

# Bristol Health Protection Annual Report 2022

April 2021 to March 2022



**Report date:** 13<sup>th</sup> December 2022

**Report author:** Monica Koo, Public Health Registrar Bristol City Council

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**Monica Koo, Public Health Registrar**  
**13<sup>th</sup> December 2022**

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## Acronyms

AAA	Abdominal Aortic Aneurysm
ASR	Asylum Seeker and Refugees
AMR	Antimicrobial Resistance
AQMA	Air Quality Management Area
ASLRF	Avon and Somerset Local Resilience Forum
BCC	Bristol City Council
BCG	Bacillus Calmette-Guerin
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.diff) infection
COVID-19	Coronavirus
COMAH	Control of Major Accident Hazards
CPU	Civil Protection Unit
DEFRA	Department for Environment Food & Rural Affairs
DfE	Department for Education
DPH	Director of Public Health
DTaP	Diphtheria, Tetanus and Polio
EHO	Environmental Health Officer
EPPR	Emergency preparedness, resilience and response
FHRS	Food Hygiene Rating Scheme
FSA	Food Standards Agency
HCAI	Healthcare associated infections
HIV	Human Immunodeficiency Virus
HPV	Human Papilloma Virus
ICB	Integrated Care Board
IPC	Infection, Prevention and Control
IPV	Inactivated Polio Vaccine
JSNA	Joint Strategic Needs Assessment
LHRP	Local Health Resilience Partnership
MenACWY	Meningitis ACWY vaccine
MMR	Measles Mumps and Rubella
MRSA	Methicillin Resistant Staphylococcus Aureus
MSSA	Methicillin-Sensitive Staphylococcus aureus
NBT	North Bristol Trust
NCSP	National Chlamydia Screening Programme
NHSE	NHS England
NHSE&I	NHS England and Improvement
NICE	National Institute for Health and Care Excellence
OHID	Office for Health Improvement and Disparities

ONS	Office for National Statistics
PHE	Public Health England
PPV	Pneumococcal vaccine
PrEP	Pre-exposure prophylaxis
PWID	People Who Inject Drugs
RSHE	Relationships and Sexual Health Education
SCID	Severe Combined Immunodeficiency
STI	Sexually Transmitted Infections
SW	South West region
TB	Tuberculosis
TD	Tetanus and Diphtheria
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 annual health protection report covers the period 1<sup>st</sup> April 2021 to 31<sup>st</sup> March 2022 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 reporting period of this report spanned many pivotal stages of the COVID-19 pandemic including the introduction of the booster vaccination programme (Sep 2021), the emergence of the highly contagious Omicron variant (Dec 2021 – Jan 2022) and the national transition to “Living safely with COVID-19” (announced in Feb 2022). The impact of the pandemic therefore continues to be felt throughout our reporting, with ongoing consequences on the availability and interpretation of data for some sections.

This year’s report also comes at a time of regional and national change and transition within public health. Public Health England was abolished in October 2021, with functions being migrated into the UK Health Security Agency (UKHSA), Office for Health Improvement and Disparities (OHID), NHS England & Improvement (NHSE&I), and NHS Digital. Furthermore, the Clinical Commissioning Group were in a period of preparation towards the planned formation of Integrated Care Board during the reporting period (see Appendix A for an outline of the different responsibilities for partner organisations). With the ongoing pandemic response, likely emergence of other infections suppressed due to pandemic restrictions in 2020 and 2021, and changing landscapes, working collaboratively across teams, organisations, and sectors has been (and continues to be) more important than ever in protecting the health of everyone in Bristol.

Finally, health protection covers an extensive range of exposures, risks, and disease – 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 inequalities in health is critical to improving and protecting the health of the whole population.

Our next assurance report will be produced in September 2023 covering the period from 1<sup>st</sup> April 2022 to 31<sup>st</sup> March 2023.

**Christina Gray**  
**Director of Public Health**  
**13<sup>th</sup> December 2022**



## 2. Executive Summary

Bristol is a welcoming, vibrant, and culturally diverse city. It has significant pockets of deprivation and inequalities which are drivers in health protection issues faced by the population. Bristol often presents as an outlier compared to other South West local authority areas due to differing demographics; comparison to England averages and statistically similar local authorities are presented where data is available.

The reporting period has continued to be challenging due to the ongoing response to and management of COVID-19. This has also impacted the availability of some data to fulfil this report, with some key datasets for the year 2021–22 not having been produced or published in the public domain. Please see below for a summary of current issues for the reporting period and future priorities for each domain of health protection.

### Immunisations

Vaccine uptake among older adults (shingles, pneumococcal, and flu) is comparable to SW.

The population-wide COVID-19 vaccination programme was successfully delivered at scale and at considerable speed through the collective efforts of key partners including our neighbourhood and community champions, to reach into areas where uptake was lower.

However routine vaccine programmes continued to be disrupted by the COVID-19 pandemic during 2021–22. Additionally, childhood vaccine uptake levels in Bristol are lower compared to SW and England and remain below the 95% target for population protection and therefore remains a significant risk.

#### **Priorities for the next reporting period**

- To establish system-level Maximising Immunisation Uptake Groups in 2022–23 to increase childhood immunisation uptake
- To maintain focus on COVID-19 and flu vaccine uptake among eligible groups, particularly where there are known inequalities

### Screening

The majority of screening programmes have recovered from backlogs following initial disruptions due to the COVID-19 pandemic. However cancer screening uptake is poor compared to the SW, particularly cervical cancer screening where almost a third (32%) of 25–49 year olds and over a quarter (27%) of 50–64 year olds are not accessing screening.

