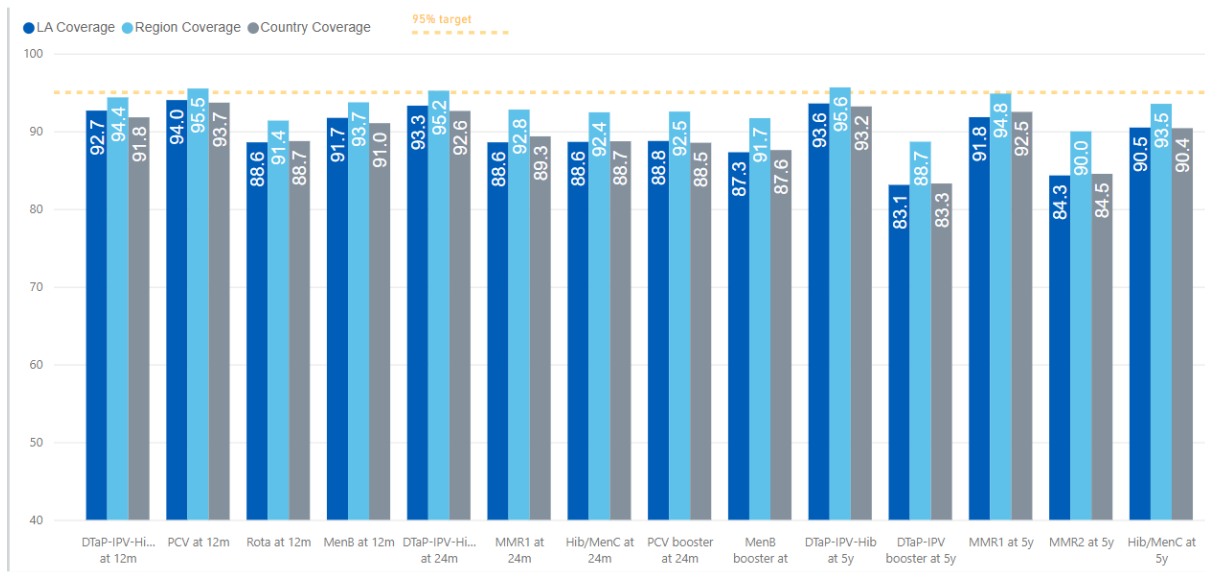
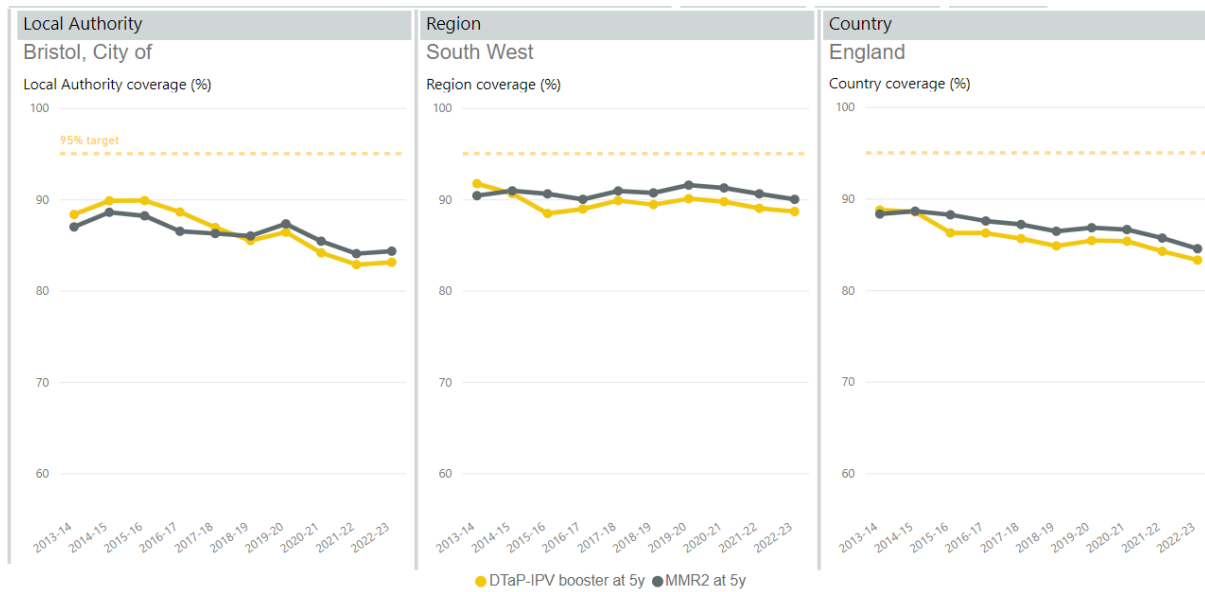


Figure 2: MMR 2nd dose at 5 years and DtaP-IPV booster dose at 5 years in Bristol, South West, and England, 2013–14 to 2022–23 Error! Bookmark not defined.



In addition to the routine childhood vaccination programme, targeted immunisations (hepatitis B, BCG [tuberculosis], and influenza) continue to be delivered to eligible babies. Following large scale changes to the infant BCG programme from September 2021, all providers have changed their models of delivery to deliver to infants at 28 days. These changes have resulted in better data collection and fail-safes being put in place. This is currently being evaluated to ensure a high level of uptake is being maintained.

3.3 School age immunisations

Both the 2020–21 and 2021–22 school aged adolescent immunisation cohorts were affected by the COVID-19 pandemic. There was significant disruption to delivery, due to school closures and high

³ NHS Digital (2023) Childhood Vaccination Coverage Statistics- England, 2022–23. Available from: [Childhood Vaccination Coverage Statistics, England, 2022-23 - NHS Digital](#)

levels of school absence, and capacity was affected by the additional requirement and prioritisation for providers to deliver the COVID-19 vaccine to 12–15-year-olds as well as the extended flu programme in Autumn 2021. In 2022-23 the school aged immunisation services across the region continued to offer both school based and community provision for missed vaccines to previous eligible cohorts, alongside the routine offer to the 22/23 cohorts. This additional offer was completed in March 2023.

Published annual data is not yet available for the 2022–23 cohort.⁴ The available provisional monthly uptake data on HPV and ACWY shows good progress was made with recovery of the 21/22 cohort across BNSSG in regard to being offered, however, Bristol uptake is not as high as South Gloucestershire and North Somerset and the teenage booster was noticeably lower in Bristol compared to pre-COVID figures. Continued lower uptake across the adolescent programme has been in evidence for the 2022-23 cohort, which reflects a national picture. With recovery now complete, the focus will be on developing plans with all providers to improve uptake and address inequalities, including continuing to make the offer for all adolescent vaccines to the end of year 11. Following JCVI guidance, which showed comparable efficacy of a single dose compared to 2 doses, a change to the HPV programme from a two dose to a one dose schedule will take effect from September 2023.

3.4 Shingles

The shingles vaccine is offered to people aged 70 to 79 years old. From September 2021, an additional Shingles vaccine (Shingrix®) was introduced for eligible individuals who are immunocompromised.⁵

Shingles vaccination was offered opportunistically up until April 2021. Since then, 70–79-year-olds have been actively invited for a vaccine.⁶ In Bristol, vaccine coverage among eligible individuals turning 70–80 years in financial year 2021–22 was 62%, and comparable to the BNSSG estimate of 64% and England estimate of 62%.⁷ The annual coverage report for 2022-23 is not yet available.

From 1st September 2023, large scale changes to the shingles programme have been introduced, expanding the eligible population to 60-80 years old in a phased rollout, and over 50 years old for everyone who is severely immunocompromised.

3.5 Pneumococcal vaccine

The pneumococcal vaccine (PPV) protects against serious and potentially fatal pneumococcal infections. The vaccine is offered to adults aged 65 years or over and those with long-term health conditions, such as serious heart or kidney conditions. National vaccine shortages of PPV have historically been an issue and have had a significant effect on coverage, however, it has been reported by NHSE this issue has now been resolved. Bristol data has not yet been published by NHSE for 22/23

⁴ Given that data for the 21/22 cohort was published before full activity was completed and therefore not representative of final uptake, it has not been included.

⁵ PHE (2021) Shingles immunisation programme: introduction of Shingrix® letter. Available from: <https://www.gov.uk/government/publications/shingles-immunisation-programme-introduction-of-shingrix-letter/shingles-immunisation-programme-introduction-of-shingrix-letter>

⁶ NHS England (2021) Update on vaccination and immunisation changes for 2021–22. Available from: <https://www.england.nhs.uk/publication/update-on-vaccination-and-immunisation-changes-for-2021-22/>

⁷ UKHSA (2022) Shingles vaccine coverage for those becoming 70 to 80 years of age in the year 1 April 2021 to 31 March 2022 as of 23 June 2022. Available from: <https://www.gov.uk/government/publications/herpes-zoster-shingles-immunisation-programme-2021-to-2022-evaluation-reports>

3.6 Flu vaccine

Seasonal influenza vaccinations happen every year, starting in September and continuing until February. Below is a summary of vaccination uptake for vaccines delivered by GP practices in Bristol.

Table 1 Number of Seasonal Influenza Vaccinations delivered and Uptake as a percentage (1st September 2022- 28th February 2023)^{8 9}

Category	Number of Vaccines Delivered 2021-22	Uptake % 2021-22	Number of Vaccines Delivered 2022-23	Uptake % 2022-23
65 years and over	56,344	83.0%	52,402	80.6%
Under 65 years and in an at-risk category	38,582	50.7%	36,077	49.4%
All pregnant women	2,749	40.2%	6,279	40.3%
All 50–65-year-olds	44,479	53.1%	23,246	28.5%
All 2-year-olds	2,684	48.9%	2,426	49.0%
All 3-year-olds	2,926	51.6%	2,560	49.6%

It is important to note that of the 39 GP practices within Bristol, 38 practices completed the survey, giving a response rate of 97.4%, this is less than the previous year, where 100% of practices completed the survey.

Compared to the previous year, there has been a decrease across the categories of; 65 and over, under 65 years and in an at-risk group, 50–65-year-olds and all 3-year-olds. There has been a marginal increase in the uptake of influenza vaccinations for all pregnant women and all 2-year-olds.

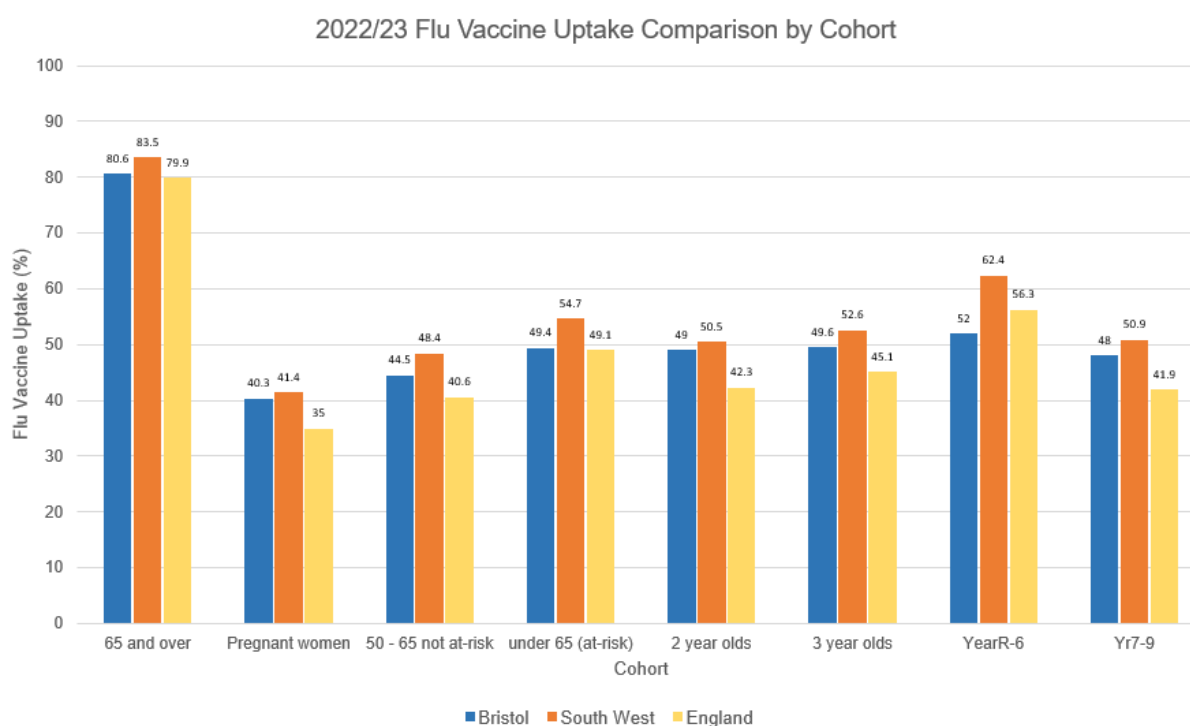
Flu immunisation uptake in Bristol was above the England average in 2022–23 but remained below the SW level. Uptake was highest among 65 and over age group.

Flu vaccine uptake in Bristol was below the South West region average across the eligible cohorts but above the national average for all but the Primary School age group (Figure 3).

⁸ UKHSA (2022) Seasonal influenza vaccine uptake in GP patients: winter season 2021 to 2022. Available from: <https://www.gov.uk/government/statistics/seasonal-influenza-vaccine-uptake-in-gp-patients-winter-season-2021-to-2022>

⁹ UKHSA (2023) Seasonal influenza vaccine uptake in GP patients: winter season 2022 to 2023. Available from: <https://www.gov.uk/government/statistics/seasonal-influenza-vaccine-uptake-in-gp-patients-in-england-winter-season-2022-to-2023>

Figure 3: Flu Vaccination Uptake for eligible groups in Bristol, SW and England, 2022-23^{10 11}



3.7 COVID-19 vaccine

COVID-19 vaccinations began being administered in Bristol on 8th December 2020, as of 29th March 2023, 75% of the population aged 16 years or over have received two doses of the vaccine and 61% have received a third/booster dose. The uptake of the vaccine is much greater in older age groups and diminishes as the ages get younger.

Figure 4: Percentage of population having received 1st, 2nd and 3rd dose of COVID-19 vaccine, broken down into age groups^{48.1}

	1st dose - Coverage			2nd dose - Coverage			3rd dose - Coverage		
	Bristol	BNSSG	ENG	Bristol	BNSSG	ENG	Bristol	BNSSG	ENG
12yrs+	77%	82%	78%	73%	78%	75%	58%	65%	59%
16yrs+	79%	83%	80%	75%	80%	77%	61%	68%	63%
60yrs+	93%	95%	93%	92%	95%	92%	88%	92%	89%
50-59yrs	86%	90%	87%	84%	88%	86%	75%	81%	76%
40-49yrs	78%	82%	78%	75%	80%	75%	62%	68%	60%
30-39yrs	73%	76%	70%	69%	72%	66%	53%	56%	46%
18-29yrs	72%	75%	68%	66%	69%	62%	45%	48%	38%
16-17yrs	58%	66%	62%	45%	54%	49%	12%	15%	12%
12-15yrs	45%	52%	46%	35%	41%	35%	1%	2%	1%
5-11yrs	12%	14%	10%	8%	9%	7%	0%	0%	0%

Compared to other core cities, Bristol ranks relatively high in terms of 1st dose vaccine coverage (79.3%). Ranking only behind Sheffield and the England average (both 80.4%). When comparing the

¹⁰ UKHSA National Childhood Influenza Vaccination Programme 2022 to 2023. Available from: [Seasonal influenza vaccine uptake in school age children: winter season 2022 to 2023 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/statistics/seasonal-influenza-vaccine-uptake-in-school-age-children-winter-season-2022-to-2023)

¹¹ Seasonal Influenza vaccine uptake amongst GP patients in England 2022 to 2023. Available from: [Seasonal influenza vaccine uptake in GP patients: monthly data, 2022 to 2023 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/statistics/seasonal-influenza-vaccine-uptake-in-gp-patients-monthly-data-2022-to-2023)

percentage of the population that have had at least 3 doses of the vaccine the story is the same, Bristol (62.3%) again ranks only behind Sheffield (62.9%) and the England average (63.9%).

Figure 5: Estimated vaccination coverage: 1 or more doses, Bristol, England and English core cities⁴⁸.

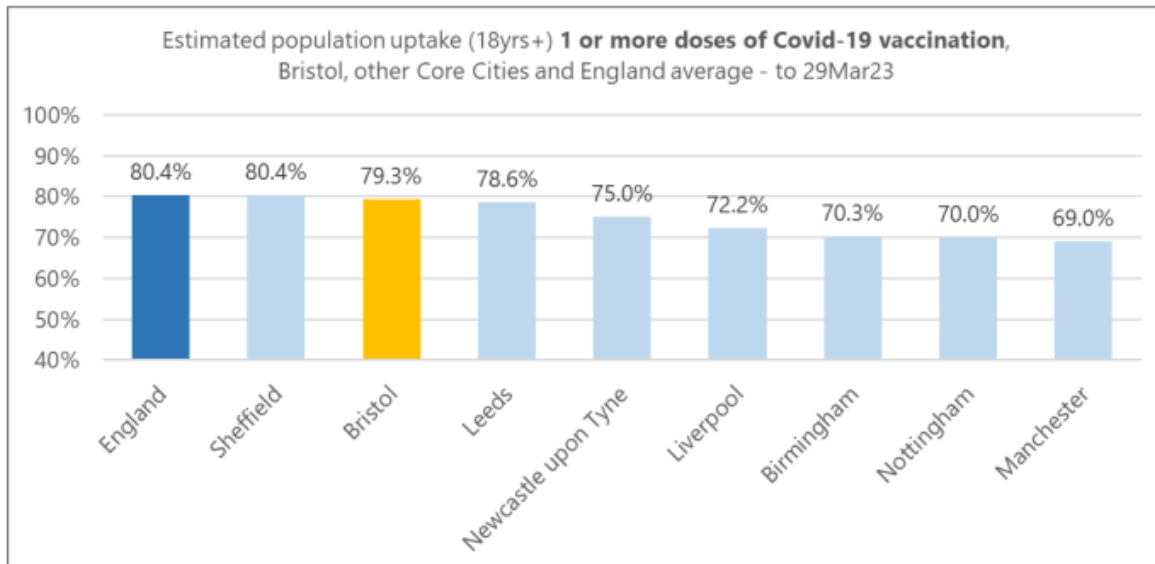
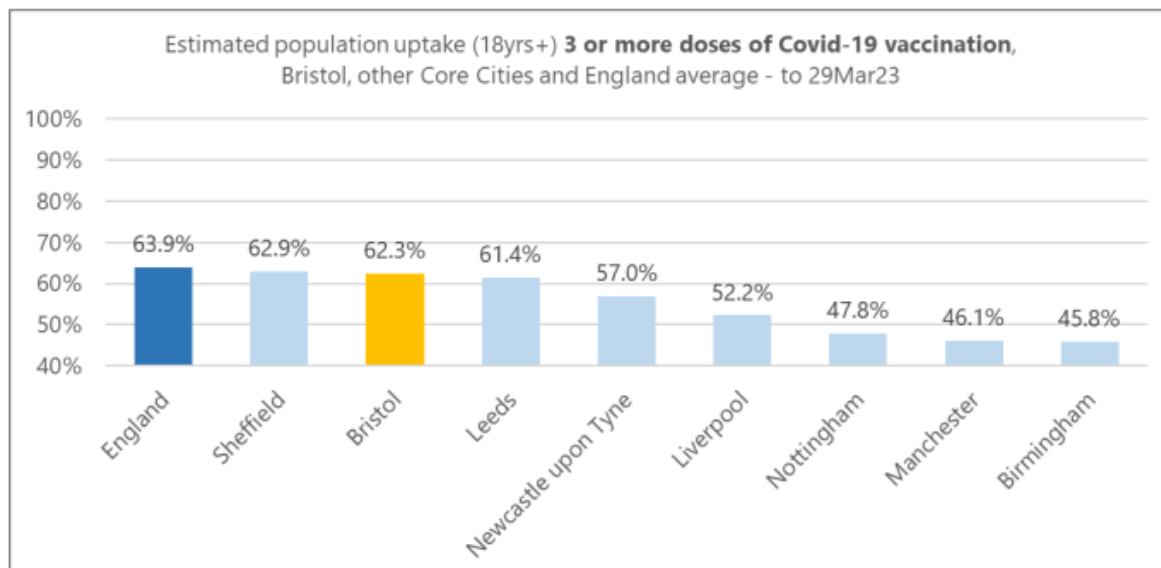


Figure 6: Estimated vaccination coverage: 3 or more doses, Bristol, England and English core cities⁴⁸.



When comparing to Chartered Institute of Public Finance and Accountancy (CIPFA) statistical nearest neighbours, which includes some Core Cities but also some additional local authority (LA's), Bristol's uptake for 1 or more dose ranks lower. Being much more in the middle of the table. This is again reflected in the 3 or more doses data.

Figure 7: Estimated vaccination coverage, 1 or more doses, Bristol, England and CIPFA nearest neighbours⁴⁸

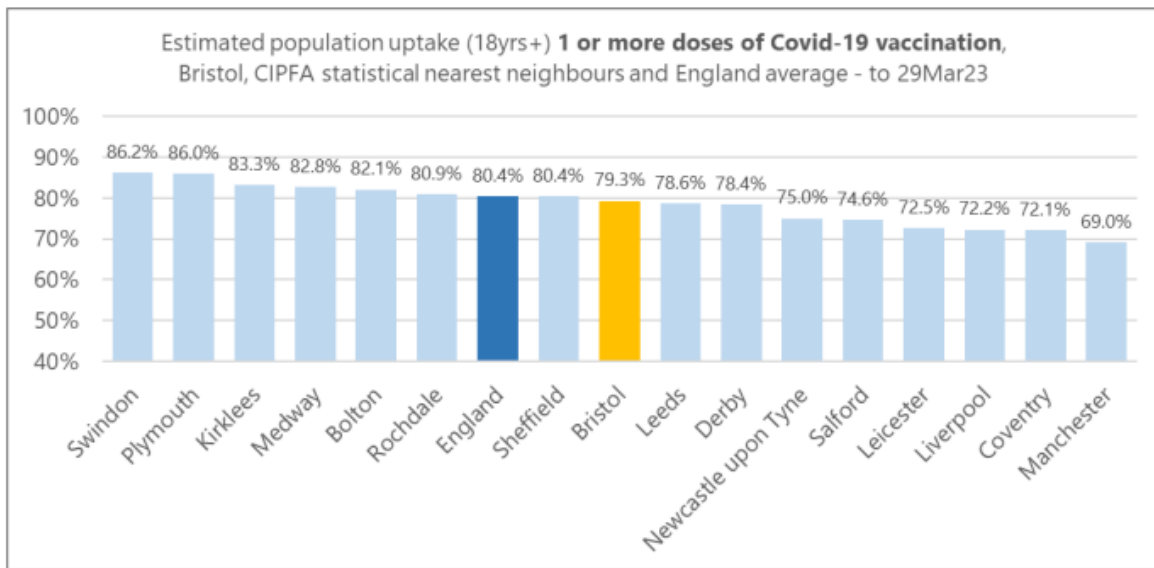
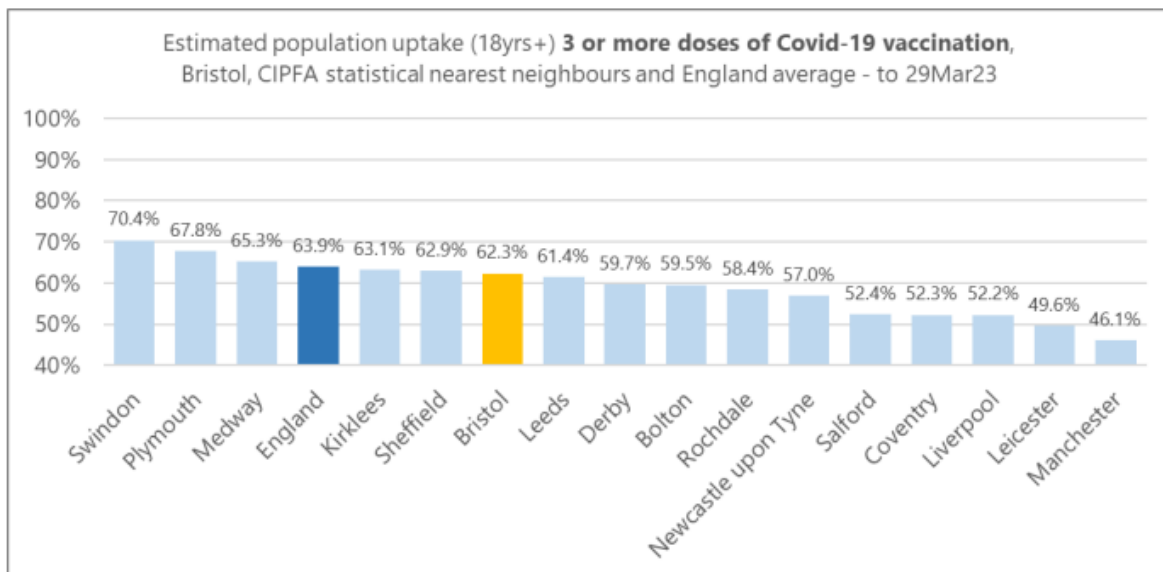


Figure 8: Estimated vaccination coverage, 3 or more doses, Bristol, England and CIPFA nearest neighbours⁴⁸



4. Screening

4.1 Screening programmes

There are currently three national population cancer screening programmes: breast, bowel and cervical screening.

There are eight non-cancer screening programmes: six antenatal and new-born (Foetal Anomaly, Infectious Diseases in Pregnancy, Sickle Cell and Thalassaemia, New-born and Infant Physical Examination, New-born Blood Spot and New-born Hearing) and two adolescent / adult (Abdominal Aortic Aneurysm and Diabetic Eye).

All screening programmes have performance standards relating to uptake, which may be acceptable or achievable (acceptable is a lower target than achievable).¹² Performance and quality indicators are monitored by the NHSE Vaccination and Screening Team, and assurance provided to the Bristol Health Protection Committee.

4.2 Cervical screening

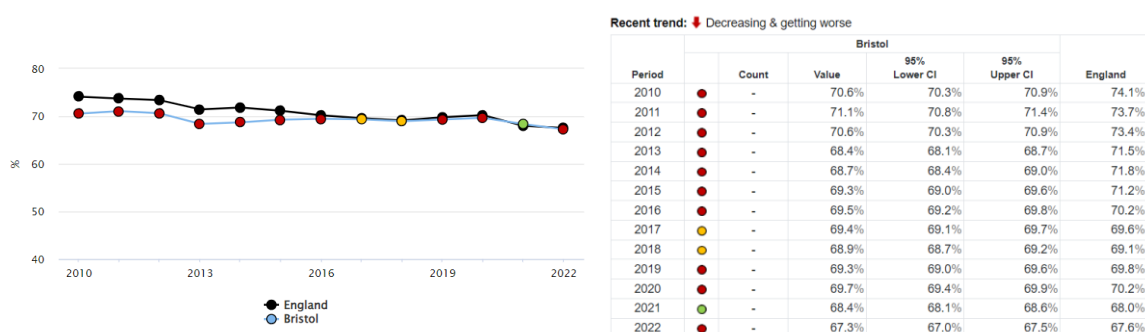
Cervical screening data is broken down into two specific age groups, 25–49 years and 50–64 years.

Based on 2021–22 data, there has been a further slight decline in local and national coverage among 25–49-year-olds with 67% of women and people with a cervix accepting a cervical screen (Figure 9). Among 50–64-year-olds, overall uptake is higher at 73%, again a stable position over the last 3 years, but a downward trend over the last 10 years. It is worth noting that while the percentage coverage is decreasing, in absolute numbers the number of screens taking place has increased across Bristol, due to the rise in size of eligible population.

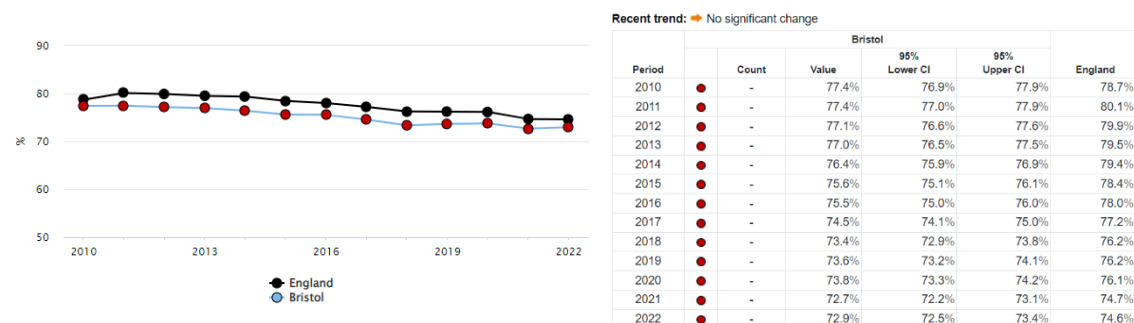
Increasing cervical screening coverage remains a key focus for the SW NHSE Vaccination and Screening Team this year, and a programme of work is planned to include targeted work with GP practices, and local communications. There have also been examples of local work to increase cervical screening uptake, for example, Caafi Health making telephone calls to eligible individuals to support them to book and attend appointments.

Figure 9 and Figure 10: Cervical cancer screening coverage in Bristol, South West, and England in different cohorts¹³

Cancer screening coverage: cervical cancer (aged 25 to 49 years old)



Cancer screening coverage: cervical cancer (aged 50 to 64 years old)



¹² PHE (2019) NHS population screening standards. Available from:

<https://www.gov.uk/government/collections/nhs-population-screening-programme-standards>

¹³ OHID (2022) Fingertips: Public Health Outcomes Framework (cervical cancer screening). Available from:

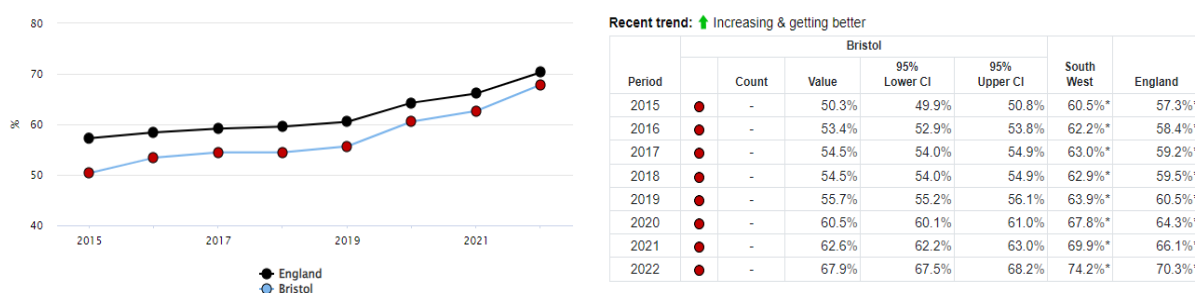
<https://fingertips.phe.org.uk/>

4.3 Bowel cancer screening

The BNSSG bowel screening centre demonstrated a good performance during 2022-23 despite events such as postal and nursing/doctor strikes causing an impact on the service. The Programme continues to extend the age cohort in line with National policy and now incorporates 54-, 56-, and 58-year-olds. A further extension to 50- and 52-year-olds is planned to go live from April 2024. From July 2023 patients with Lynch Syndrome will be invited into the screening programme and capacity for this has been secured.

Bowel screening uptake in Bristol, the South West, and England in the 60–74-year-old cohort (published data not yet available for other age cohorts) has increased. In Bristol specifically, there has been an increase from 51% in 2014–15 to 67.9% in 2021–22 which meets the achievable standard (Figure 11). Nevertheless, bowel screening uptake in Bristol remains lower than regional and national uptake. Initiatives such as a system wide inequalities group and the completion of a Health Equity Assessment Tool were commenced in 2022 and are ongoing.

Figure 11: Bowel cancer screening coverage in Bristol, South West, and England, 2014–15 to 2021–22¹⁴

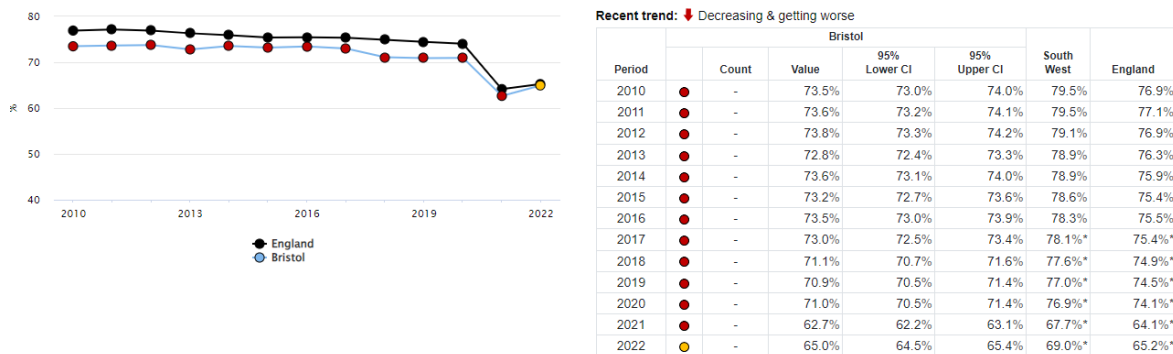


4.4 Breast cancer screening

Bristol’s breast cancer screening programme achieved recovery, regarding screening offer, in 2022-23 following the pause in screening and subsequent backlog which developed during the COVID-19 pandemic. In line with regional and national trends, uptake for the Avon programme, which covers Bristol, has been below previous years and below the target of 70%. Looking forward into 2023-24 the focus is on increasing uptake and addressing health inequalities. The Avon breast screening programme took delivery of a new mobile screening unit in March 2023 which will bring additional screening capacity to the programme.

¹⁴ OHID (2023) Fingertips: Public Health Outcomes Framework (bowel cancer screening). Available from: <https://fingertips.phe.org.uk/>

Figure 12: Breast cancer screening coverage in Bristol, South West, and England, 2009–10 to 2021–22 ¹⁵



4.5 Antenatal and new-born screening

The antenatal and new-born screening services covering the Bristol locality area are delivered by North Bristol Trust (NBT) and University Hospitals Bristol and Weston (UHBW). Staffing pressures and capacity within maternity have had varying degrees of impact on some screening functions throughout 2022-23. Screening teams within both Trusts have worked with wider team colleagues and management to provide mitigation for a safe and effective service to patients. Coverage for the ANNB programmes in both NBT and UHBW Trusts has met the acceptable or achievable for 2022-23. Published annual data for the year 2022-23 is not yet available.

4.6 Diabetic eye screening

Diabetic eye screening is offered to anyone with diabetes who is 12 years old or over on an annual basis. The BNSSG DESP programme has a good performance against its KPIs with an uptake of 81.3% (above the 79.0% England average) and above the 75% acceptable target. Interval extension will start being introduced from 1st October 2023 with patients with 2 consecutive results of no pathology (ROM0) being put on a 2-year recall (50% will be put on a 2-year recall in the first year as an even number of patients need to be screened from one year to another). Whilst there is no published data specific to Bristol, provider data at GP and screening centre level has shown that more deprived areas in central Bristol have lower uptake and a higher nonattendance rate, and to address this they have initiated targeted work with this population. This includes involvement in community events to promote screening, provision of an accessible central Bristol clinic in The Galleries, and flexible appointment times such as evenings and weekends.

4.7 AAA screening

Abdominal Aortic Aneurysm (AAA) screening is offered to men during their 65th year. If an AAA is identified in an individual, they are entered into a surveillance programme or referred for assessment for vascular surgery, depending on the size of the aneurysm. The Bath, Bristol and Weston AAA screening programme has now fully recovered, in regard to screening offer, following COVID-19. Latest published data from 2021–22 states that 73% of eligible men in Bristol had received AAA screening within the year they became eligible, higher than the national coverage (70%).¹⁶

¹⁵ OHID (2023) Fingertips: Public Health Outcomes Framework (breast cancer screening). Available from: <https://fingertips.phe.org.uk/>

¹⁶ OHID (2022) Fingertips: Public Health Profiles – AAA screening coverage (proportion %). Available from: <https://fingertips.phe.org.uk/>

4.8 Inequalities and strategy

Inequalities in screening and immunisation uptake (by ethnicity, deprivation, physical or learning disability status) have been previously acknowledged nationally.¹⁷ The NHSE SW Vaccination and Screening Team has a regional Inequalities Strategy for Screening and Immunisation Programmes in the South West, to renew focus on ensuring access for all.

This includes providing training on the use of the Health Equity Assessment Tool (HEAT), supporting all screening providers to use this tool to develop health inequalities action plans, commissioning Learning Disability practitioners in every system to support screening uptake, and bespoke training for screening providers on working with people with severe mental illness.

5. Sexual Health

5.1 Introduction

Bristol continues to see a higher incidence of STIs compared to the South West and England, which is likely to be linked to the greater proportion of young people aged 15-24 in Bristol and to changes in sexual behaviours. Although there has been an increase in new STI diagnoses in the reporting period, this remained below pre-COVID-19 pandemic levels, which was linked to the ongoing recovery in STI testing. During the 2022-23 reporting period, sexual health services in Bristol responded to the Mpox outbreak and to a significant increase in gonorrhoea cases (that has now exceeded pre-pandemic levels locally). New cases of HIV in Bristol continued to decrease and in 2022 the rate was lower than both the South West and England averages. This data is being explored further for assurance purposes.