#### **Priorities for the next reporting period**

- To return to and overtake pre-pandemic screening uptake levels

- To focus on inequalities in screening uptake

## Sexual Health

Bristol continues to see a higher incidence of STIs compared to SW and England. While there has been a decrease in STI diagnoses in the reporting period, this is attributable to less testing, in line with patterns seen nationally. HIV incidence in Bristol continues to decrease but remains higher than the SW average and is similar to England.

### Priorities for the next reporting period

- BNSSG Joint Sexual Health Needs Assessment will be conducted and led by BCC PH team
- To examine syphilis diagnosis rates in light of recent changes in trends and data reporting methodologies
- To monitor impact of national changes to chlamydia screening implemented in April 2022 (removing offer of opportunistic screening among men)
- 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

## HCAI and AMR

Health care acquired infection (HCAI) case review procedures continued to be disrupted due to the COVID-19 pandemic and response (e.g. staff redeployment). An unexpected and unexplained spike of *Clostridium Difficile* infections occurred across Bristol and BNSSG in June 2021, which led to the convening of a South West *Clostridium Difficile* collaborative group.

Flu vaccine uptake among healthcare staff was lower compared to the last reporting period. This may be partly due to the diversion of resources to the COVID-19 vaccination programme and COVID-19 infection-related workplace absences.

### Priorities for the next reporting period

- To restart HCAI case review meetings from April 2022
- To review findings from a pilot study of Clorexidine wipes for people who inject drugs which was initiated to reduce the spread of MRSA
- To undertake a cohort review of *P. aeruginosa* bacteraemia to understand local drivers
- To undertake two antibiotic prescribing projects (review of cellulitis and pyelonephritis treatment)

## Tuberculosis

TB incidence is higher in Bristol compared to SW and England, although it is showing a downward trend.

Bristol is the only city to have latent TB testing service in the SW region and treatment pathways are well established. However, a greater proportion of Bristol cases experience delayed diagnosis and start treatment late compared to the English average. Delayed diagnosis and treatment of TB often means poorer clinical outcomes for individuals, as well as greater risk of onward transmission to others. Certain populations (ethnic minorities, people from poorer areas, or those with social risk factors) are at greater risk of TB and delayed treatment.

### Priorities for the next reporting period

- 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
- To set up a new TB control board in December 2022
- To seek clarity on the causes of delayed diagnosis and treatment

## COVID-19

The COVID-19 response remained an important priority for BCC-led health protection during the reporting period. Case rates in Bristol reached the highest rate to date in January 2022 but there were less than half the number of deaths compared to the previous reporting period. The COVID-19 mortality rate in Bristol was higher than the SW but lower than the rest of England.

### Priorities for the next reporting period

- Continue to support outbreak management in high-risk settings
- Continue to monitor vaccine uptake and the impact of long COVID in Bristol

## Environmental Health

The food safety inspections schedule was severely disrupted due to the COVID-19 pandemic and associated restrictions on business operations. Adherence to COVID-19 control measures in ships and vessels was monitored, and ship inspections and sampling for non-COVID-19 infection control were also carried out.

### 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

The movement of people through international travel and migration can contribute to the transmission of infectious disease. Antimicrobial resistance and antibiotic use is a global concern, as are vaccine preventable diseases which persist in certain areas and populations.

### Priorities for the next reporting period

- The upcoming annual DPH report (September 2023) will focus on the borderless aspect of infectious diseases.

## Asylum Seeker and Refugee health

Several arrivals of large ASR groups were coordinated during the reporting period (ASR in August 2021, Afghanistan in September 2021 and Ukraine in early 2022).

### Priorities for the next reporting period

- Continue the multi-agency group to support health and wellbeing of the ASR population
- System commissioners to undertake funding reviews to ensure that services are sufficient for the increasing ASR population

## Non-communicable environmental health risks

Annual nitrogen dioxide levels in Bristol are decreasing but continue to exceed legal limits. The development and launch of the Clean Air Zone will support further reductions.

The previously reported fly pollution problem in Avonmouth has been resolved. The Pollution Control team has continued to undertake environmental permit checks and the investigation of lead-poisoning reports.

### Priorities for the next reporting period

- To refresh the Clean Air Plan for Bristol

## Emergency preparedness, Resilience and Response

The CPU supported COVID-19 testing across the city during the reporting period. The surge testing programme was debriefed as publicly accessible free testing came to an end in April 2022.

In addition, there were 44 incidents during the reporting period including domestic fires, water leaks, suspected bombs, public disorder, and Storm Eunice (February 2022). A multi-agency COMAH exercise was conducted in November 2021 which successfully identified recommendations to be adopted.

There were 136 demonstrations during the reporting period, which represents more than double reported in 2020–21, likely influenced by the standing down of COVID-19 restrictions.

**Priorities for the next reporting period**

- Continue to strengthen the coordination of response by re-establishing LHRP in light of system level changes
- Maintain and increase our staff training and awareness of emergency response and capability to act
- Update the Corporate Recovery Plan and review and update the corporate business continuity framework with supporting impact assessment and plan templates

## 3. Immunisations

### 3.1 Overview

Immunisations are one of the most significant public health developments in the prevention of infectious disease <sup>1</sup>. The routine vaccine schedule in the UK is available here along with vaccine acronyms used in this section:

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

The population-wide COVID-19 vaccination programme was successfully delivered at scale and at considerable speed through the collective efforts of key partners including our neighbourhood and community champions, to reach areas where uptake was lower.

Pre-existing immunisation programmes continued to be impacted by the COVID-19 pandemic during the reporting period (April 2021 to March 2022) both in terms of programme delivery, and the quality and timeliness of data. Therefore, the data contained in the report is not necessarily comparable to previous years and should be viewed in the context of the pandemic.