5.2 Overview

Sexually transmitted infections (STIs) are entirely preventable but can have lasting long-term and costly complications, such as pelvic inflammatory disease, ectopic pregnancy and infertility. Bristol has a relatively young population compared to England and this is predicted to rise. The city is ethnically diverse, has areas of high deprivation, and there is a significant lesbian, gay, bisexual and trans (LGBT) community. These factors mean sexual health is a high priority for Bristol City Council (BCC).

Unity Sexual Health, Bristol's specialist sexual health service, has faced a number of challenges in 2022-23, initially responding to the easing of COVID-19 restrictions, followed closely by the emergence of Mpox in May 2022 onwards. Towards the end of 2022 there was a notable increase in gonorrhoea cases, which continued to rise to levels greater than prior to the pandemic by the end of March 2023. Throughout 2022-23, the service adapted their delivery model to respond to these challenges, offering longer appointment times in response to Mpox to allow for appropriate infection prevention and control measures to be carried out, to deliver vaccinations to those at risk, and towards the end of 2022-23 to increase the number of gonorrhoea treatment clinics to manage the numbers being diagnosed.

5.3 Sexually Transmitted Infections (STIs)

There were 3,948 new STIs diagnosed in Bristol in 2022. This is equivalent to a crude rate of 838 per 100,000 people and is significantly higher than the rate of 489 per 100,000 in the South West region

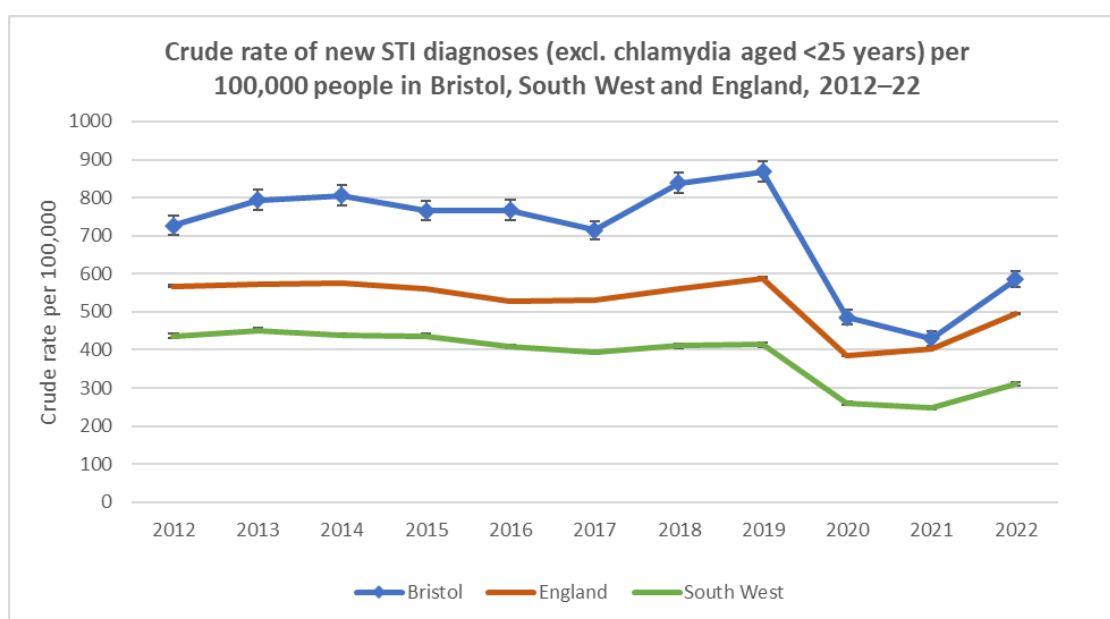
¹⁷ PHE (2020) Screening inequalities strategy. Available from: <https://www.gov.uk/government/publications/nhs-population-screening-inequalities-strategy/phe-screening-inequalities-strategy#screening-inequalities-and-the-case-for-action>

and 694 per 100,000 in England.¹⁸ Crude rate calculations consider differences in population size, but not population structure. Bristol has the highest rate of STIs in the South West, and much of this difference is likely to be due to a greater proportion of young people in the city compared to the South West and England.

Following significant decreases in STI diagnoses recorded in Bristol in 2020 and again in 2021 during the COVID-19 pandemic, which limited social interactions and restricted access to sexual health services and testing, the number of diagnoses increased in 2022 but did not reach pre-pandemic levels. Levels of STI testing are still recovering following the pandemic, which likely accounts for the lower levels of STI diagnosis still being reported in 2022-23.

A similar pattern is seen when chlamydia cases in under 25-year-olds are excluded (Figure 13). The rate of new STI diagnoses excluding chlamydia in under 25-year-olds was 586 per 100,000 people in 2022. This was a 36% increase compared to 2021, but still lower than pre-pandemic levels and lower than the national average (496 per 100,000).

Figure 13: Crude rate of new STI diagnoses (excl. chlamydia aged <25 years) per 100,000 people in Bristol, South West, and England, 2012–22 (UKHSA)¹⁸

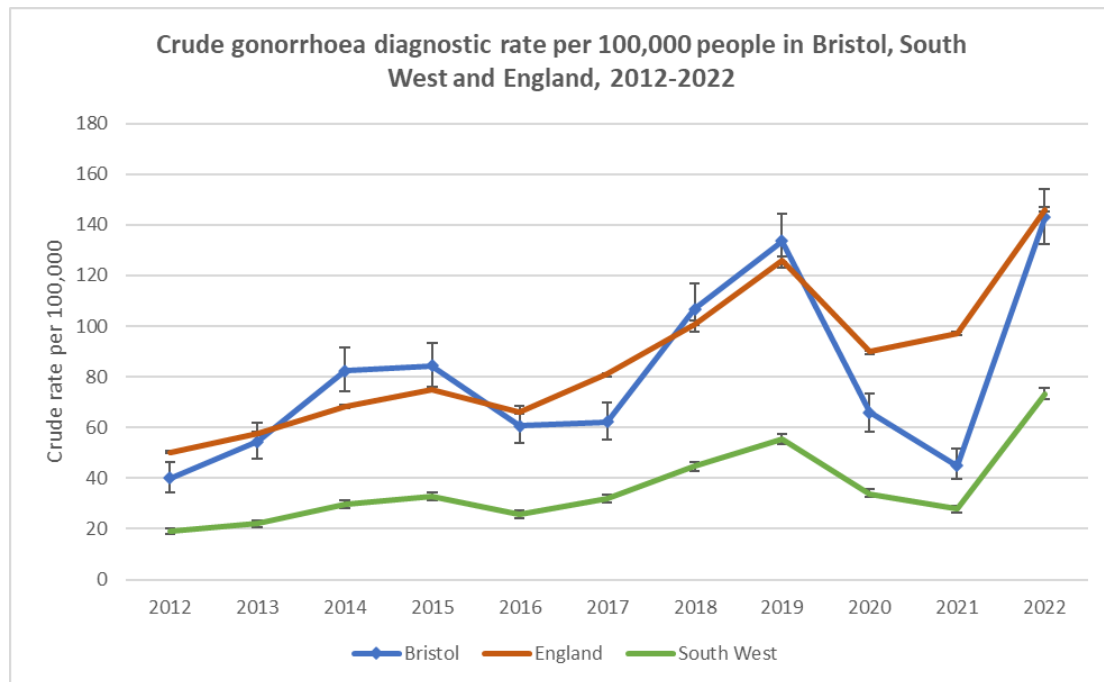


During 2022, both gonorrhoea and syphilis cases in England returned to the high levels reported in 2019 (prior to the COVID-19 pandemic). Gonorrhoea increased in people of all ages, but the rise was highest among young people aged 15 to 24 years. Similar increases were seen in Bristol. In 2022 there were 673 new diagnoses of gonorrhoea in Bristol, compared to 619 in 2019, with a rate of 143 per 100,000 people, similar to England’s rate of 146 per 100,000 people (Figure 14). The increase in gonorrhoea seen across the South West led to the UK Health Security Agency (UKHSA) in the South West declaring a regional incident early in 2023. Bristol had the highest number and rate of

¹⁸ UKHSA (2022) Sexual and Reproductive Health Profiles. Available from: https://fingertips.phe.org.uk/profile/sexualhealth/data#page/4/gid/1938133286/pat/6/par/E12000009/ati/502/are/E06000023/iid/93546/age/1/sex/4/cat/-1/ctp/-1/yr/3/cid/4/tbm/1/page-options/car-ao-0_car-do-0

gonorrhoea cases, with increases seen particularly among heterosexuals aged 19 to 23 years, and among GBMSM aged 24 to 34 years. In relation to syphilis, there were 62 new diagnoses in Bristol in 2022, compared to 69 in 2019, with a rate of 13.2 per 100,000 people, similar to England's rate of 15.4 per 100,000 people. Although syphilis numbers are relatively low, undetected, this infection can have significant health impacts and any increase is a concern.

Figure 14: Crude gonorrhoea diagnostic rate per 100,000 people in Bristol, South West, and England, 2012–22 (UKHSA)¹⁸



5.4 Mpox (Monkeypox)

Mpox is a rare but high consequence viral infection (MPXV). Mpox does not spread easily between people unless there is very close contact. Spread of Mpox may occur when a person comes into close contact with an infected animal (rodents are believed to be the primary animal reservoir for transmission to humans), human, or materials contaminated with the virus. Mpox has not been detected in animals in the UK. The virus is transmitted through skin-to-skin contact, breathing in the virus through the respiratory tract, or contact with mucous membranes (eyes, nose, mouth, genitals).¹⁹

Since May 2022, cases of human Mpox have been reported in multiple countries that have not previously had MPXV in animal or human populations, including the UK. Between the 22nd of May 2022 and the end of March 2023, 3,561 cases of Mpox had been identified in the. The majority of these cases have occurred in GBMSM without documented history of travel to endemic countries. At the end of 2022, there had been 13 cases of Mpox in Bristol.²⁰

¹⁹ UKHSA (2018) Mpox (monkeypox): background information. Available from: [Mpox \(monkeypox\): background information - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/news/mpox-monkeypox-background-information)

²⁰ UKHSA (2022) Mpox outbreak: epidemiological overview. Available from: [Monkeypox outbreak: epidemiological overview - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/news/mpox-outbreak-epidemiological-overview)

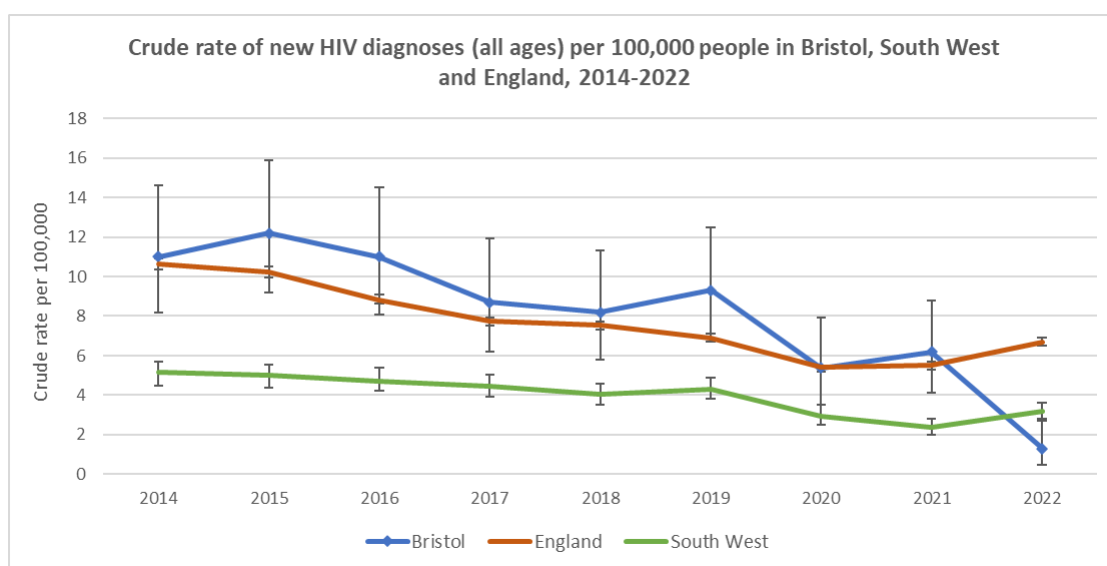
Unity Sexual Health worked closely with the Bristol, North Somerset and South Gloucestershire health system to respond to the spread of Mpox, offering extended appointments to observe all infection prevention and control requirements and supporting the rollout of the vaccination programme.

5.5 HIV incidence in Bristol

Data on fingertips for HIV incidence in Bristol in 2022 is incorrect and therefore it is not possible to update this section accurately. This is being investigated with UKHSA and our HIV treatment provider. The England average is 6.7 per 100,000 (Figure 15). It is important to note that testing coverage in Bristol is poor, with only 38% of eligible people attending specialist sexual health services accepting a HIV test in 2022, having fallen from 68% in 2019. This is likely to have had an impact on the number of new HIV diagnoses. The increasing use of PrEP is also likely to have a positive impact.

Once newly diagnosed, the percentage of people in 2020–22 who started antiretroviral therapy promptly (within 91 days of their diagnosis) was 91%, a little above the England average of 85%.²¹ The way this metric is calculated was revised in 2023 and is no longer comparable to historic data.

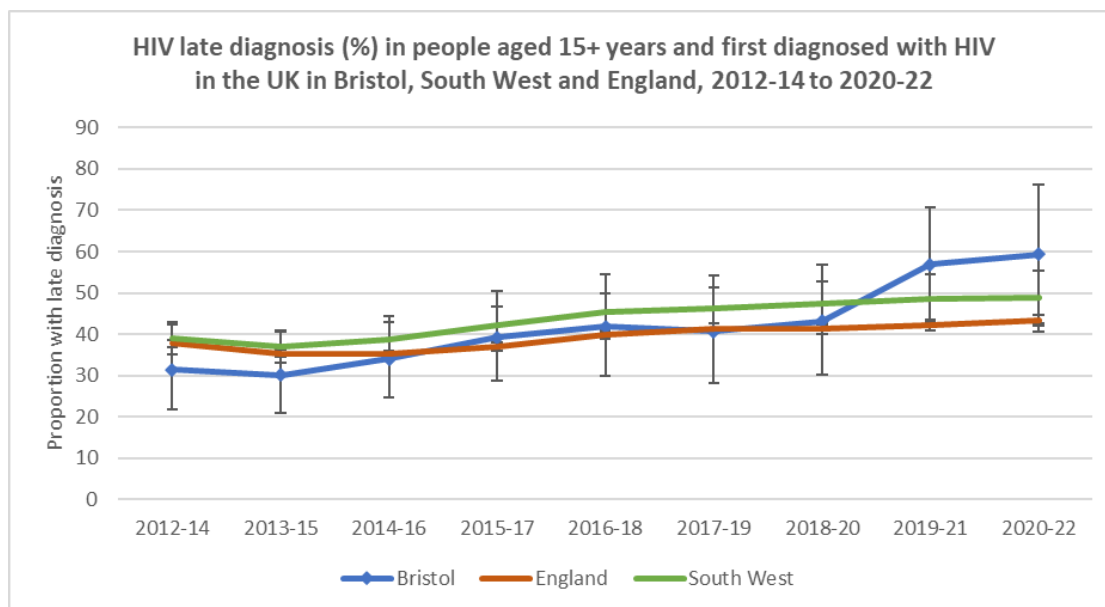
Figure 15: Crude rate of new HIV diagnoses per 100,000 people (all ages) in Bristol, South West and England, 2014–22 (UKHSA). NOTE unreliable Bristol data for 2022.



In Bristol, it is estimated that around 1 in 20 (5%) people are unaware that they are infected with HIV, based on a UKHSA analysis using 2021 data. This increases the risk of poor health outcomes and onward HIV transmission. Between 2020 and 2022 in people aged 15 and over in Bristol with a new HIV diagnosis that was first diagnosed in the UK, 59% had a late diagnosis, which is a slight increase on the combined 2019 to 2021 data and higher than the England average of 43% (Figure 16).

²¹ UKHSA (2022) Sexual and Reproductive Health Profiles. Available from: https://fingertips.phe.org.uk/profile/sexualhealth/data#page/4/gid/1938133286/pat/6/par/E12000009/ati/502/are/E06000023/iid/93546/age/1/sex/4/cat/-1/ctp/-1/yr/3/cid/4/tbm/1/page-options/car-ao-0_car-do-0

Figure 16: HIV late diagnosis in people aged 15+ years and first diagnosed with HIV in the UK in Bristol, South West and England, 2012–14 to 2020-22 (UKHSA)



5.5.1 HIV initiatives in Bristol

Work continued throughout 2022-23 to support the national HIV Action Plan²², much of which is aligned with the global Fast Track City initiative that BCC signed up to at the end of 2019.²³ The initiative is led by the Bristol Fast Track Cities Steering Group with membership from BCC Public Health, Brigstowe, the University of Bristol, Unity Sexual Health, North Bristol NHS Trust, Terence Higgins Trust, CHIVA and members of the public. The collaborative steering group aims to end HIV stigma and focus on exceeding the UNAIDS 95:95:95 HIV targets:

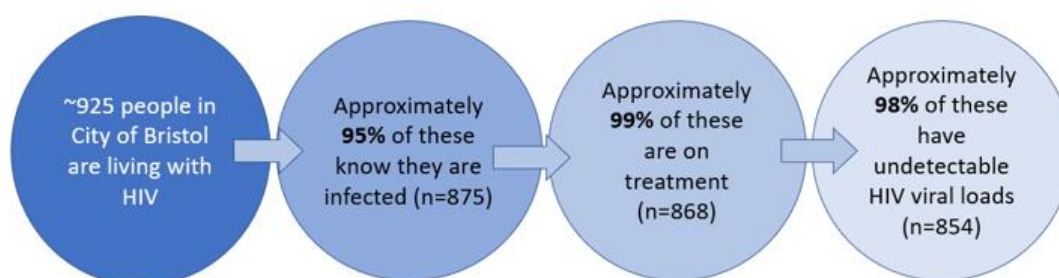
- 95% of people living with HIV knowing their status
- 95% of people with diagnosed HIV on treatment
- 95% of people on treatment with suppressed viral loads

Fast Track Cities performance data is analysed by UKHSA, and at the time of writing, the data for 2022 was not available. Figure 17 below shows Bristol’s achievement in 2021 against the three targets.

²² Department of Health and Social Care (2021) Towards Zero: the HIV Action Plan for England - 2022 to 2025. Available from: <https://www.gov.uk/government/publications/towards-zero-the-hiv-action-plan-for-england-2022-to-2025>

²³ Bristol One City (2020) Fast Track Cities. Available from: <https://www.bristolonecity.com/fast-track-cities/>

Figure 17: Bristol HIV Fast Track City performance, 2021 (UKHSA)



In 2022-23, Fast Track City partners undertook a number of initiatives including:

- A pilot of four vending machines in two locations in Bristol, one location in North Somerset and one location in South Gloucestershire for the collection of STI self-sampling kits and HIV self-testing kits. The vending machines aimed to increase access to asymptomatic testing among African and Caribbean heritage communities, young people and GBMSM.²⁴
- Commencing a study examining how to improve HIV testing and access to PrEP in GP practices.²⁵
- Commencing a project to understand whether it is possible to use pharmacies to deliver PrEP to improve HIV prevention, including identifying the barriers that may stop people from using them.²⁶
- Lobbying local MPs about the importance of funding opt-out HIV testing in emergency departments in areas of high HIV prevalence.
- Rolling out of ‘Hearts and Minds’ training to address stigma amongst healthcare workers.
- Campaigns to address HIV stigma.
- Expanding support to people who find it difficult to engage in HIV treatment.

5.5.2 Common Ambition Bristol (CAB)

Common Ambition Bristol is a co-production project which aims to work with African and Caribbean Heritage (ACH) communities to address the HIV inequalities experienced by this community.

²⁴ Gobin, M. et al. (2023) P048 Acceptability and Feasibility of Digital Vending Machines to Improve Access to Sexual and Reproductive Health Testing in the West of England: Using a Person-based Approach. Sexually Transmitted Infections [online]. Available from: https://sti.bmj.com/content/99/Suppl_1/A46

²⁵ National Institute for Health Research. Examining how to improve HIV prevention and testing in GP practices. Available from: <https://arc-w.nihr.ac.uk/research/projects/examining-how-to-improve-hiv-prevention-and-testing-in-gp-practices/>

²⁶ National Institute for Health Research. Accessing PrEP through pharmacies to improve HIV prevention. Available from: <https://arc-w.nihr.ac.uk/research/projects/accessing-prep-through-pharmacies-to-improve-hiv-prevention/>

ACH community members work alongside healthcare, public health and academic partners to develop, test and evaluate interventions to establish effectiveness and acceptability. In 2022-23 there were 4 key strands of work; outreach via ACH businesses including barbers, hairdressers and local shops, promotion of messaging via various sources of ACH relevant media, running an ACH specific sexual health clinic to undertake testing, to commence PrEP, planning a second clinic, and running community events to promote understanding and HIV testing including enabling self-testing.

5.5.3 HIV PrEP

PrEP became available via routinely commissioned NHS sexual health services at the end of 2020. This medication reduces the risk of individuals acquiring HIV. BNSSG were commended in the national press for being one of the first areas in the country to make this provision available via Unity Sexual Health. In 2022-23, 339 people started taking daily PrEP, and a further 212 people started taking event-based PrEP. Of those starting PrEP in 2022-23 in Bristol, take-up was highest in men who have sex with men/transgender women (98%), ages 25-34 years (46%), and people who are White British or White Irish (68%).

5.6 SHIP HIT²⁷

The Sexual Health Improvement Health Integration Team (SHIP HIT) is a group of partners who aim to collectively support the development of evidence-based services to improve the sexual health of our population. The SHIP HIT action plan is a comprehensive action plan which includes a number of areas relevant to health protection; improving understanding of sexual health needs, ending sexual stigma, improving STI and HIV testing and using our collaborative network to influence nationally.

In 2022-3 the SHIP HIT continued to support the work of Fast Track Cities and Common Ambition Bristol (see above), and we were involved in a number of other research projects including Emergency Department opt out testing for blood borne viruses (national), exploring HIV testing barriers for Black African women, PrEP pharmacy delivery, GP HIV testing, STI vending machines evaluation, vaccine uptake in men who have sex with men, and black men's sexual health needs.

5.6 Sexual health needs assessment

A joint sexual health needs assessment for BNSSG was undertaken for the first time in 2022-23 in order to identify unmet need and gaps in service provision that could be impacting on the sexual and reproductive health outcomes of the population. The needs assessment brought together data on sexual health and HIV outcomes, as well as data on service activity and quality. A BNSSG-wide survey was also undertaken to explore the views of the public, service users and professionals. The needs assessment has provided important evidence and recommendations to support future commissioning decisions.

5.7 Relationships and sexual health education (RSHE)

RSHE became statutory in schools in 2020²⁸, which covers Relationships Education at Key Stages 1 and 2 (primary school), Relationships and Sex Education (RSE) at Key Stages 3 and 4 (secondary school) and Health Education from key stage 1 to 4. All schools are required to deliver 13 modules

²⁷ Bristol Health Partners. Sexual Health Improvement Programme. Available From: <https://www.bristolhealthpartners.org.uk/health-integration-teams/sexual-health-improvement-programme-ship/>

²⁸ Department for Education (2019). Relationships Education, Relationships and Sex Education (RSE) and Health Education. Available From: https://assets.publishing.service.gov.uk/media/62cea352e90e071e789ea9bf/Relationships_Education_RSE_and_Health_Education.pdf

developed by the Department for Education (DfE). This guidance is currently being reviewed and revised guidance is due to be published in 2024.

In Bristol many schools choose to purchase a resource that provides tailored learning aids and teaching materials that are aligned to the curriculum. Within BCC, any queries relating to the delivery of RSHE are directed to the Healthy Schools Team, who encourage schools to be responsive to emerging issues within schools. There is an RSHE Hub available on the Healthy Schools website²⁹ which shares support and resources related to RSHE topics.

5.8 Future plans

5.8.1. Sexual health recommissioning

The process of recommissioning integrated sexual and reproductive health services for Bristol, North Somerset and South Gloucestershire will begin in 2023-24. Services in scope for recommissioning include:

- STI and HIV testing, STI treatment, HIV prevention including pre-exposure prophylaxis (PrEP), the National Chlamydia Screening Programme, specialist contraception services, and a service for young people, sexual health outreach and health promotion.

BNSSG Integrated Care Board will co-commission abortion services with the integrated sexual health service, and Bath and North East Somerset Council will also co-commission the National Chlamydia Screening Programme with the integrated sexual health service.

The recommissioning process will be led by Bristol City Council and supported by a joint commissioning group with partners from North Somerset, South Gloucestershire Councils and the Integrated Care Board. It will draw on findings from the sexual health needs assessment and from engagement with the public, clinicians and potential providers to develop a sustainable service model that is responsive to the population's needs.

5.8.2. Bristol Fast Track Cities

In 2023-24 Bristol Fast Track cities aims to focus on addressing apparent low uptake of HIV testing amongst sexual health services users and will be repeating the audit which took place in 2022. We will be working with our OHID colleagues to encourage late diagnosis to be considered a serious incident and require investigation, to enable us to better understand why people continue to be diagnosed at a stage which compromises their health. We will undertake a stigma survey in Bristol to better understand the prevalence of stigma and continue educating our health and care colleagues around HIV. We will be exploring workplace policies around blood borne virus (BBV) and how these can be improved to reduce continued stigma, and we will focus on people with HIV who have been lost to follow up. We will continue to work, share and learn from our UK Fast Track city partners and will be developing a bespoke Bristol Fast Track Cities website.

5.8.3. Extending C-Card age range

In 2023-24, Bristol City Council will be increasing the age range of their C-Card condom distribution scheme from 13-19 years old to 13-24 years old. This extension is in response to the gonorrhoea outbreak as Bristol have the highest rates of new gonorrhoea cases in the South West, with the 19-23 age group one of the most impacted. Regular testing and using a condom are key preventative measures being encouraged to curb the spread of gonorrhoea. Ensuring that all young people under

²⁹ Bristol Healthy Schools. Available from: [Bristol Healthy https://www.bristol.gov.uk/council-and-mayor/statistics-census-information/census-2021_Schools](https://www.bristol.gov.uk/council-and-mayor/statistics-census-information/census-2021_Schools)

the age of 25 in Bristol can access free condoms is an important intervention that Bristol City Council are putting in place to try and reduce transmission of gonorrhoea and other STIs.

5.8.4 Priorities for the next reporting period

- Undertake the recommissioning of integrated sexual health services.
- Continue to monitor and encourage the recovery of STI and HIV testing in Bristol and the subsequent effects on numbers of new diagnoses.
- Support the development of communications materials to raise awareness of the C-Card condom distribution age extension and oversee their dissemination.
- In conjunction with local partners including populations at risk, determine the most appropriate interventions and channels to address the continuing rise in STIs.

6. Healthcare Associated Infections (HCAI) and Antimicrobial Resistance (AMR)

6.1 Introduction

Healthcare associated infections (HCAI) are more likely to occur in patients who are seriously ill; patients who have repeated courses of antibiotics or invasive devices such as catheters and intravenous cannulas; or patients who inject drugs.

The BNSSG Clinical Commissioning Group (CCG) hosts the Healthcare Associated Infection (HCAI) Group. This is held quarterly and chaired by the CCG's Deputy Director of Nursing & Quality and the BNSSG Antimicrobial Resistance Strategy (AMR) Group which was established to support and enable delivery of the UK 5-year AMR National Action plan 2019–24 and ensure progress towards the 20-year vision to contain and control AMR. The group provides leadership for a system-wide approach for the containment and control of AMR in human health services. Bristol City Council (BCC) Public Health team have representatives at both groups.

6.2 MRSA

Methicillin-Resistant Staphylococcus Aureus (MRSA) is a gram-positive bacterium that is commonly colonised in the human skin and mucosa without causing infection. When invasive infection occurs, usually because the bacterium enters the body via broken skin or medical procedures, it can produce a wide variety of diseases particularly in those with weakened immune systems. This may include minor skin and wound infections and pneumonia, but also result in blood stream infections (septicaemia) and sepsis which can be fatal.

Nationally, there is a 'Zero Tolerance' approach to MRSA Bacteraemia. In Bristol there were 21 cases of MRSA in the reporting period, this represents a decrease from the previous year (28 cases) but remains above the target of zero cases per year. This is a concern and further work is needed to better understand the profile and drivers for this.

The diagnosis of a MRSA bloodstream infection on admission enables timely access and administration of appropriate antibiotics to patients. The Vascular Access Process initiative at UHBW has been one quality improvement programme of work to reduce MRSA/MSSA bloodstream infections.

BNSSG CCG and local authority partners commissioned Bristol Drugs Project (BDP) to roll out a Chlorhexidine programme and implementation during 2019-20. Public Health England supported the Chlorhexidine project. This intervention targeted service users using drugs within Bristol, screening this specific patient cohort for MRSA and providing decolonisation treatment where applicable. In

addition, a trial promoting use of Chlorhexidine wipes to Persons Who Inject Drugs (PWID) commenced in April/May 2021 through our local drug and alcohol services with the aim of reducing risk of infection in injecting site. Due to the challenges of the COVID-19 pandemic a robust evaluation was challenging, and the decision made to extend the project into 2022-23 was made.

6.3 Clostridium Difficile

Clostridium Difficile is a gram-positive bacterium normally found in the gut. In elderly hospitalised patients, especially those with current or recent history, repeated or extended courses of antibiotics can allow the bacterium to grow to abnormally high levels and cause severe diarrhoea and mortality. It is preventable through antibiotic stewardship, high levels of environmental cleaning, and standard infection prevention and control measures by staff.

During 2022-23, there were 79 cases of Clostridium Difficile infection (CDI) in Bristol, compared to 144 cases 2021-22.

Across the ICB, the cases appear to be evenly split over the local authorities, but there is a demonstrable reduction in the Bristol local Authority compared to 2021-22. As an ICB, this benchmark remained above the England and Southwest average per 100,000 populations until more recently. There were three (3) periods of improvement throughout 2022-23 where the assigned cases were below the All England and Southwest average.

BNSSG was a key partner in the South West CDI collaborative group during 2022-23 and actively engaged with system colleagues. The BNSSG Clostridium Difficile working group continued work to embed HCAI-CDI workstream sprint initiatives which includes a review of Vancomycin and community onset CDI during quarter 3 (Oct – Dec 2022).

The ICB are required to undertake systemwide reviews for patients diagnosed with CDI. However, during 2021-22, no community onset case reviews were routinely undertaken due to Data Protection Information governance issues. The lack of case reviews means lost opportunities to ensure patients have received appropriate treatment and a loss of opportunity to share learning with system partners.

6.4 Escherichia coli

Escherichia coli (E. coli) is a gram-negative bacterium found in the intestines of humans and animals. While most strains are harmless, some can become invasive and cause a variety of diseases: healthcare associated E. coli bloodstream infections represent 55% of all gram-negative bloodstream infections.

E. coli cases reduced in frequency when compared to 2021-22. There were 205 cases of E. coli in Bristol this reporting period, compared with 232 last year.

6.5 Other bloodstream infections (BSI)

The number of cases of Methicillin-Sensitive *Staphylococcus aureus* (MSSA), *Klebsiella* and *Pseudomonas aeruginosa* bacteraemia reported within Bristol are noted in **Table 6.5.1**.

Table 2: Number of cases of MSSA, Klebsiella and Pseudomonas aeruginosa bacteraemia in Bristol, 2020–21 to 2022–23

Pathogen	Year		
	2020-21	2021-22	2022-23
Pseudomonas Aeruginosa	33	28	24
Klebsiella bacteraemia	85	86	73

Methicillin-Sensitive Staphylococcus aureus (MSSA)	78	73	93
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The most frequently reported primary focus of Klebsiella species bacteraemia during 2021-22 was the urinary tract, constituting 32.8% of cases with a reported primary focus of infection. BNSSG will seek to facilitate shared learning to capture how local improvement has been achieved.

During 2023-24 monitoring of the position for BNSSG against all England and Southwest benchmarking will continue. The BNSSG ICB will encourage partner organisations to review IPC work programmes for 2023-24 and support learning from MSSA reviews.

6.6 Antibiotic prescribing

Antibiotic prescribing and antibiotic resistance are inextricably linked, as overuse and incorrect use of antibiotics are major drivers of resistance. A BNSSG Antimicrobial Resistance Strategy group (recently renamed Infection Prevention and Management Committee) was established in 2020–21 aiming to support and enable the delivery of the national five-year AMR Action Plan³⁰.

In the winter of 2022–23 there was a significant increase in antibiotics prescribed due to an increase in Group A Streptococcus infections. A 43% increase of antibiotic prescriptions from October 2022 (16,396) to December 2022 (23,488) was seen in Bristol. The largest increase was seen in children aged 0-9 years and was in line with increases seen nationwide. The prescribing rate has since reduced back to expected levels. Despite the winter increase, BNSSG remains the lowest prescriber of antibiotics in children nationally, highlighting good antimicrobial stewardship.

Bristol and BNSSG continued to meet the two nationally set antimicrobial prescribing targets. Antimicrobials per STAR-PU³¹ which monitors overall antibiotic prescribing, and the broad-spectrum antibiotics target in 2022–23 (whereby broad-spectrum antibiotics³² should constitute ≤10% of all prescribed antibiotics).

In hospital settings, the 2022–23 NHS Standard Contract included a requirement to reduce antibiotic consumption of broad-spectrum antibiotics (WHO watch and reserve classification) by 4.5% from a 2018 baseline, measured as Defined Daily Doses (DDD) per 1000 admissions. UHBW met this target and NBT whilst seeing a reduction in the prescribing of broad-spectrum antibiotics did not meet the 4.5% reduction target.

Community antibiotic guidelines continue to be reviewed and updated and stewardship work continues across Bristol. In 2022–23 this included a focus on cellulitis and pyelonephritis pathways with all Bristol practices undertaking an audit on how the diagnosis and prescribing for these two conditions. During World Antimicrobial Awareness Week (18-24th November 2022), there was a focus on the course length of antibiotics, this area of focus is continuing into 23-24 and clinically appropriate short courses can lead to reduced antimicrobial resistance and reduced antibiotic side effects for patients.

³⁰ UKHSA (2019) UK 5-year action plan for antimicrobial resistance 2019 to 2024 Available from: <https://www.gov.uk/government/publications/uk-5-year-action-plan-for-antimicrobial-resistance-2019-to-2024>

³¹ Antibiotic prescribing can be measured using Specific Therapeutic Group Age-sex weightings Related Prescribing Units (STAR-PU) weighting, which allows prescribing levels to be adjusted for the number and characteristics of patients registered in the practice.

³² Cephalosporins, Quinolones and Co-amoxiclav

7. Tuberculosis (TB)

7.1 What is TB?

Tuberculosis (TB) is an infectious disease that most often affects the lungs and is caused by a type of bacteria. It spreads through the air when infected people cough, sneeze or spit. Most infections result in asymptomatic latent TB which is not infectious while 5–10% of cases go onto develop into active TB³³.

Tuberculosis is preventable and curable. Additionally, TB disproportionately impacts underserved and often socially marginalised populations, where the risks of transmission and delayed diagnosis, drug resistance, and mortality are highest.

TB is a public health priority in the UK and globally due to the health, social and economic burden of the disease. While it is preventable through vaccination and is a curable disease with appropriate use of antibiotics, there is a worldwide risk of multi-drug resistant TB (MDR TB) and extensively drug resistant TB (XDR TB).

7.1.1 TB data availability

Availability of timely and recent data for TB notifications, Treatment and Outcomes at a Local Authority level is poor. The most recent data available for this report runs up until the end of 2021. This could be significantly improved to allow for more reactive public health action and better prevention at a local level. Improving data oversight at a Bristol locality level will be a key priority in the year ahead.

7.2 TB Incidence in Bristol

The Tuberculosis in England, 2022 report (data up until end of 2021) indicates that in Bristol, the 3-year average number³⁴ of TB Notifications and rates reported to UKHSA from 2020-2022 was 43, this represents a rate of 9.2 per 100,000³⁵ and portrays a slight increase in incidence on recent years.

TB incidence has been decreasing overall in Bristol since 2011, but the rate of decline had been slowing (Figure 18). This latest increase is concerning, particularly in the context that data availability carries a significant delay and we do not know the full local impact of the Covid19 pandemic on TB notifications within the city. Additionally, over the past 18 months Bristol has seen significant migration to the area and more widely the South West.

Responding to TB cases within Bristol requires significant resource from local agencies, with many cases having complexities both medically and socially. So any rise in incidence will add pressure to an already challenged system.