### 3.2 Childhood immunisations

Nationally, childhood vaccine coverage in 2021–22 decreased compared to 2020–21, and none of the scheduled vaccine met the 95% target. Similar trends were noted in Bristol, with particular concern for uptake of the MMR and DTaP-IPV 2<sup>nd</sup> vaccines among 5 year olds, which was less than 90% (84% and 83% respectively) (**Figure 3.2.1**). This represents a decrease in coverage of both vaccines compared to the last reporting period (2020–21), with greater relative declines noted in Bristol compared to regional and national estimates (**Figure 3.2.2**). It is important to note that Bristol's childhood vaccination uptake had been decreasing before the pandemic so low uptake cannot be wholly attributed to the effects of the COVID-19 pandemic.

The UK-wide Measles and Rubella Elimination Strategy <sup>2</sup> 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. Having been paused due to the pandemic, this regional strategy is currently being updated.

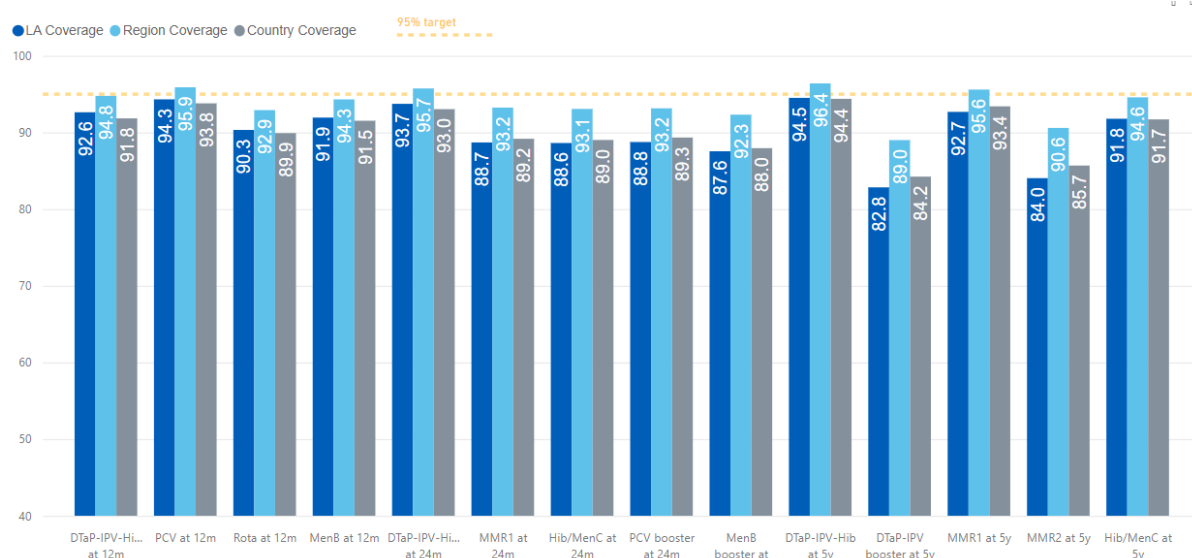
Work is planned for 2022–23 to set up System-level *Maximising Immunisation Uptake Groups*, led by the NHS England (NHSE) Screening and Immunisation Team, with a key focus on increasing the uptake of childhood immunisations, particularly MMR and pre-school booster vaccines. This group will develop an evidence-based action plan that identifies targeted interventions to improve uptake.

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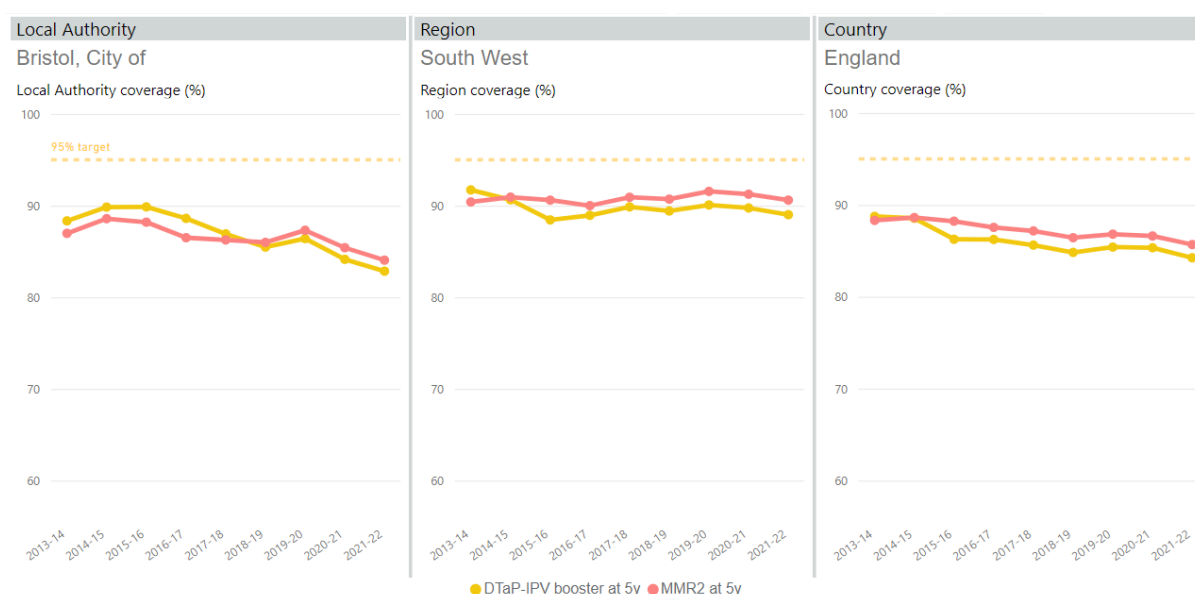
<sup>1</sup> ONS (2015) How has life expectancy changed over time? Available from: <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/lifeexpectancies/articles/howhaslifeexpectancychangedovertime/2015-09-09>