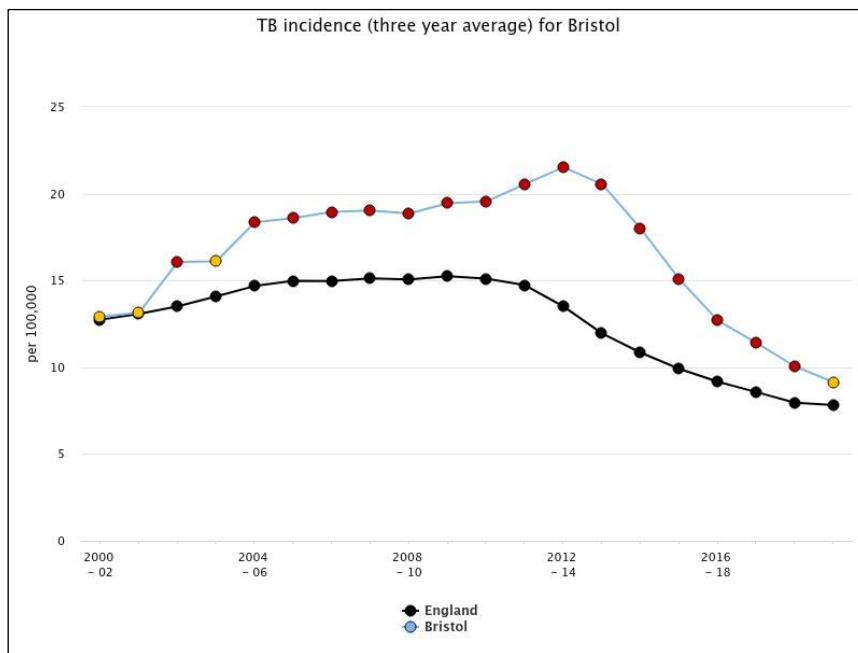
Bristol's 3-year average still remains higher than the England average for the same period (7.3-7.8 per 100,000) and significantly greater than the South West Average (2.9).

³³ WHO (2022) Tuberculosis Fact sheet. Available from: <https://www.who.int/news-room/fact-sheets/detail/tuberculosis>

³⁴ UKHSA (2021) Tuberculosis incidence and epidemiology in England, 2021. Available from: [tb-annual-report-series- https://www.bristol.gov.uk/council-and-mayor/statistics-census-information/census-20211-supplementary-data-tables.ods \(live.com\)](https://www.bristol.gov.uk/council-and-mayor/statistics-census-information/census-20211-supplementary-data-tables.ods)

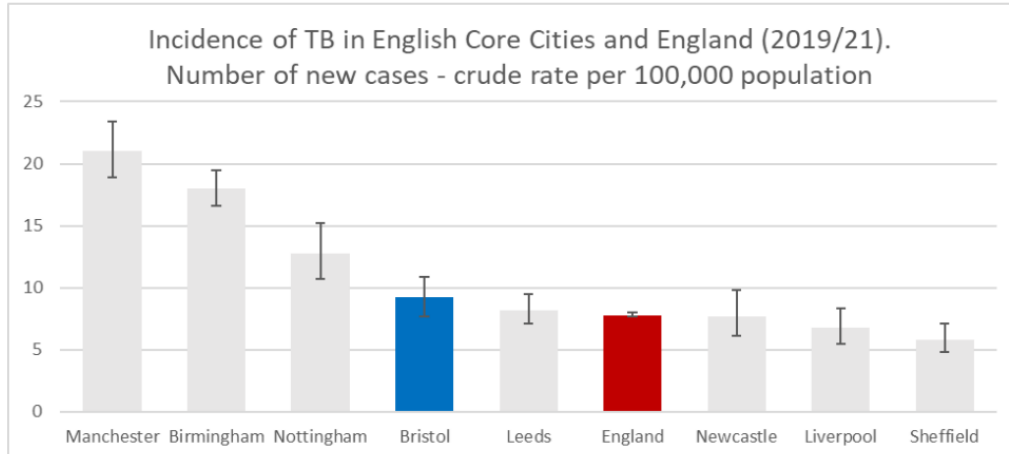
³⁵UKHSA (2022) Tuberculosis in England, 2022 report [Tuberculosis in England, https://www.bristol.gov.uk/council-and-mayor/statistics-census-information/census-20212022-report \(data up to end of 2021\) - GOV.UK \(www.gov.uk\)](https://www.bristol.gov.uk/council-and-mayor/statistics-census-information/census-20212022-report-data-up-to-end-of-2021)

Figure 18: Incidence of TB in Bristol and England, 2000/02-2019/21³⁶



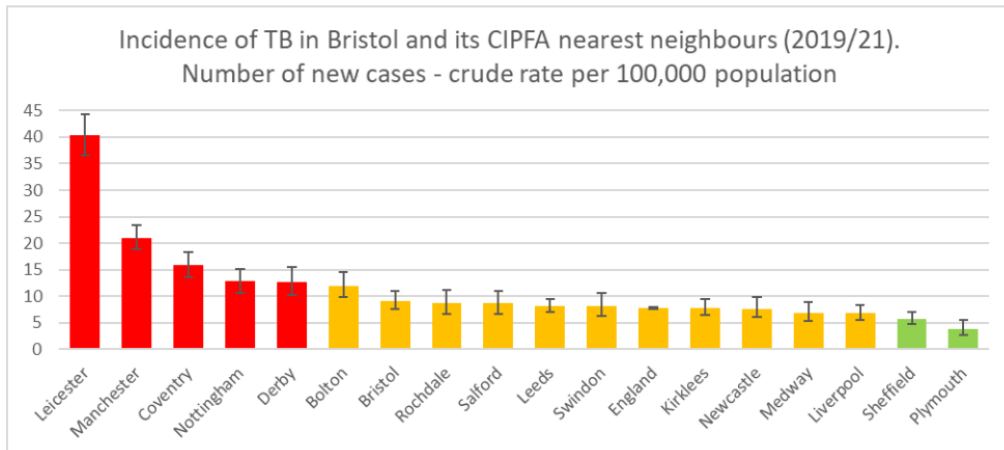
When comparing to English Core Cities, Bristol ranks 4th and when compared against CIPFA nearest neighbours, Bristol ranks 7th in terms of TB incidence (Figure 19 & Figure 20).

Figure 19: Incidence of TB in English Core Cities³⁶



³⁶ OHID Fingertips (2023) Public Health profiles. Available from: <https://fingertips.phe.org.uk>

Figure 20: Incidence of TB in Bristol and CIPFA nearest neighbours³⁶



The red colour-coding indicates rates that are significantly greater than the England average, yellow represents rates that are not significantly different than the England average, green indicates rates that are significantly less than the England average.

Provisional data from quarterly reports, produced by UKHSA suggests that there have been more cases of TB diagnosed in the Southwest in this reporting period than there were last year. (190 in 2022-23 vs 156 in 2021-22)³⁷.

7.3 TB Treatment

The main treatment for TB is a 6-month course of antibiotics³⁸, and therefore, due to the nature of TB treatment and testing, data on this is limited. The most up-to-date data available is up until the end of 2021.

In 2021, 42.1% of pulmonary TB cases in Bristol started treatment within two months of the onset of symptoms and 68.4% within four months of symptom onset. This is higher than the proportion of cases starting treatment within two months in England, which is 38%, and equal to the proportion of cases starting treatment within four months in England³⁹.

There is an established TB service operating across Bristol providing outreach and support to people with active or latent tuberculosis (TB). The team are responsible for identifying and arranging screening for people who've been exposed to TB.

The team also provide information, advice and education about TB to health professionals and the community. The team also lead the clinical management of cases and contact tracing, and works with the South West health protection team at UKHSA in response to more complex TB incidents or outbreak situations.

The nurses within the team work closely with TB specialist doctors at the Bristol Royal Infirmary (BRI) and Southmead Hospital to support people who are being investigated or treated for TB. They visit

³⁷ UKHSA (2023) Number of TB Notifications by UKHSA Region. Available from:

<https://www.gov.uk/government/statistics/tuberculosis-in-england-national-quarterly-reports>

³⁸ NHS (2023) Tuberculosis (TB). Available from: <https://www.nhs.uk/conditions/tuberculosis-tb/>

³⁹ OHID (2023) Fingertips – Public Health Data. Available from: <https://fingertips.phe.org.uk/profile/tb-monitoring/data#page/4/gid/1938132814/pat/6/ati/502/are/E06000023/iid/91450/age/1/sex/4/cat/-1/ctp/-1/yr/1/cid/4/tbm/1/page-options/tre-do-1>

people at home, making sure they get the help they need to complete their courses of treatment and tailoring their support to individual needs. The nurses also arrange TB check-ups for people who have had contact with someone that has an infectious case of TB.⁴⁰

7.3.1 Time to Treatment

In 2020, 35% of pulmonary TB cases in Bristol started treatment within two months of symptoms onset and 57% within four months of symptoms onset. This is lower than the proportion of cases starting treatment in England, at 39% and 68% respectively. No culture-confirmed TB cases were found to be multi-drug resistant (MDR) across the SW in 2020⁴¹.

The number of new cases per year places a notable demand on the health care system. Contact tracing is key to management of TB, and with new testing tools latent TB can be identified (that could otherwise reactivate and cause active disease) and appropriate action taken to support these people.

7.3.2 Enhanced Case Management (ECM)

21 cases of TB within the South West have been recorded as requiring Enhanced Case Management, accounting for 13% of cases. Of these 21 cases, 6 situations required a Level 3 response. Level 3 indicates cases involving patients with very complex clinical or social issues or both affecting treatment and necessitating DOT or video enhanced therapy (VOT) and may include people experiencing homelessness, multidrug resistant (MDR) or rifampicin resistant (RR) TB, those with complex contact tracing or cases in which the involvement of social services is required.⁴²

The number of these more complex situations that arise, place significant strain and resource implications on agencies responding to these cases within Bristol, particularly if a case is linked to a vulnerable setting such as a homeless hostel or street homeless population.

7.4 TB Equalities Data

National data for the calendar year ending 2020 indicates that the majority of people with TB born in the UK were White (59%) followed by South Asian (22%) and Black (14%) among those with known ethnicity⁴³. However, adjusting for differences in population size, incidence rates were highest among people from non-White ethnic groups being up to 11 times higher than in the White ethnic group.

Similarly in the South West, the most frequently reported ethnic groups of TB cases diagnosed in 2020 were White (50%), Indian (16%) and Black African (15%), but the equivalent incidence rate among non-UK born individuals was 20.3 per 100,000 people, which was substantially higher than the incidence rate among the UK-born population (1.3 per 100,000 people)^{Error! Bookmark not defined.}.

Non-UK-born cases were more likely to have received a BCG vaccination for TB prevention than UK-born cases (73% vs 27% respectively), reflecting the fact that the BCG vaccine is not routinely administered in the UK^{Error! Bookmark not defined.}.

7.4.1 Asylum Seekers and Refugees

Over the past 18 months there has been significant migration into Bristol and more widely, the South West. This has caused pressure on the local system and presents a potential cause for concern in the future due to the unknown history of TB exposure in some people.

⁴⁰ [Tuberculosis \(TB\) Nurse – Sirona care & health NHS services \(sirona-cic.org.uk\)](https://www.sirona-cic.org.uk)

⁴¹ UKHSA (2021) Tuberculosis in the South West: annual review 2021. Available from: <https://www.gov.uk/government/publications/tuberculosis-tb-regional-reports>

⁴² [TB treatment in England, 2021 - GOV.UK \(www.gov.uk\)](https://www.gov.uk)

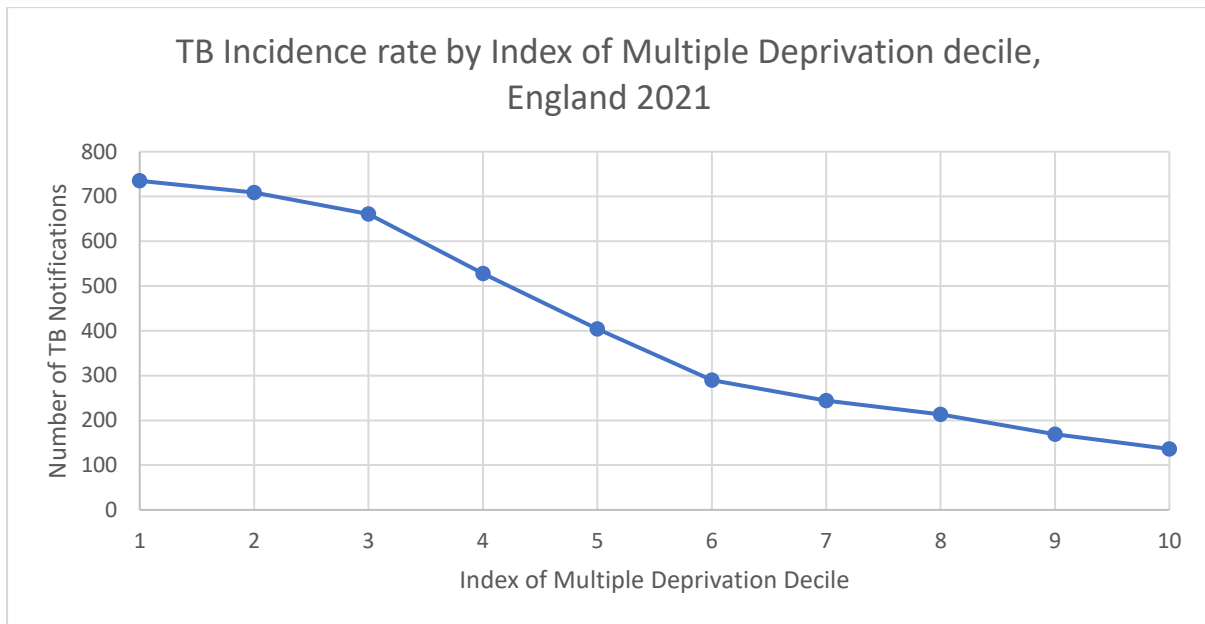
⁴³ UKHSA (2021) Tuberculosis in England: 2021 report (presenting data to end of 2020). Available from: <https://www.gov.uk/government/publications/tuberculosis-in-england-annual-report>

There have also been specific official routes to the UK opened for eligible migrants (for example from Afghanistan or Ukraine). As these populations and routes have specific features there are tailored TB screening recommendations for these groups.

7.4.2 Deprivation

National data indicated a social gradient in TB incidence rate for the calendar year ending 2021. The incidence rate of TB in the 10% of the population living in the most deprived areas (IMD decile 1) was over five times greater than the incidence rate of TB in the 10% of the population living in the least deprived areas (IMD decile 10)^{Error! Bookmark not defined.}.

Figure 21: TB Incidence by Index of Multiple Deprivation Decile^{Error! Bookmark not defined.}



Source: UKHSA (2021) Tuberculosis in England: 2021 report (presenting data to end of 2021).

7.4.3 Social risk factors

Social risk factors that are measured among those diagnosed with TB are, current drug and/or alcohol misuse, current experience or a history of homelessness and imprisonment.

Nationally, the number of people notified with TB has decreased in the last decade but the number of people with TB and a social risk factor has remained relatively constant, suggesting that TB control measures have not been as effective in this population.

In 2021, 17 (11%) TB cases in the South West reported one or more risk factors^{Error! Bookmark not defined.}. On average, TB cases with social risk factors tended to have shorter delays between symptom onset and treatment but were less likely to complete treatment and more likely to have poorer outcomes compared to those with no social risk factors.

7.5 National strategy and reporting

Substantial work is needed to meet the international WHO End TB targets in the UK, which aim to achieve a 95% reduction in the number of TB deaths and 90% reduction in the incidence rate of TB compared to 2015 by 2035⁴⁴.

UKHSA and NHS England jointly published a new Action Plan for TB (2021 to 2026) in 2021, which set out a programme of work to reduce TB incidence and transmission. The TB Action Plan aims to improve the prevention, detection and control of TB in England, focusing on the needs of those most affected by TB whilst recognising the impact and learning of the COVID-19 pandemic⁴⁵.

The South West TB Control Board has overall responsibility to set the strategic priorities in the South West and facilitate the delivery of the TB Action Plan 2021–2026 and have representation from across the system. Additionally, the regional UKHSA team produces annual reports and twice-yearly cohort reviews to provide local health intelligence beyond the notification system used for outbreak response and management.

Delivery of the Action Plan's priorities will build on the progress in collaborative working with multi-agency partners (regional OHID, ICS, service providers) in forums such as the South West TB network to address the 5 key priorities outlined in the TB Action Plan.

7.6 Local Priorities

7.6.1 Local Surveillance

The increased TB incidence, some linked to migration which has grown exponentially in this period, and the complexities in regard to wider risk factors, diagnosis and treatment is creating increased pressure on the local system.

It is a key priority that data from local surveillance, and local caseload is timely and is reported into the Health Protection Committee. In the coming year, agencies will work together to ensure that this more localised data is readily available and can be used to initiate interventions and public health action.

With the limited published data we will need to undertake a local rapid review of TB to gain clarity on local profile to support commissioning and delivery. Noting the complexities of migration and for some who have no recourse to public funds we will develop a local pathway across the system.

7.6.1.1 Impact of Covid 19

The impact of COVID-19 on TB control in England is not yet fully quantified: population-wide lockdowns may have reduced TB transmission but due to the disruption of TB services, the number of undetected and untreated TB cases may have increased⁴⁶.

Going forward, it is a key priority within Bristol to understand the full impact of the Covid 19 pandemic on TB surveillance and control within the city.

⁴⁴ WHO (2015) The End TB Strategy. Available from: <https://www.who.int/teams/global-tuberculosis-programme/the-end-tb-strategy>

⁴⁵ UKHSA (2021) TB Action Plan for England, 2021 to 2026. Available from: <https://www.gov.uk/government/publications/tuberculosis-tb-action-plan-for-england>

⁴⁶ Cilloni L et al (2020) The potential impact of the COVID-19 pandemic on the tuberculosis epidemic a modelling analysis. Available from: <https://doi.org/10.1016/j.eclinm.2020.100603>

7.6.2 Asylum Seekers and Refugees

Work is required locally to address the risks associated with an increasing migrant population within the city- specifically related to those who have entered the UK via specific official routes (for example from Afghanistan or Ukraine- both countries with a higher national incidence of TB).

Pre-entry screening does not test for latent tuberculosis infection (LTBI) or for extra-pulmonary disease. Migrants from high-incidence countries remain at a higher risk for TB many years after arrival in the UK. Primary care practitioners must therefore remain alert to the signs and symptoms of TB among migrants. This is a priority locally in Bristol to address this.

8. COVID-19 Response

The majority of data within this section has been extracted from Bristol City Council's JSNA for COVID-19.⁴⁷

8.1 Overview

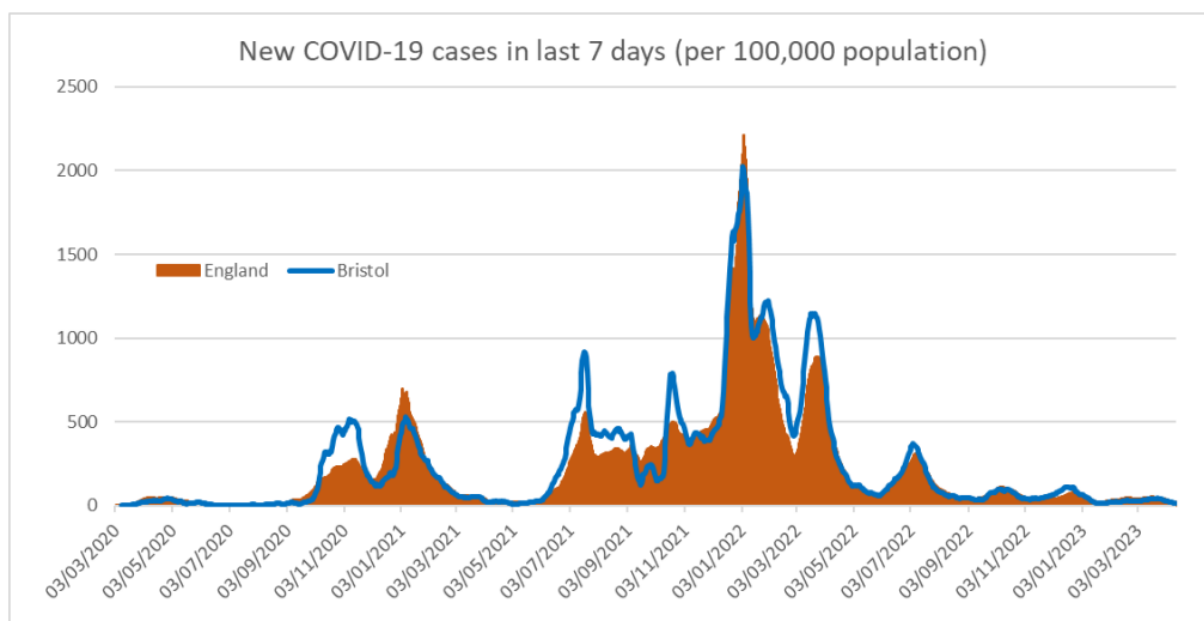
COVID-19 (SARS-CoV-2) is an infectious disease caused by a coronavirus. It was first reported in China in December 2019, the first case reported in the UK happened the following month in January 2020. Bristol reported its first case on 3rd March 2020 and the first reported death within Bristol with COVID-19 was on 27th March 2020. As of April 2023, all legal requirements associated with COVID-19 have been lifted in the UK.

8.2 Cases and Testing

Since January 1st, 2020, there have been 185,502 reported cases of COVID 19 within Bristol (as of 31st March 2023). Figure 22 below illustrates the trend in cases over time. It is important to remember that we can only present reported data, therefore cases may be artificially lower due to testing limitations at certain points of time and/or personal choice regarding testing completion/ reporting.

⁴⁷ Bristol City Council (2023) COVID-19 Joint Strategic Needs Assessment. Available from: <https://www.bristol.gov.uk/files/documents/1577-jsna-2021-22-covid-19/file>

Figure 22: Trends in cases of COVID-19⁴⁸



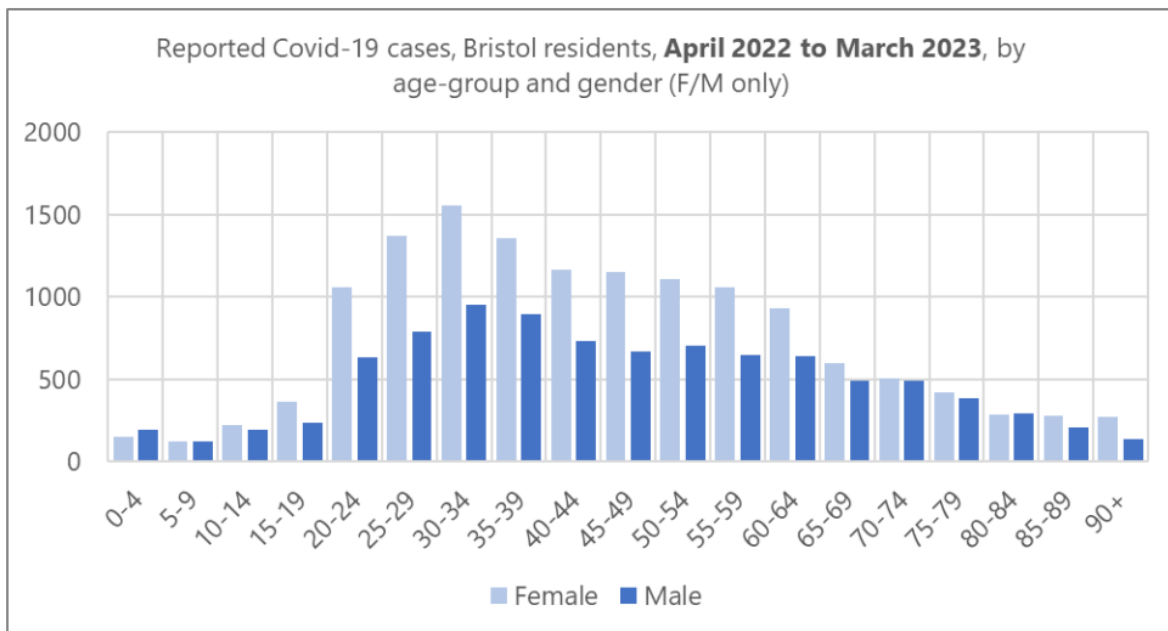
Testing was initially reserved for healthcare staff and patients; therefore, testing (and the number of cases) was artificially low. Free community testing was made available and strongly promoted to the wider population from May 2020 onwards, until April 2022.

During the period of April 2022 – March 2023, that this report covers, free community testing had ceased, and the numbers of tests completed reduced, which limited the level of confidence in COVID-19 rates. Due to the continuing testing across Health and Social Care some data was available locally which showed an expected skew towards working age adults and older people.

There was very little data evidence of COVID-19 infection in children and young people, but testing was not undertaken to assess this. Figure 23 below provides an overview of reported cases, separated by male and female.

⁴⁸ Bristol City Council (2023) Joint Strategic Needs Assessment – COVID-19. Available from: <https://www.bristol.gov.uk/files/documents/1577-jsna-2021-22-covid-19/file>

Figure 23: Total number of COVID-19 cases within Bristol by age group and sex, April 2022 to March 2023⁴⁸.

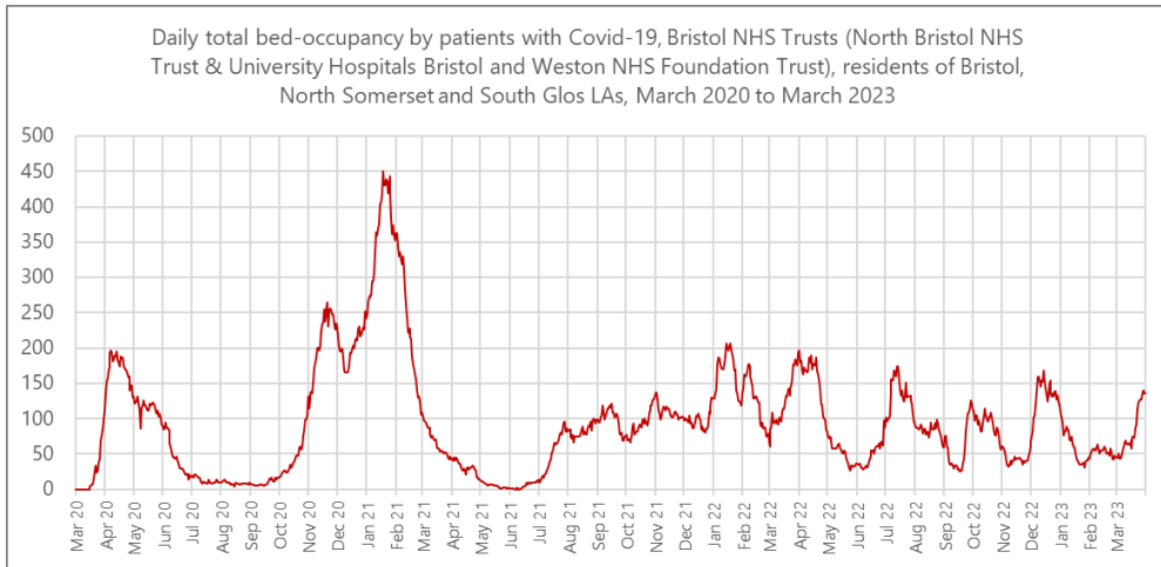


With the reduced level of testing data, the focus on monitoring risk moved to measuring levels of severe illness. Hospital data became increasingly important as an early and reliable metric of the COVID-19 impact.

8.3 Hospitalisations

15,917 people were admitted to hospital with COVID-19 during the period of March 2020 – 31st March 2023. These admissions were to the two main hospitals that serve Bristol (although these hospitals serve a very large area, not just Bristol residents). It is also important to acknowledge that COVID-19 may not have been the primary reason for hospitalisation but was identified through admission testing or due to asymptomatic or symptomatic cases being tested while in hospital. Estimates are that between 20-50% of recorded hospitalised cases of COVID-19 do not have COVID-19 as the primary reason for admission.

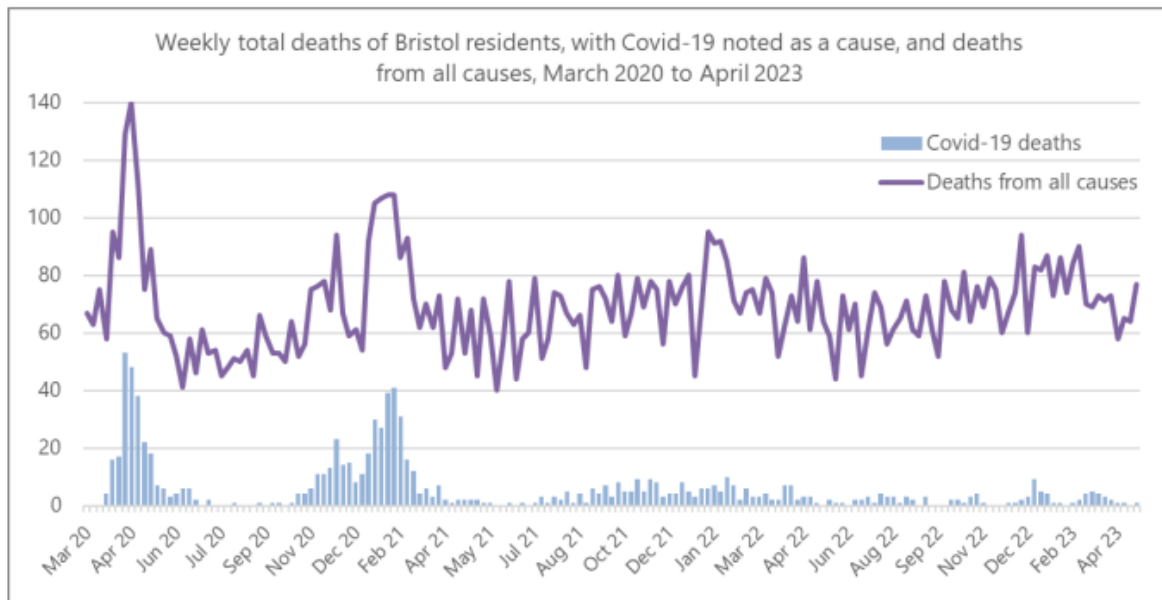
Figure 24: Daily hospital bed occupancy associated with COVID-19 infections across Bristol's two hospital trusts⁴⁸.



8.4 Deaths

The method for measuring death caused by COVID-19 in this document, is COVID-19 being cited as the underlying cause of death on the death certificate. From March 2020 to March 2023, 921 residents of Bristol died from COVID-19. Across the three years since March 2020, the mortality of COVID-19 has decreased year on year. In the year from March 2020 to March 2021 there were 613 deaths from COVID-19, from March 2021 to March 2022 this number was 193 and in the year from March 2022 to March 2023 there were 115 deaths from COVID-19.

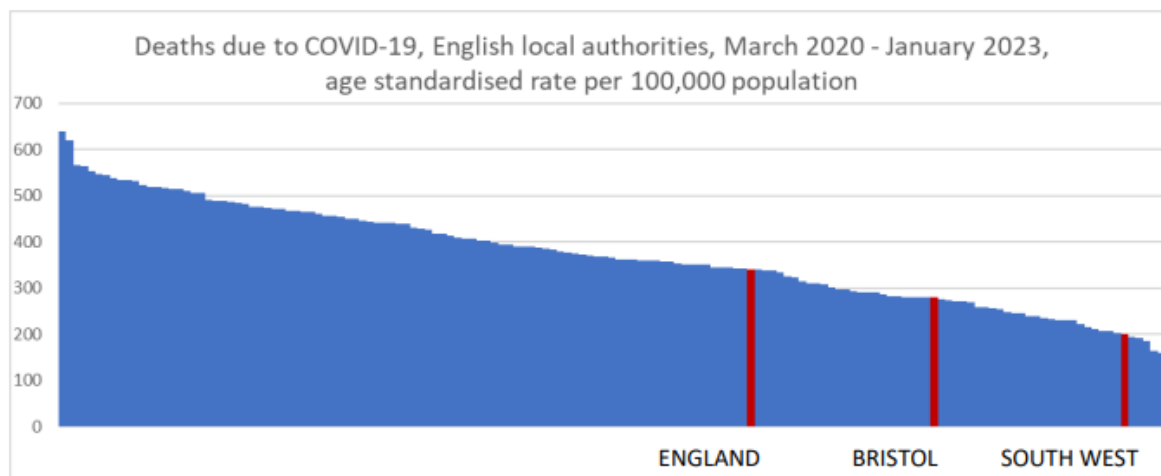
Figure 25: Trend in number of COVID-19 deaths and deaths from all causes registered in Bristol⁴⁸.



The demographic of Bristol, with a statistically younger age population than other cities and local authorities, may influence on the low crude mortality rates observed. Bristol has a relatively young population, who are much less likely to be affected by serious illness associated with COVID-19 infection, when compared to a more elderly population. However, by comparing age standardised

mortality rate, which is more reliable in comparisons, we can see that while Bristol was relatively low for total deaths, compared to the other core cities within England, and the England average it had a higher mortality rate than the average for the Southwest of England region.

Figure 26: Age standardised COVID-19 mortality rates, English Local Authorities⁴⁸.



8.5 Long COVID

There is no local data or intelligence for long COVID⁴⁹ in Bristol.

As of 5th March 2023 there were 1.9 million people living in private households who had self-reported long COVID (2.9% of the population). The greatest prevalence of self-reported long COVID was within people aged 35-69 years, females, people living in deprived areas, those working in social care, those aged 6 years and over who are not working or looking for work.

By applying the same estimates to Bristol using the most recent 2021 Census data which indicated Bristol had a population of 472,500 on census day it can be estimated that approximately 13,700 have self-reported symptoms of long COVID. Fatigue was the most reported symptom (72% of people who self-reported long COVID reported fatigue), this was followed by difficulty concentrating (51%), muscle aches (49%) and shortness of breath (48%).

9. Environmental Health

9.1 Foodborne and Waterborne Illness

Foodborne illness (more commonly referred to as food poisoning) is any illness that results from eating contaminated food/water. Foodborne and waterborne illness can be caused by a variety of different pathogenic organisms at some point in the food chain, between farm and fork. For example, *Campylobacter*, *Salmonella*, *Listeria*, *Escherichia Coli* 0157, *Giardia* and *Cryptosporidium*. Although most cases in the UK are mild, they are unpleasant and result in absences from education or the workplace and place a significant demand on healthcare services. Occasionally foodborne/waterborne illness can lead to complications or even death. Access to safe food and potable water is one of the most fundamental human needs.

⁴⁹ Long COVID is described by the Office for National Statistics as “symptoms continuing for more than four weeks after the first confirmed or suspected coronavirus (COVID-19) infection that were not explained by something else”.

In Bristol, there were 585 confirmed cases of notifiable potentially food/water related infections between 1 April 2022 and 31 March 2023. There were also 148 service requests relating to suspect food poisoning for the same period⁵⁰.

Bristol City Council (BCC) Public Protection Team works closely with relevant health protection agencies and businesses to minimise the spread of infections and to investigate serious cases/outbreaks throughout the year.

9.2 Food Safety Inspection and Intervention

All food businesses based in the UK are subject to food hygiene laws enforced by local authorities. Businesses can be inspected at any point unannounced, for example if BCC receives complaints, or having become due as part of the annual programme of inspections.

Authorised environmental health officers (EHOs) have the right to enter and inspect food premises unannounced, without appointment to ensure that businesses meet the requirements of food safety legislation. Inspections result in a set of scores which, for most business supplying the final consumer, are published under the Food Standards Agency (FSA) 'Food Hygiene Rating Scheme'.⁵¹

The Food Standards Agency (FSA) expects 100% of premises to be inspected based on their scoring; BCC has set a local target of 80%. Bristol's annual programme of inspections was impacted by the COVID-19 pandemic and associated restrictions on premises resulting in an increased backlog of outstanding inspections. Towards the end of the previous reporting period (2021–22), 41% of the required inspections/interventions had been achieved, compared to 79% achieved pre-pandemic in 2019–20. Between April 2022 and March 2023, inspections recommenced at approaching normal capacity, although there were some problems retaining and recruiting authorised officers. 2,131 inspections were completed representing 67% of the total due. This remains below the FSA's expectations.

During 2022–23 BCC followed FSA guidance and priority planning in the form of the Local Authority Recovery Plan to focus on the highest risk establishments first. The Plan set out the timescale for authorities to clear the backlog of inspections by the end of March 2023. There was a backlog of 950 visits by the end of 2022–23, which will add to the programmed visits and anticipated new business registrations giving an estimated total of 3,572 visits due by the end of 2023–24.

The 2022–23 compliance rate across food businesses in Bristol was 98% excluding the establishments awaiting first inspection (86% including the unrated). The minority of establishments that fall into the "non-compliant" category are the focus for follow up and action by BCC. Among the non-compliant establishments identified during 2022–23, BCC conducted 186 re-visits, issued 527 written warnings, with 10 voluntary closures or surrenders.

Looking forward, we have recently been making good progress on reducing the backlog, we have engaged contractor EHOs to help with this. We have provided the FSA with quarterly reports and have regular meetings with them as they closely monitor progress as part of their regular monitoring of LA activity. Food inspector capacity during the reporting period was supported through temporary

⁵⁰ UK Health Security Agency notifications recorded on BCCs Civica database.

⁵¹ These ratings run from 0-5, with a score of '0' indicating that serious action must be taken immediately to avoid penalties or the closure of the premises. A score of 3-5 is considered "broadly compliant" while a score of 0-2 is considered "non-compliant". Establishments are inspected on a regular basis, with inspection intervals varying from every 6 months to every 36 months. <https://www.food.gov.uk/safety-hygiene/food-hygiene-rating-scheme>

funding structures. As new grant funding opportunities become available the BCC Environmental Health team will continue to apply for these; any additional funds will be used to employ additional contractors to reduce the backlog as much as possible. Subject to grant funding, the team aims to contract out a further 1,800 inspections for completion by the end of March 2024. This will have a positive impact on reducing the backlog.