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

**Figure 3.2.1: Childhood Vaccination Coverage in Bristol, South West, and England, 2021–22 <sup>3</sup>**



**Figure 3.2.2: MMR 2<sup>nd</sup> dose at 5 years and DTaP-IPV booster dose at 5 years in Bristol, South West, and England, 2013–14 to 2021–22 <sup>3</sup>**



In addition to the routine childhood vaccination programme, targeted immunisations (hepatitis B virus, tuberculosis, and influenza) continue to be delivered to eligible babies. Additionally, there have been some changes made to the timing and/or delivery of infant BCG and rotavirus vaccines to eligible babies in the South West, as Severe Combined Immunodeficiency (SCID) testing is being piloted in selected

<sup>3</sup> NHS Digital (2022) Childhood Vaccination Coverage Statistics- England, 2021–22. Available from: <https://digital.nhs.uk/data-and-information/publications/statistical/nhs-immunisation-statistics/2021-22>

areas of England (babies identified as having SCID should not be given the BCG or rotavirus vaccines) <sup>4</sup>.

### 3.3 School age immunisations

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

Published annual data is not yet available for the 2021–22 cohort <sup>5</sup> and while provisional monthly uptake data shows good progress is being made across BNSSG, Bristol uptake is not as high as South Gloucestershire and North Somerset. Low uptake figures are apparent for the 2021–22 cohort HPV2 dose, but this is mainly due to the need for a 6 month gap between the two doses and outstanding doses will be administered in early 2023. Additional funding has been agreed for BNSSG to enable a recovery programme for the 2021–22 incomplete delivery of HPV, MenACWY and TD/IPV. This will include both of the above cohorts, with the aim to complete by the end of March 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 <sup>6</sup>.

Shingles vaccination uptake has been affected by the pandemic, as this vaccination was offered opportunistically up until April 2021. Since then, and therefore during the reporting period, 70–79 year olds have been actively invited for a vaccine <sup>7</sup>. A Shingles vaccination awareness campaign was run in the South West in August 2021. In February 2022 the NHSE Screening and Immunisation Team reviewed vaccine coverage across each area, and wrote to GP practices with low coverage, asking them to invite anyone aged 79 who had become eligible during the pandemic and would shortly become ineligible when they turned 80.

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<sup>4</sup> UKHSA (2021) Rotavirus vaccine and SCID newborn screening evaluation: information for GPs and practice nurses. Available from: <https://www.gov.uk/government/publications/rotavirus-vaccine-and-scid-newborn-screening-evaluation/rotavirus-vaccine-and-scid-newborn-screening-evaluation-information-for-gps-and-practice-nurses>

<sup>5</sup> The published data for the 2020–21 cohort, which in a normal year would have been completed by August 2021 is not representative of the final uptake figures as delivery has continued to be offered to this cohort throughout 2021–22 and is ongoing; the data has therefore not been included in the report.

<sup>6</sup> 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>

<sup>7</sup> 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/>



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% <sup>8</sup>.

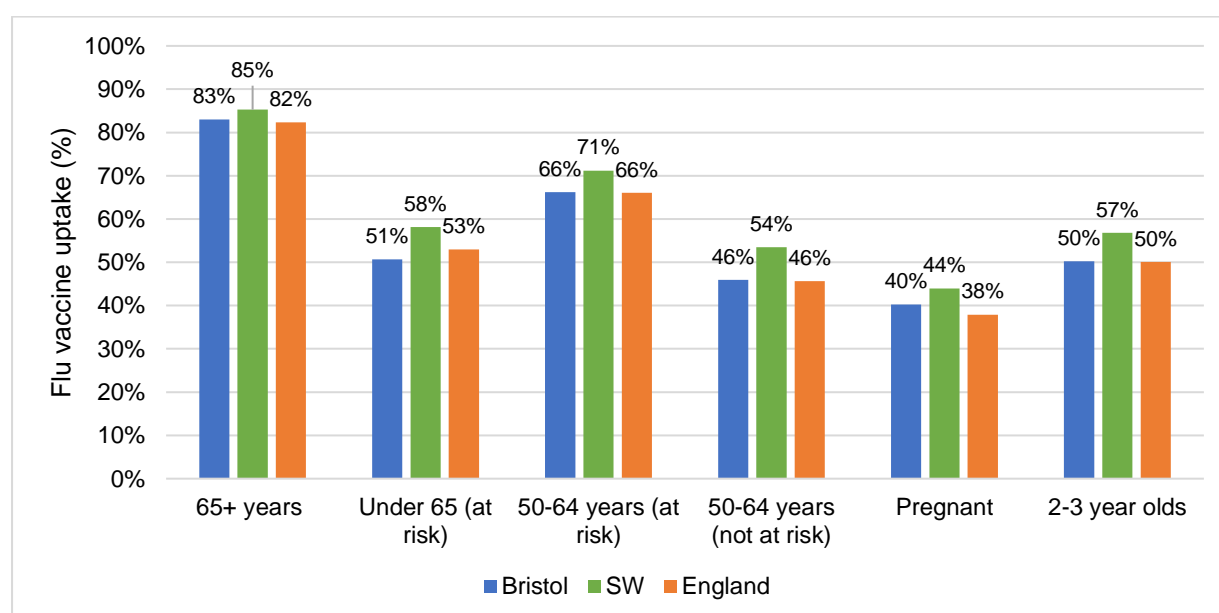
### 3.5 Pneumococcal vaccine

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. Vaccine shortages of PPV have been an issue nationally and have had a significant effect on coverage. However, the uptake for 65+ year olds in BNSSG during 2021–22 was slightly over the SW average <sup>9</sup>.

### 3.6 Flu vaccine

Flu immunisation uptake in BNSSG was broadly in line with England in 2021–22 though lower than the SW. Across the eligible groups, uptake was highest among 65+ year olds and 50–64 year olds at risk, while vaccine uptake among pregnant women and 2–3 year olds was lower (**Figure 3.6.1**).

**Figure 3.6.1: Flu Vaccination uptake for eligible groups in Bristol, SW, and England BNSSG, 2021–22** <sup>10</sup>



<sup>8</sup> 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>

<sup>9</sup> Data for 2021–22 not publicly available, although vaccine coverage estimates for 2020–21 are. Available from: <https://www.gov.uk/government/publications/pneumococcal-polysaccharide-vaccine-ppv-vaccine-coverage-estimates>

<sup>10</sup> UKHSA (2022) Seasonal flu vaccine uptake in GP patients: final end of season data for 1 September 2021 to February 2022 by local authority. Available from: <https://www.gov.uk/government/statistics/seasonal-influenza-vaccine-uptake-in-gp-patients-winter-season-2021-to-2022>

## 4. Screening

### 4.1 Screening programmes

There are currently three national cancer screening programmes: breast, bowel and cervical; the 2021–22 statistics are not available at time of preparing this report so the latest available data from 2020–21 is presented.

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 young person and 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) <sup>11</sup>.

### 4.2 Cervical screening

Cervical screening data is broken down into two specific age groups, 25–49 years and 50–64 years. The NHS cervical screening programme in Bristol continued throughout the pandemic, with a delay in invitations during March and August 2020 (part of the last reporting period).

Based on 2020–21 data, there has been no significant change in local or national coverage among 25–49 year olds with 68% of women accepting a cervical screen. This means there were over 30,000 eligible women aged 25–49 years in Bristol who did not receive their cervical screen. For the last four years, screening rates in this group have been similar to the England rate but remain lower than the South West uptake and the 80% acceptable target (**Figure 4.2.1**).

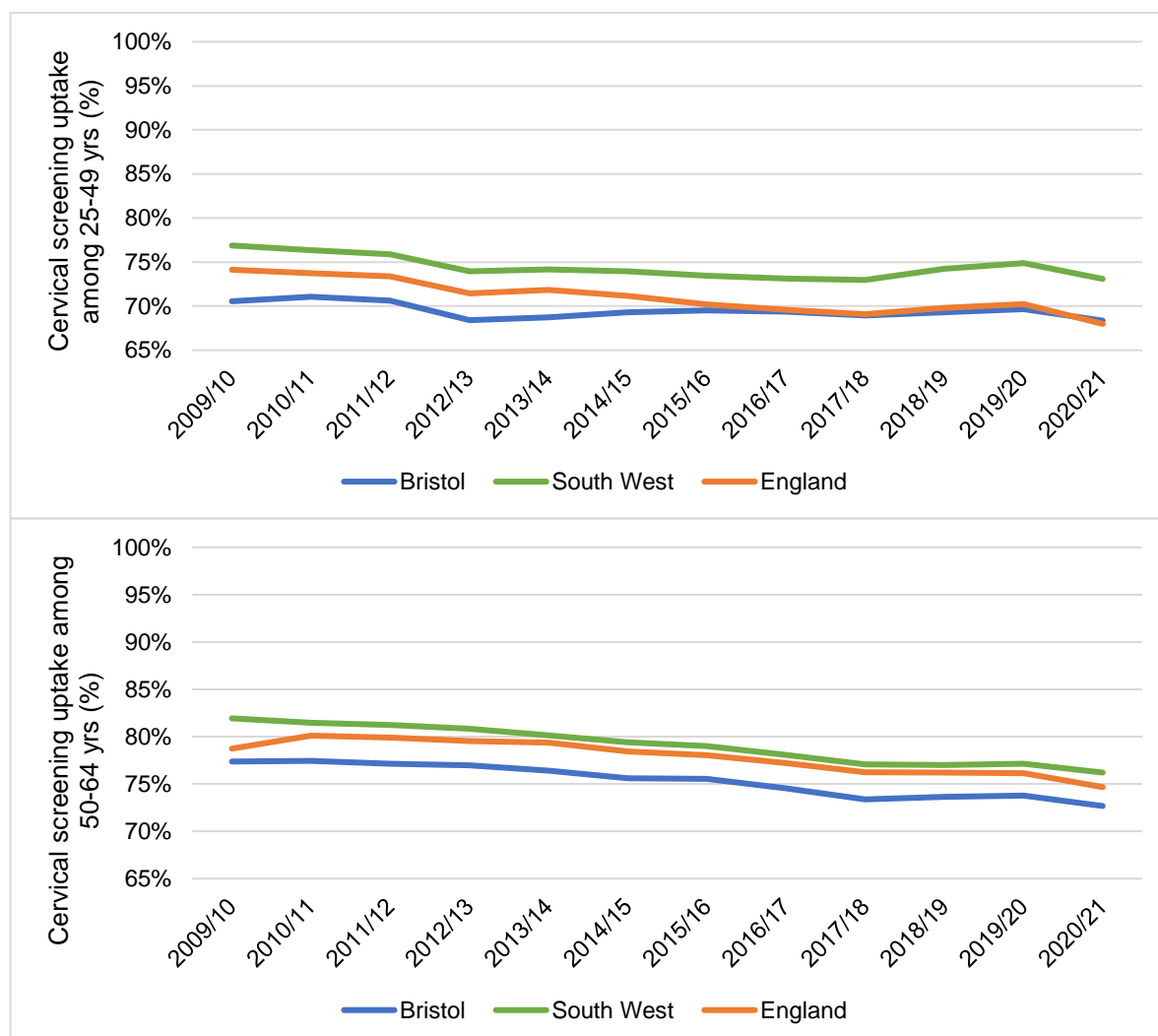
Among 50–64 year olds, overall uptake is higher at 73%, again a stable position over the last 3 years, but a downward trend over the last 10 years. This means over 9000 eligible women in Bristol were not screened in 2020–21. This is lower than the coverage in the South West and England (**Figure 4.2.1**).