9.3 Port Health

BCC is the statutory Port Health Authority for the ports of Avonmouth, Royal Portbury Docks and Portishead marina which are in North Somerset and owned by Bristol Port Company. Bristol Port Health Authority (BPHA) is part of the BCC Public Protection team and is responsible for infectious disease control at the border, inspection & certification of international shipping arrivals and operating the long-established Border Control Post.

The Border Control Point is based at Avonmouth and is operated in liaison with Border Force, the Animal and Plant Health Agency, DEFRA, and the FSA and subject to their regulatory requirements.

A second Border Control Post funded by central Government and the Bristol Port Company has been built at Royal Portbury Docks where the deep-water dock is located, with detailed input and liaison from BPHA regarding the necessary Border Control Post requirements to examine arriving foodstuffs. This facility is currently in the designation process and hopefully will be operative by the end of 2023. The Port Health Authority continues to work with DEFRA regarding the many and frequent changes to proposed import controls regarding EU imports and ongoing funding for these activities.

During the reporting period (April 2022 to March 2023), BPHA was proactive in ensuring the necessary COVID-19 controls (which changed over time) were in place in relation to all ships including cruise ships arriving from international and European destinations. A 24-hour service was introduced at the beginning of the COVID-19 pandemic to provide effective controls at the Port.

Our Port Health Officers continued to liaise with many different partners about the ongoing UK legal COVID-19 requirements and guidance during the reporting period. These partners included Bristol Port Company & Harbourmasters, Importers, Border Force, Public Health England, Shipping agents, Coastguard, Port Police, and the Seafarer Centre Chaplains at Portbury Dock. This involved working on complex COVID-19 cases arriving from various countries and working with relevant agencies to ensure COVID-19 spread was contained, crew and the public protected, and crew changes and self-isolation requirements adhered to.

Other Port Health work includes inspections and sampling of ships including cargo and cruise liners for non-COVID-19 infection control including Legionella, food poisoning, other communicable diseases, and hygiene arrangements including the issuing of International Ships Sanitation Certification. There was a steady record of manifest checks (183 over the reporting period) and checks on Maritime Declarations of Health (1,557 over the reporting period) during the reporting period. The rate and number of actions completed by Port Health officers during this reporting period was impacted by the working restrictions in place due to the COVID-19 pandemic and the many outbreaks and cases of COVID-19 on vessels that were dealt with as a priority by Port Health Officers.

9.4 Contaminated Land

It is recognised that failing to deal adequately with land contamination could cause harm to human health, property and the wider environment. The origin of land contamination is often because of

industrial activities although some areas may be affected by the natural or background occurrence of potentially hazardous substances such as radon, methane or metallic elements.

Bristol was formerly a city of heavy industry, rapidly developing from the eighteenth century, the construction of the floating harbour in 1809 saw a boom in industry alongside the river and overtime this has moved away from the city centre to Avonmouth and other industrial areas. Industries specialising in chemicals, metals (lead and steel) and glass were commonplace. Mineral extraction including coal mining continued until the early twentieth century. In recent years there has been a growth in the waste processing sector.

Contamination becomes a concern when the levels of substances are deemed to be high enough to cause potential risks to human health and/or the environment. The presence of contamination however does not mean an unacceptable risk. Risk exists when there is a complete contaminant linkage involving a:

- **Source** - contaminant on or under the land, any substance which is or may become harmful to persons or buildings, including substances which are corrosive, explosive, flammable, radioactive or toxic.
- **Pathway** - the route by which the contamination reaches the receptor i.e., inhalation or ingestion.
- **Receptor** - people and living organisms in general, groundwater, rivers or the wider environment, ecological systems or property which may be harmed.

The team have three main mechanisms to deal with contaminated land:

- **Development Management Process (Planning and Building Control)**
 - **National Planning Policy Framework 2023** – developers have a duty to ensure the development is fit for the proposed end use, as outlined National Planning Policy Framework (2023) Paragraphs 120, 174, 183-188.
 - **Building Regulations 2010** – developers have a duty to ensure the building meets the requirements of Approved Document C.
 - We are a consultee for the development management process ensuring that developments are fit for purpose, we work in conjunction with other national bodies such as the Environment Agency with respect to controlled waters and the Coal Authority with respect to coal mining legacy issues.
- **Environmental Damage Regulations 2009**
 - This enables us to act when a current pollution incident occurs from a company.
- **Environmental Protection Act 1990 Part 2A**
 - The council have a statutory duty to assess and inspect land to ensure it is suitable for the current use, these are sites which have the potential to be causing significant harm to human health from historic contamination.

The Pollution Control Team ensures and ratifies the above processes by providing expert evaluation of applications, associated site investigation reports, risk assessments, testing, remediation strategies, unexpected contamination and validation.

The typical number of planning applications where we need to consider contamination (associated site investigation reports, risk assessments, testing, remediation strategies, unexpected contamination and validation etc) runs at approximately 550 per year.

10. Global Population Health

10.1 Zoonosis

Approximately 60% of emerging infectious diseases reported globally are thought to be of zoonotic origin.

Zoonoses are defined as those diseases and infections naturally transmitted between people and vertebrate animals. There are three classes as follows: a) endemic zoonoses which are present in many places and affect many people and animals; b) epidemic zoonoses which are sporadic in temporal and spatial distribution; and c) emerging and re-emerging zoonoses which are newly appearing in a population or have existed previously but are rapidly increasing in incidence or geographical range. Examples of the latter include Rift Valley fever, SARS (severe acute respiratory syndrome), pandemic influenza H1N1 2009, Yellow fever, Avian Influenza (H5N1) and (H7N9), West Nile virus and the Middle East respiratory syndrome coronavirus (MERS-CoV) reported in the recent past.

This increase has been linked to environmental changes, loss of habitat, climate change, loss of biodiversity. It is also recognised that there are now greater levels of contact between humans and animals, and that we live in closer proximity. In addition to the increasing incidence of infectious diseases is the increasing risk of spread.

Infectious diseases have no borders. The COVID-19 pandemic showed how quickly an infection can circle the earth and have devastating impacts. Worldwide people travel for a range of reasons; for holidays, visiting friends and family, to study and work or to flee war, persecution or economic hardship. These journeys create opportunities for infections to spread.

10.2 Vaccine-preventable diseases

Despite many countries making significant development towards immunisation efforts, there are still many outbreaks of vaccine-preventable diseases. Notably measles, which remains to be one of the leading vaccine preventable killer of children, globally⁵². There is growing concern of the risk of measles transmission, London particularly has seen a growth in cases in the early part of 2023. Links to travel to countries with high measles prevalence and low vaccination coverage are then reaching into UK populations with low MMR vaccination protection. Bristol, which has an MMR coverage level more similar to London and other cities, is at greater risk.

The COVID-19 pandemic continues to display a negative impact on the essential immunisation programme in a global context. Delivery and strengthening of this programme remains a priority for the World Health Organisation.

Conflict can lead to greater number of vaccine-preventable deaths due to the disruption of healthcare infrastructure which undermines vaccination programmes. In these turbulent environments focus often shifts away from preventative healthcare, leaving vulnerable populations at heightened risk of vaccine-preventable disease. Furthermore, displacement of populations to refugee camps that have limited medical facilities and limited sanitation may foster the spread of disease.

Inequalities in access to healthcare are observed globally, particularly in relation to immunisations for vaccine-preventable diseases. LMIC (Low-medium income countries) often have poorer vaccine programmes due to a number of economic, systemic and logistical challenges, as a result of reduced

⁵² World Health Organization (2023) A new era in the fight against measles and rubella. Available from: <https://www.who.int/news/item/22-02-2023-a-new-era-in-the-fight-against-measles-and-rubella>

economies and resources. Including the inadequate funding for purchasing vaccines, maintaining cold-chains, and training of healthcare workers. Other barriers include reduced capacity for health education, political instability and difficulty reaching geographically isolated populations.

10.3 Anti-microbial resistance (AMR)

Where bacterial infections occur, antibiotics are often used to treat, however the more we use antibiotics, and use them unwisely, for example for non-bacterial infections, we are increasing the risk of anti-microbial resistance. As described earlier in this report (Section 6.6), this remains a significant public health challenge internationally and work to reduce antibiotic use in human, animal and agriculture remains a priority; [Fleming Fund](#) and the [Global AMR Innovation Fund](#).

Global surveillance systems continue to monitor antimicrobial resistance and antibiotic use at a global level.

10.4 Mpox

Between 2022 and 2023 we saw the international emergence of Mpox. Mpox (previously named Monkeypox) is a rare but high consequence zoonotic disease caused by a virus related to smallpox, most commonly found in west and central Africa. Mpox is not highly infectious, it requires close contact between humans or an infected animal. It is however classed as a high consequence infectious disease with potential for high mortality.

More detail about Mpox can be found in section 5.4.

10.5 Climate Change

Climate change is described as “an alteration in the regional or global climate; especially the change in global climate patterns increasingly apparent from the mid to late 20th century onwards and linked largely with increased emissions of carbon dioxide and other greenhouse gases caused by human activity”⁵³.

Climate change is contributing to a number of different emergencies worldwide, such as wildfires, heatwaves, tropical storms and hurricanes. These weather and climate hazards affect health both directly and indirectly, increasing the risk of deaths, noncommunicable diseases, the emergence and spread of infectious diseases, as well as affecting food availability and quality, contributing to world-hunger foodborne and waterborne diseases⁵⁴.

11. Asylum seekers and Refugees

The city of Bristol has continued to welcome and meet the health needs of both asylum seekers and refugees (ASRs) during the reporting period. ASRs are a broad population with some groups requiring more assistance than others based on the circumstances and context of their arrival.

The council’s Refugee Resettlement Programme Project Board, chaired by Adult Social Care, has oversight of Resettlement streams of work. A multi-agency group of statutory, community and voluntary partners, chaired by Public Health, continues to coordinate and facilitate the care of those

⁵³ Oxford English Dictionary, s.v. “climate change (n.),” December 2023. Available from: <https://doi.org/10.1093/OED/4530570262>

⁵⁴ World Health Organization (2023) Climate Change. Available from: <https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health>

arriving through the Home Office-organised hotel accommodation for ASR. This included an initial accommodation hotel for destitute asylum seekers, and two hotels and 40 apartments for people resettling from Afghanistan (ARAP Afghan Resettlement and Assistance Policy scheme). This group meets regularly to focus on the health and wider needs of the ASR population. The Integrated Care Board also coordinates a health commissioners migrant health group to facilitate planning.

The health needs of the ASR population include a range of physical and mental conditions including post-traumatic stress disorder (PTSD) and trauma. The OHID Migrant Health Guide⁵⁵ continued to provide key guidance on health-related policy for health providers serving migrant populations. Health Protection issues dealt with this year include outbreaks of diarrhoea and vomiting, scabies, chicken pox and identification and treatment of TB cases.

[Haven Health](#), a specialist primary healthcare care service for ASRs provided by Sirona Health and Care provides a 'first stop' clinic for new arrivals across the BNSSG area. The Haven offers comprehensive health assessments for those not yet registered with a GP, medical management of current health problems, and screening and immunisations for communicable diseases. Additionally, the Haven facilitates registration with primary care practices and provides information about how to use the NHS and confidential interpreting during consultations. Sirona Health and Care has also provided health visitors, and a school nurse to support this community, as well as the Latent TB team.

[The HOPE service](#) provided by Avon & Wiltshire Mental Health Partnership helps ASRs and victims of trafficking who have experienced trauma in adulthood and have a primary diagnosis of PTSD.

Work is ongoing across the council to support people fleeing conflict in Ukraine, they have access to all UK healthcare provision.

The number of ASR is expected to continue to increase in the year 2023–24 which will create additional demand and system pressure on local services. The ARAP accommodation will close in 2023, with many families being rehoused locally, and the initial accommodation will be expanded to include at least one other hotel. This means that our priority is to ensure a continuity of health service for residents being moved, ensuring the resilience of local services, and working with UKHSA to ensure infection prevention measures are in place recognising the regular movement of people across the Home Office hotel estate.

12. Non-communicable Environmental Health Risks

12.1 Air quality

Poor air quality is the largest environmental risk to public health in the UK. Studies have shown that exposure to poor air quality can have an impact on health and wellbeing at all stages of life, from being associated with low birth weight, lung function development in children, increased risk of chronic disease, and acute respiratory exacerbations, to premature death⁵⁶.

⁵⁵ Office for Health Improvement and Disparities (2023) Migrant health guide. Available from: <https://www.gov.uk/government/collections/migrant-health-guide>

⁵⁶ PHE (2019) Review of interventions to improve outdoor air quality and public health. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/938623/Review_of_interventions_to_improve_air_quality_March-2019-2018572.pdf

Poor air quality is harmful to everyone, but inequalities in exposure (e.g., how close you live to an area of high pollution) and susceptibility (e.g., infants and children, older people, and those with poor lung health) result in health inequalities⁵⁷.

International and national actions to improve air quality often focus on particulate matter (PM10), fine particulate matter (PM2.5), and nitrogen dioxide (NO₂) which are major components of urban air pollution⁵⁸ and are strongly linked to adverse health effects. There are many other pollutants that are given less prominence, though any efforts to achieve the above targets will likely lead to overall improvements in air quality.

New estimates produced by DEFRA and UKHSA indicate that in 2021, 5.7% of all deaths in Bristol were attributable to long-term exposure to PM2.5 pollution⁵⁹. The proportions of deaths attributable to air pollution vary across the city in relation to pollutant concentrations, from around 7% in some wards to around 10% in others⁶⁰. Concentrations are highest in the centre of the city and therefore so are deaths attributable to air pollution. These mortality rates include both nitrogen dioxide (NO₂) and fine particulate matter (PM2.5) based on 2013 pollution data, so are slightly higher than the figure quoted by DEFRA and UKHSA above.

In Bristol, monitoring data shows continued exceedances of the annual mean NO air quality objective close to roadside locations in the city centre and along the main arterial routes. While concentrations of NO are declining, further urgent action is needed to comply with legal limits. Additionally, domestic solid fuel burning (a major source of PM10 and PM2.5) is of increasing concern with limited awareness among the population.

12.2 Road transport and the Air Quality Management Area

Road transport is a major source of particulate matter and nitrogen oxides (of which nitrogen dioxide is one) accounting for 34% of NO_x and 12% of PM2.5 emissions in the UK⁶¹. At busy roadside locations, the contribution of traffic to NO₂ can be greater than 80%.

An Air Quality Management Area (AQMA) may be established if health standards (known as objectives) are not achieved or at risk of being not achieved, in line with DEFRA recommendations (Figure 27). Approximately 100,000 people live within Bristol's AQMA, which has been in place since 2001.

⁵⁷ DHSC (2017) Annual Report of the Chief Medical Officer, Health Impacts of All Pollution – what do we know? Available from: <https://www.gov.uk/government/publications/chief-medical-officer-annual-report-2017-health-impacts-of-all-pollution-what-do-we-know>

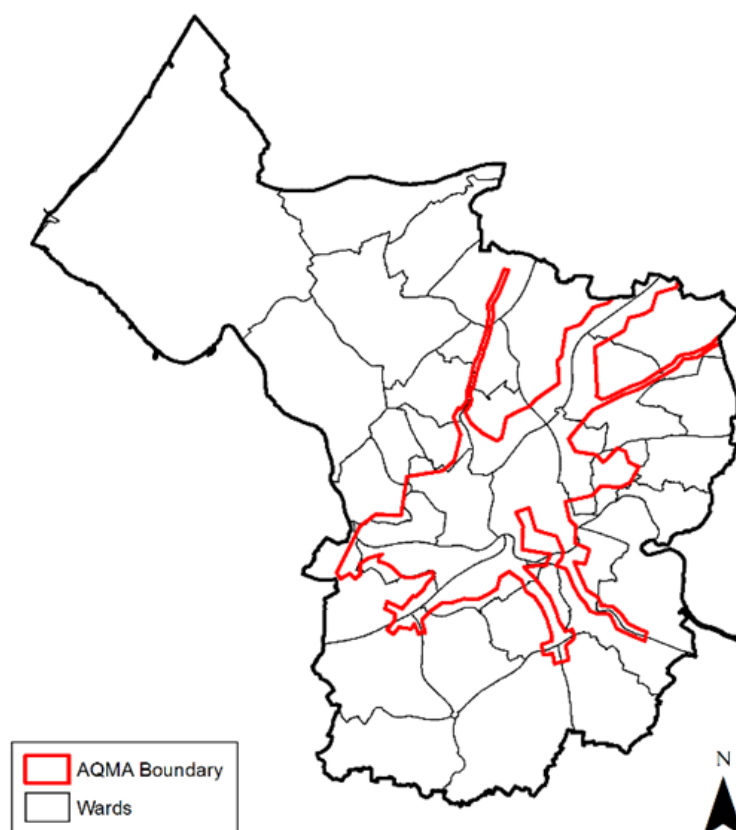
⁵⁸ PHE (2018) Health matters: air pollution. Available from: <https://www.gov.uk/government/publications/health-matters-air-pollution/health-matters-air-pollution>

⁵⁹ OHID (2022) Fingertips: Public Health Profiles. Available from: <https://fingertips.phe.org.uk/search/air%20pollution#page/4/gid/1/pat/6/par/E12000009/ati/402/are/E06000023/iid/93861/age/230/sex/4/cat/-1/ctp/-1/yrr/1/cid/4/tbm/1/page-options/car-do-0>

⁶⁰ Air Quality consultants (2017) Health Impacts of Air Pollution in Bristol. Available from: <https://www.bristol.gov.uk/files/documents/599-health-impacts-of-air-pollution-in-bristol-february-2017/file>

⁶¹ DEFRA (2019). Clean Air Strategy 2019. Available from: <https://www.gov.uk/government/publications/clean-air-strategy-2019>

Figure 27: Map of Bristol's Air Quality Management Area (AQMA) ⁶²



The AQMA is based around busy road junctions and roads where nitrogen dioxide from the exhausts of vehicles is most concentrated due to the volume of vehicles. Real-time data on local air quality can be visualised and downloaded in the [Air Quality Dashboard](#).

Bristol's Clean Air Zone (CAZ) commenced in November 2022. The CAZ charges polluting vehicles to enter a zone in Bristol's city centre and is predicted to deliver compliance with the NO air quality objective in 2023 and will also lead to small reductions in particulate pollution. Additional air quality monitoring will be carried out to understand the effects of the CAZ, and all air quality monitoring data is published real-time on Bristol's [open data portal](#). Exemptions have been applied to ensure impact on low-income households is mitigated. Further information is available on the [Clean Air for Bristol](#) website.