Increasing cervical screening coverage is a key focus for the NHSE Screening and Immunisation Team this year, and a programme of work is planned to include targeted work with GP practices, and local communications.

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<sup>11</sup> PHE (2019) NHS population screening standards. Available from: <https://www.gov.uk/government/collections/nhs-population-screening-programme-standards>

**Figure 4.2.1: Cervical cancer screening coverage in Bristol, South West, and England among 25–49 year olds (top figure) and 50–64 year olds (bottom figure), 2009–10 to 2020–21 <sup>12</sup>**



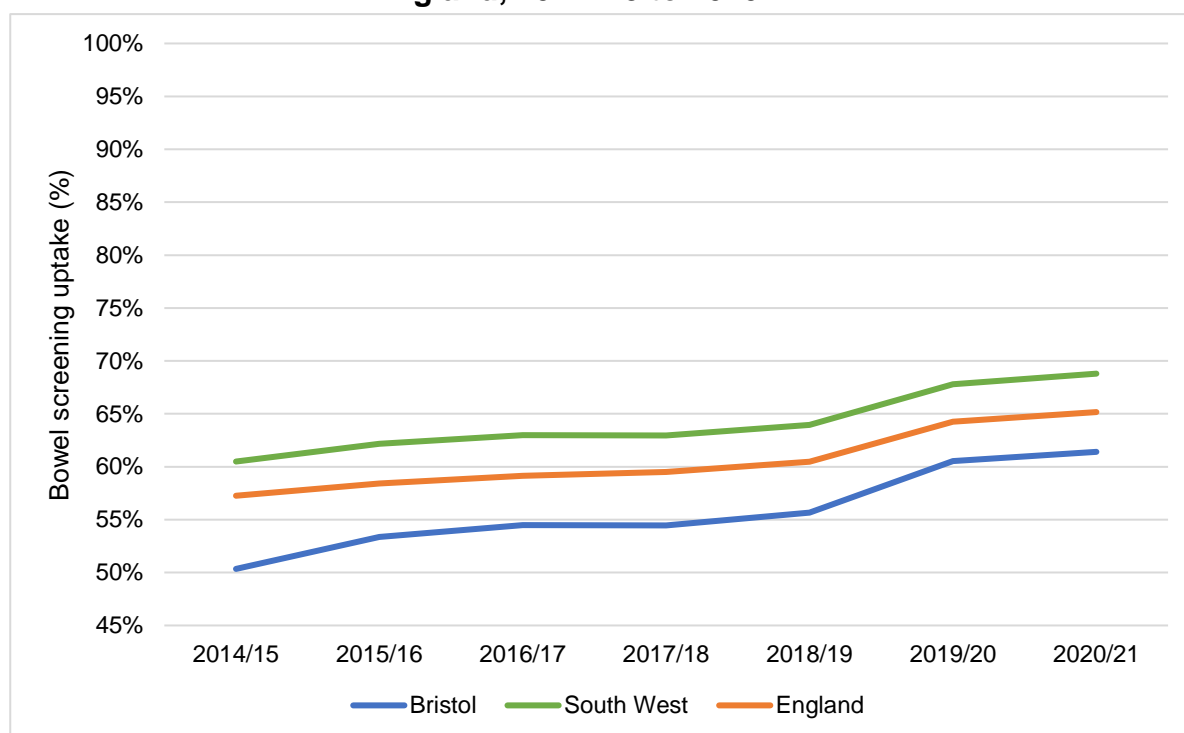
### 4.3 Bowel cancer screening

The Bristol bowel screening centre recovered the screening backlog created by the pause in service between April and June 2020 by July 2021. The Programme was extended to those aged 56 years in August 2021 and expanded this further to 58 year olds in August 2022, one of the first within the SW region to do so. A further extension to 54 year olds is planned to go live in April 2023.

Bowel screening uptake in Bristol, the South West, and England has increased; in Bristol specifically, there has been an increase from 51% in 2014–15 to 61% in 2020–21 which meets the achievable standard (**Figure 4.3.1**). Nevertheless bowel screening uptake in Bristol remains lower than regional and national uptake.