12.3 Domestic fuel burning

Domestic solid fuel burning is a re-emerging area of concern across the UK for particulate matter emissions, especially in wintertime when it may be used to supplement central heating. National data indicates that PM_{2.5} emissions from domestic wood burning have been increasing in the last decade, and there is increasing evidence regarding PM_{2.5} and a range of long-term diseases and deaths⁶³. Recent evidence shows that domestic combustion accounted for 15% and 25% of PM₁₀

⁶² OS data © Crown copyright & database rights 2021 Ordnance survey 100023406

⁶³ Thangavel P et al., (2022) Recent Insights into Particulate Matter (PM_{2.5})-Mediated Toxicity in Humans: An Overview. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9223652/>

and PM2.5 respectively in the UK in 2020, most of which comes from burning wood in closed stoves and open fires⁶⁴.

In Bristol, additional measures are being considered to address PM2.5 emissions from domestic solid fuel burning. For example, the DEFRA air quality grant funded “Slow the Smoke” citizen engagement project which started in 2021 and aimed to raise awareness of solid fuel burning and collect data relating to solid fuel burning in Bristol. This may lead to some improvement in air quality in the study area.

The impacts that exposure to PM10 and PM2.5 have on the human body are severe.

Short term exposure to particulate matter can exacerbate chronic conditions such as asthma, COPD, and bronchitis. In people with cardiovascular disease, short term exposure to PM2.5 can lead to arrhythmias (abnormal heartbeat) and heart attacks. These typically subside once exposure is reduced.

Long term exposure to air pollution and particulate matter can increase a person's risk of developing several conditions such as heart disease, respiratory diseases, lung infections, lung cancer, diabetes and others. There is also the increased risk of premature death from these conditions⁶⁵. Furthermore, there is a possible association between exposure to PM2.5 during pregnancy and adverse birth outcomes, such as preterm birth, low birth weight and being small for gestational age⁶⁶

12.4 Pollution control

The BCC Pollution Control team has continued to undertake environmental permit checks of high-risk activities across the city, working closely with the Environmental Agency. In addition, the team is responsible for petroleum licensing for petrol stations and environmental searches relating to property purchases. The team also investigates and makes representation on planning applications relating to contaminated sites to ensure proper remediation is undertaken before redevelopment.

12.5 Lead

Lead poisoning is very rare but can have significant effects on human health. Common places where lead can be found is in soil, old paint (sometimes found in older housing built pre-1950's), and in older lead water pipes. The UK Health Security Agency lowered the concentration for lead from $\geq 10\mu\text{g/dL}$ ($\geq 0.48\mu\text{mol/L}$) to $\geq 5\mu\text{g/dL}$ ($\geq 0.24\mu\text{mol/L}$) for children under 16 years and for pregnant women, with effect from 5 July 2021 a reduction to 0.24. Public health intervention is required for anyone testing above 0.24. Since this change, we have seen a small increase in reported numbers of Lead cases in Bristol.

Lead poisoning occurs when lead is ingested or inhaled, with inhalation more common through occupational exposure. Lead poisoning cases in children predominantly occur through ingestion and where Pica behaviour is observed. In the reporting period less than 5 new cases were reported in Bristol. Multiagency work is undertaken with each case to thorough environmental sampling, investigation of other potential sources, putting in mitigations to remove or prevent access to

⁶⁴ DEFRA (2022) Emissions of air pollutants in the UK – Particulate matter (PM10 and PM2.5). Available from: <https://www.gov.uk/government/statistics/emissions-of-air-pollutants/emissions-of-air-pollutants-in-the-uk-particulate-matter-pm10-and-pm25>

⁶⁵ Health Effects Institute (2020) State of Global Air. Available from: [soqa-health-effects-factsheet_0.pdf \(stateofglobalair.org\)](https://www.stateofglobalair.org)

⁶⁶ Yuan L et al., (2019) Maternal fine particulate matter (PM2.5) exposure and adverse birth outcomes: an updated systematic review based on cohort studies. Available from: <https://pubmed.ncbi.nlm.nih.gov/30891704/>

identified lead sources and monitoring the individuals blood lead levels until they have returned to a safe level to prevent further harm.

13. Emergency Preparedness Resilience and Response (EPRR)

13.1 National Security Risk Assessment 2022

In November 2022 the next reiteration of the National Security Risk Assessment was published. This was then assessed and localised risks, likelihoods and impacted reviewed.

Bristol City Council identified the risks, hazards, threats most apparent, as either having a lead Local Authority role and responsibility, and/or a localised priority to plan and prepare for.

These were then prioritised by capability, training and exercising gaps against highest scoring risks due to impact and likelihood, giving us the following priority areas;

April 2022 – November 2022

- National/Regional Power Outages
 - IT & Communication Outages
- Recovery Exercise – Terrorism (*deferred due to incidents*)
- Cyber

November 2022 – March 2023

- As above, and also;
 - Major Fire
 - High Temperatures & Heatwaves
- Assess new risks added such as;
 - Incident (grounding/sinking) of a vessel [blocking a major port] – *in a local context*.
- And additional risks under Human, Animal and Plant Diseases such as
 - Major outbreak of plant pest – *Argilus planipennis*

Lists not exhaustive.

13.2 Heatwaves

In May 2022 we held our first Summer Preparedness Severe Weather Group, assessing the likelihood and impacts of high temperatures and heatwaves, reflecting such in the Severe Weather Guide, no longer just Winter Weather, and utilising the new [Keeping Bristol Cool mapping tool](#).

It was agreed to continue having both a Summer and Winter preparedness meeting with the Severe Weather Group hereon.

The first Heatwave was declared in July 2022 with surrounding areas falling into RED Weather Warnings and Level 3 and Level 4 Heat Health alerts came into force.

13.3 Special Measures

In June 2022 it was brought to our attention that four of our HRA High Rise Blocks were to go in Special Measures, which requires a mass evacuation instead of a Stay Put Policy.

Tabletop Exercises were held with council Services, Partners and agencies, to prepare for such a scenario.

Capability gaps identified were around transportation of evacuees and access to care and medications.

The number of HRA blocks in Special Measures increased to 38 across Bristol.

13.4 Industrial Action: Health

Numerous partners and agencies undertook a series of Industrial Action Strikes impacting services.

This included medical staff that also supported South West Ambulance Service Trust (SWAST) who continued to have lengthy ambulance delays and long waiting times on calls.

On the night of 15th December, a Major Incident was declared due to a road traffic collision between a bus and a car impacting a property, and the potential for casualties during such strikes within the National Health Service, and the impacts on SWAST.

13.5 Industrial Action: Avon Fire & Rescue Service

In February 2022 there was potential for a localised strike with Avon Fire and Rescue Service. Briefings, planning and preparedness was done to understand the risks and impacts for Bristol, especially as we had a number of blocks in Special Measures.

Industrial Action did not take place on this occasion.

13.6 Incidents

The Emergency Preparedness Response Team (EPRT) responded to 37 incidents throughout the reporting period. This is demonstrated by table 13.6.1.

Table 3: Incidents responded to by the EPRT

Incident	Number
Fire	13
HAZMAT	3
Highways	1
Utility: Water	4
Heatwave	1
London Bridge	1
Bomb Threat	1
Flooding	2
Road Traffic Collisions	5
Death of a Minor (Alert)	1
Protest	1
Community Safety, Crime and Disorder	3

13.7 Debriefs and Lessons Identified

After each exercise and/or incident we have an internal debrief within 2-3 weeks and a multi-agency debrief within 4-6 weeks.

13.8 Ex Safe Nest

Exercise Safe Nest was a Live Emergency Centre exercise in one of our Community Places of Safety.

This gave opportunity to put various staff volunteers and partner agency's' training into practice with setting up a centre, registering evacuees and providing welfare.

Voluntary Agencies British Red Cross, RE:ACT and Maritime Voluntary Service took part, as well as neighbouring Local Authority Emergency Planning Teams.

We also exercised the Tesco Emergency Feeding provision as well as collaborated with Avon and Somerset Police Casualty Bureau and the Disability Equality Forum, walking through potential opportunities to enhance and develop further processes.

13.9 Twinnell House

A fire broke out in a top floor flat of Twinnell House. The initial 999 call received was not for a fire but a fatality on the ground floor. The flat and building behaved as expected under the containment design and fabrication of the flats, however a further two persons required immediate rescue from the external wall of the flat. The building at the time of the fire had a Stay Put Policy.

Lessons were identified about the initial response and decisions made regarding evacuation in a multi-agency debrief and sharing of information on the blocks stay put/evacuation policies have since been shared and continue to be during a period of housing works and improvements.

The internal learning regarding health, community and housing impacts, the media reporting and level of coordinated response and recovery has led to process changes in our Incident Management Guide, Recovery processes and Humanitarian Assistance.

13.10 Avon and Somerset Local Resilience Forum

Bristol City Council remain active members and contributors to the work of the Avon and Somerset Local Resilience Forum, leading on Death Management for Excess deaths and/or Mass Fatality incidents, as well as Chairing and administering the Avon Area Voluntary Agencies Group (AAVAG).

13.11 Local Health Resilience Partnership

In 2022-23 the LHRP which covered Bristol, North Somerset, South Gloucestershire and Somerset (Avon and Somerset LHRP) was restructured to become 2 LHRP's coterminous with the BNSSG ICB footprint and Somerset ICB footprint. The first BNSSG LHRP meeting was in November 2022 with focus on gaining clarity on membership, ToR. Work is needed to develop a clear strategic plan of priorities recognising the whole system, including adults social care.

14. Appendix A: Organisation Roles and Responsibilities

Health protection is a critical domain of public health which seeks to prevent or reduce the harm caused by communicable diseases and to minimise the health impact from environmental hazards and risks. Health protection functions therefore include a broad range of topics, including:

- Vaccination against vaccine-preventable diseases.
- Screening programmes including for the earlier detection of cancer (bowel, breast and cervical) and other conditions (antenatal and new-born, diabetic eye, and abdominal aortic aneurism screening).
- Infection prevention and control in health and social care community settings including antimicrobial resistance.
- Communicable diseases with significant health impact such as sexually transmitted diseases, tuberculosis, and COVID-19.
- Environmental hazards such as food-borne and water-borne diseases and air pollution; and
- Health emergency preparedness and response including the management of incidents relating to communicable disease and chemical, biological, radiological and nuclear hazards.

The roles and responsibilities across organisations involved in health protection are briefly described below.

Bristol City Council

Bristol City Council (BCC) has a statutory duty under the Health and Social Care Act 2012 to be assured that the local health protection system is robust and able to respond appropriately to protect the local population's health, and that risks have been identified, are mitigated against, and adequately controlled. This duty is discharged through the Director of Public Health, who provides information and advice to relevant organisations and the public with an oversight function.

BCC also has defined statutory powers in respect of environmental health and health and safety, including food standards, pollution (including air quality), pest control, and port health (BCC serves as the Port Health Authority at the ports of Avonmouth, Royal Portbury Docks and Portishead marina).

Finally, BCC is a Category 1 responder alongside NHS bodies and emergency services for emergency preparedness and response as set out in the Civil Contingencies Act (2004). BCC is therefore responsible for assessing the risk of emergencies occurring; having emergency plans and business continuity management arrangements in case of emergency; providing advice and assistance to business and voluntary organisations about business continuity management; and maintaining arrangements to communicate information and advice to the public in the event of an emergency.

UK Health Security Agency (formerly Public Health England)

The UK Health Security Agency (UKHSA) is responsible for the investigation and management of public health outbreaks / incidents.

UKHSA have the responsibility to declare a health protection incident, major or otherwise. UKHSA also provides surveillance and early warning systems and expert advice on infectious diseases and environmental hazards as appropriate.

NHS England

NHS England (NHSE) is responsible for the commissioning and implementation of national screening and immunisation programmes across the South West region.

NHSE is also responsible for the co-ordination and support of the Local Health Resilience Partnership (LHRP), which along with preparedness, coordinates any NHS multi-agency response to an emergency.

Integrated Care Board (formerly Clinical Commissioning Group)

The Bristol, North Somerset and South Gloucestershire Integrated Care Board (BNSSG ICB) is responsible for commissioning health services across the geographies covered by the three named local authorities. The ICB must ensure through contractual arrangements with provider organisations that healthcare resources are made available to respond to health protection incidents or outbreaks (including screening, diagnostic, vaccination, and treatment services)

15. Appendix B: Update on Last Year's Priorities

Section	Last years' priorities	Update
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Immunisations	<ol style="list-style-type: none"> 1. To establish system-level Maximising Immunisation Uptake Groups in 2022–23 to increase childhood immunisation uptake. 2. To maintain focus on COVID-19 and flu vaccine uptake among eligible groups, particularly where there are known inequalities 	<ol style="list-style-type: none"> 1. The Maximising Immunisation Uptake Group was established for BNSSG, this has now been superseded by the BNSSG Immunisations Strategic Oversight Group and is focussing on MMR vaccine uptake. 2. COVID and flu have remained priority programmes for the team in order to reduce burden of disease and winter pressures in the healthcare system.
Screening	<ol style="list-style-type: none"> 1. To return to and overtake pre-pandemic screening uptake levels. 2. To focus on inequalities in screening uptake 	<ol style="list-style-type: none"> 1. Uptake has increased in Bowel and Breast cancer screening; however we continue to see a decline in cervical cancer screening, which is a continued focus for the team. 2. We have had a strong focus on addressing health inequalities in our screening programmes, strengthening the contractual requirements on health inequalities, with providers completing Health Equity Assessment Tools and developing action plans to increase access. We have delivered HEAT tool training and provided a number of resources. We have commissioned training for screening providers co-designed and co-delivered with people. We have commissioned LD screening liaison practitioners across the region to support people with LD to access screening.
Sexual Health	<ol style="list-style-type: none"> 1. BNSSG Joint Sexual Health Needs Assessment will be conducted and led by BCC public health team. 2. To examine syphilis diagnosis rates in light of recent changes in trends and data reporting methodologies 3. To monitor impact of national changes to chlamydia screening implemented in April 2022 (removing offer of opportunistic screening among men) 4. To support several health promotion campaigns/outreach events led by Unity and Terrence Higgins Trust including a focus on HIV testing, and a SW-wide campaign to encourage access to PrEP 	<ol style="list-style-type: none"> 1. A joint BNSSG Sexual Health Needs Assessment was conducted and completed at the end of 2022, led by the BCC PH team. It is due to be published very soon. 2. Syphilis diagnosis rates are regularly monitored and did increase in Bristol following the COVID-19 pandemic but did not reach pre-pandemic levels in 2022. Nationally, cases exceeded pre-pandemic levels in 2022. 3. Chlamydia screening and detection levels are regularly monitored and to improve access to tests and take up of screening, Unity’s Chlamydia Screening Team have developed an action plan and will work closely with primary care settings. 4. The BCC PH team supported the development of the PrEP My Way SW-

		wide campaign, which has been live since June 2023.
HCAI & AMR	<ol style="list-style-type: none"> 1. To restart HCAI case review meetings from April 2022 2. To review findings from a pilot study of Chlorhexidine wipes for people who inject drugs which was initiated to reduce the spread of MRSA. 3. To undertake a cohort review of P. aeruginosa bacteraemia to understand local drivers. 4. To undertake two antibiotic prescribing projects (review of cellulitis and pyelonephritis treatment) 	<ol style="list-style-type: none"> 1. The end-to-end CDI reviews are currently underway with partner organisations. 2. A briefing paper was prepared. Staff are currently in discussion with BDP to assess any improvement in 2023-24. 3. Due to improvement in case counts, this was not completed. 4. There has been no update on this priority.
TB	<ol style="list-style-type: none"> 1. To continue to closely monitor the case rates in Bristol and work towards increased awareness of TB diagnosis and treatment within GP surgeries, drug and alcohol treatment services and inclusion health groups. 2. To set up a new TB control board in December 2022 3. To seek clarity on the causes of delayed diagnosis and treatment 	<ol style="list-style-type: none"> 1. Limited data and regional focus has impacted on our Bristol specific shared understanding of TB incidence, risk factors and impacts both to service user and service delivery. A rapid review is needed to do this and has been agreed to be complete in 23/24 2. Regional TB board was launched and is meeting.
COVID-19	<ol style="list-style-type: none"> 1. Continue to support outbreak management in high-risk settings. 2. Continue to monitor vaccine uptake and the impact of long COVID in Bristol 	<ol style="list-style-type: none"> 1. UKHSA have returned to Business as usual and are the lead for outbreaks in high-risk settings, system partners continue to provide local support as needed. 2. Vaccination coverage is monitored through system weekly meetings during winter and other booster periods. 3. There remains limited information regarding long covid in Bristol.
Environmental Health	<ol style="list-style-type: none"> 1. Focus on recovering the backlog of food inspections in addition to programmed visits and anticipated new business registrations 	<ol style="list-style-type: none"> 1. This priority remains the same as this continues to be a priority, particularly as the 'second inspection post lockdowns' becomes due for more and more establishments.
Global Population Health	<ol style="list-style-type: none"> 1. The upcoming annual DPH report (September 2023) will focus on the borderless aspect of infectious diseases. 	<ol style="list-style-type: none"> 1. This will be reconsidered, as a different topic was prioritised in 2023.
ASR	<ol style="list-style-type: none"> 1. Continue the multi-agency group to support health and wellbeing of the ASR population. 2. System commissioners to undertake funding reviews to ensure that 	<ol style="list-style-type: none"> 1. The health of asylum seekers and ARAP resettlement families in the Bristol hotels is supported with the Refugee Resettlement Board, the multi-agency hotels group, and the ICB health group. In 2022-23 planning was undertaken for

	services are sufficient for the increasing ASR population	<p>the opening of a second asylum hotel in April 2023. In addition to this a further asylum hotel opened in summer 2023. The health and wellbeing of the population continues to be supported by multi-agency groups and partnership work.</p> <p>2. ICB commissioners reviewed the demand on health services caused by the increase in ASR population. The ICB has increased the investment in Haven Health and the AWP Hope Service for 2023-24. The commissioners also increased resources for Health visitors, and four Bristol GP practices that deal with asylum seekers and refugees, the Latent TB service, and DentaId.</p>
Non-communicable environmental Health risks	1. To refresh the Clean Air Plan for Bristol	1. The Clean Air Plan has not been refreshed, instead reliance was made on the Joint Local Transport Plans (JLTP) to fulfil the statutory duty to have an Action Plan. Whilst the JLTPs did look to reduce emission from traffic, it didn't have a focus on air pollution or consider any other sources of air pollution
EPRR	<ol style="list-style-type: none"> 1. Continue to strengthen the coordination of response by re-establishing LHRP in light of system level changes. 2. Maintain and increase our staff training and awareness of emergency response and capability to act. 3. Update the Corporate Recovery Plan and review and update the corporate business continuity framework with supporting impact assessment and plan templates 	No update recorded as a result of the priorities remaining similar for the next reporting period.

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