<sup>12</sup> OHID (2022) Fingertips: Public Health Outcomes Framework (cervical cancer screening). Available from: <https://fingertips.phe.org.uk/>

**Figure 4.3.1: Bowel cancer screening coverage in Bristol, South West, and England, 2014–15 to 2020–21 <sup>13</sup>**

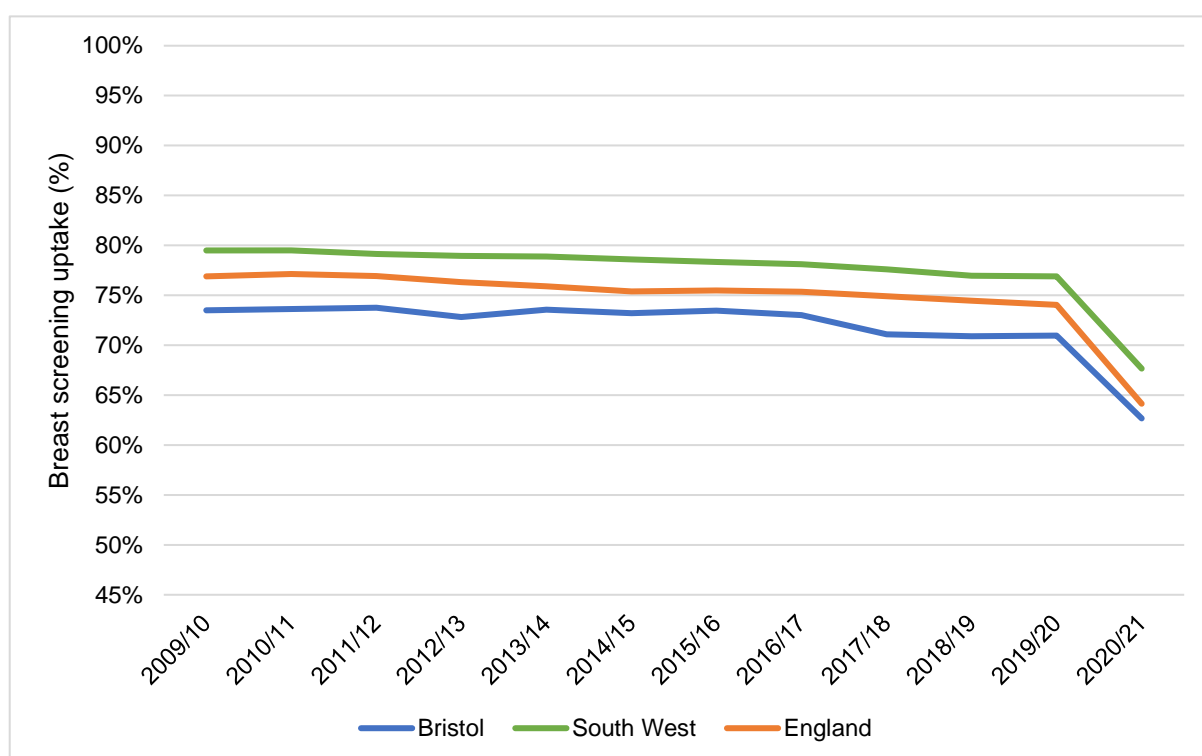


#### 4.4 Breast cancer screening

Bristol's breast cancer screening uptake among eligible women aged 53–70 years remained stable over the 3 years prior to 2019–20, but was severely impacted by the pandemic in line with regional and national trends. Significant investment has been made to ensure that the Avon breast screening programme has been able to recover the backlog, whilst delivering service improvements. As such, the focus has been on ensuring recovery to return to and overtake pre-pandemic uptake levels. The latest available data indicates coverage in 2020–21 was 64%, lower than South West and national estimates (**Figure 4.4.1**).

<sup>13</sup> OHID (2022) Fingertips: Public Health Outcomes Framework (bowel cancer screening). Available from: <https://fingertips.phe.org.uk/>

**Figure 4.4.1: Breast cancer screening coverage in Bristol, South West, and England, 2009–10 to 2020–21 <sup>14</sup>**



#### 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). The COVID pandemic continued to impact on some aspects of the screening programme in 2021–22 though the programmes have continued without pause. Performance and quality indicators are monitored by the NHSE Screening and Immunisation Team and assurance provided to the Bristol Health Protection Committee.

#### 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 Diabetic Eye Screening Programme has recovered its backlog following the COVID-19 pandemic, and uptake in BNSSG remained above the national acceptable target of 75% by the end of 2021–22 <sup>15</sup>.

#### 4.7 AAA screening

Abdominal Aortic Aneurysm (AAA) screening is offered to men during their 65<sup>th</sup> 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

<sup>14</sup> OHID (2022) Fingertips: Public Health Outcomes Framework (breast cancer screening). Available from: <https://fingertips.phe.org.uk/>

<sup>15</sup> Diabetic Eye Screening Programme data (FutureNHS Collaboration Platform), not publicly available

of the aneurysm. AAA screening was suspended during the peak of the COVID-19 pandemic with a phased restart during June and Sept 2020. The Bath, Bristol and Weston AAA screening programme has now fully recovered the backlog. Latest available data from 2020–21 indicates that 67% of eligible men in Bristol had received AAA screening, lower than regional uptake (74%) but higher than the national uptake (55%) <sup>16</sup>.

#### 4.8 Inequalities and strategy

Inequalities in screening uptake (by ethnicity, deprivation, physical or learning disability status) have been previously acknowledged nationally <sup>17</sup>. The NHSE Screening and Immunisation Team is updating the regional Inequalities Strategy for Screening and Immunisation Programmes in the South West, to renew focus on ensuring access for all.

Work is ongoing with the Somerset, Wiltshire, Avon, and Gloucestershire Cancer Alliance to support primary care networks to embed screening uptake in practice, as part of the cancer early diagnosis enhanced service specification arising from the NHS Long Term Plan.

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

<sup>17</sup> 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>

## 5. Sexual Health

### 5.1 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 and has areas of high deprivation, and there is an active lesbian, gay, bisexual and trans scene. These factors mean sexual health is a high priority for Bristol City Council (BCC).

[Unity](#), Bristol's specialist sexual health service, rapidly adapted their service delivery model in response to COVID-19. The service moved to telephone triage, expanded postal kits for self-sampling, undertook in-house rapid STI testing and provided medication via post. Those who needed to be seen in person (including the most vulnerable) were still seen face to face although community venues were closed for much of the year. Whilst these changes were a challenge to implement, many of the adaptations have been positive and have remained in place as pandemic restrictions eased in early 2022.

### 5.2 Sexually Transmitted Infections (STIs)

There were 2,872 new STIs diagnosed in Bristol in 2021. This is equivalent to a crude rate of 616 per 100,000 people and is significantly higher than the rate of 371 per 100,000 in the South West region and 551 per 100,000 in England <sup>18</sup>. Crude rate calculations take into account 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.

A significant drop in STI diagnoses in Bristol was recorded in 2020, with a further decrease in 2021. The initial reduction in 2020 was seen nationally and was most likely due to the impact that COVID-19 had on both social interactions and restricted access to sexual health services and testing during this period. However, the decrease in 2021 was not observed nationally.

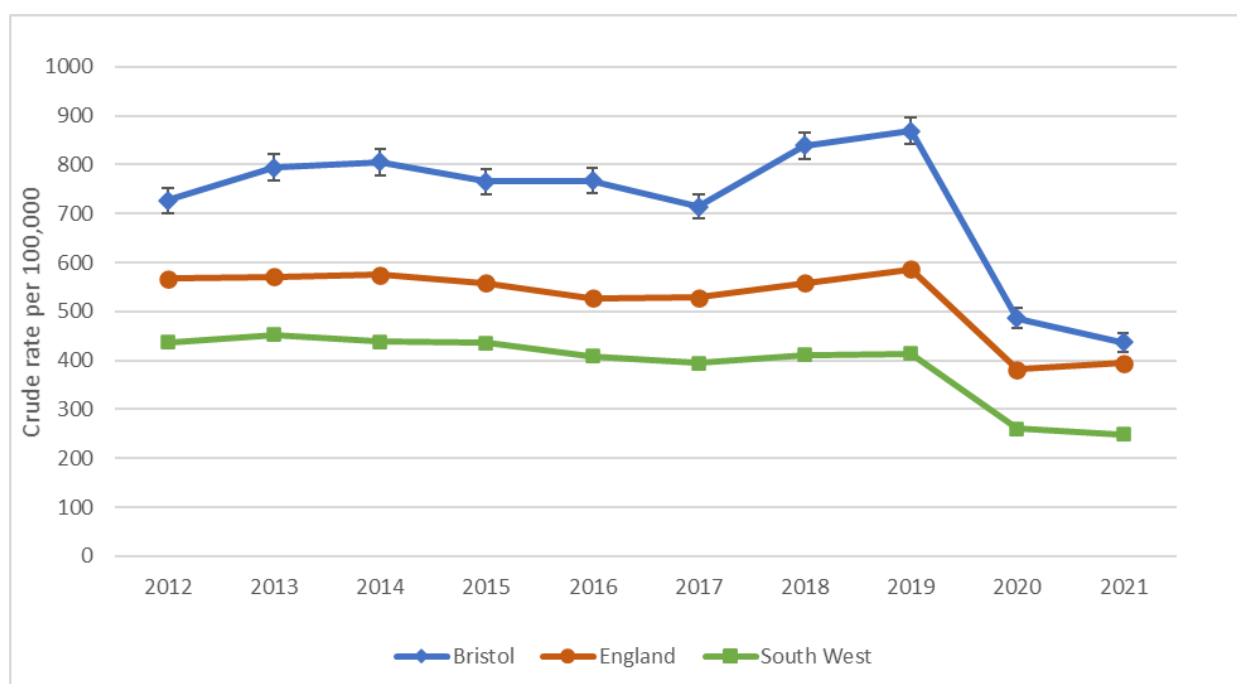
A similar pattern is seen when chlamydia cases in under 25 year olds are excluded (as most cases in this age group are diagnosed through a screening programme) (**Figure 5.2.1**). The rate of new STI diagnoses excluding chlamydia in under 25 year olds was 437 per 100,000 people aged 15–64 years in 2021. This was 10% lower than in 2020, but still significantly worse than the national average (394 per 100,000) which increased moderately between 2020 and 2021.<sup>19</sup>

<sup>18</sup> OHID (2022) Fingertips: Sexual and Reproductive Health Profiles – All new STI diagnoses rate per 100,000. Available from: <https://fingertips.phe.org.uk/>

<sup>19</sup> OHID (2022) Fingertips: Sexual and Reproductive Health Profiles – New STI diagnoses (excluding chlamydia aged under 25) per 100,000. Available from: <https://fingertips.phe.org.uk/>

The lower diagnosis rates in Bristol may be due to STI testing rates which are considerably lower than before the COVID-19 pandemic. In 2019, 31,218 STI tests (excluding chlamydia tests in under 25 year olds) were undertaken in Bristol. In comparison, 5,692 STI tests were recorded in 2021; this is under further investigation.

**Figure 5.2.1: Crude rate of new STI diagnoses (excl. chlamydia aged <25 years) per 100,000 people aged 15-64 years in Bristol, South West, and England, 2012–21<sup>19</sup>**



Further analysis has shown that recorded diagnoses of chlamydia, gonorrhoea, genital warts and herpes, have all reduced in 2021 and remain below the rates recorded before the COVID-19 pandemic.

A concern noted in 2020 was the ongoing increase in syphilis cases; there were 83 cases of syphilis in Bristol in 2020, with a rate of 17.8 per 100,000 people, which was significantly higher than England's rate (**Figure 5.2.2**). In 2021 there was a considerable decrease in diagnosed cases, with just 49 cases reported by UKHSA for Bristol, at a rate of 10.5 per 100,000 people, which was statistically similar to England's rate, and the lowest rate recorded in Bristol since 2017 <sup>20</sup>.

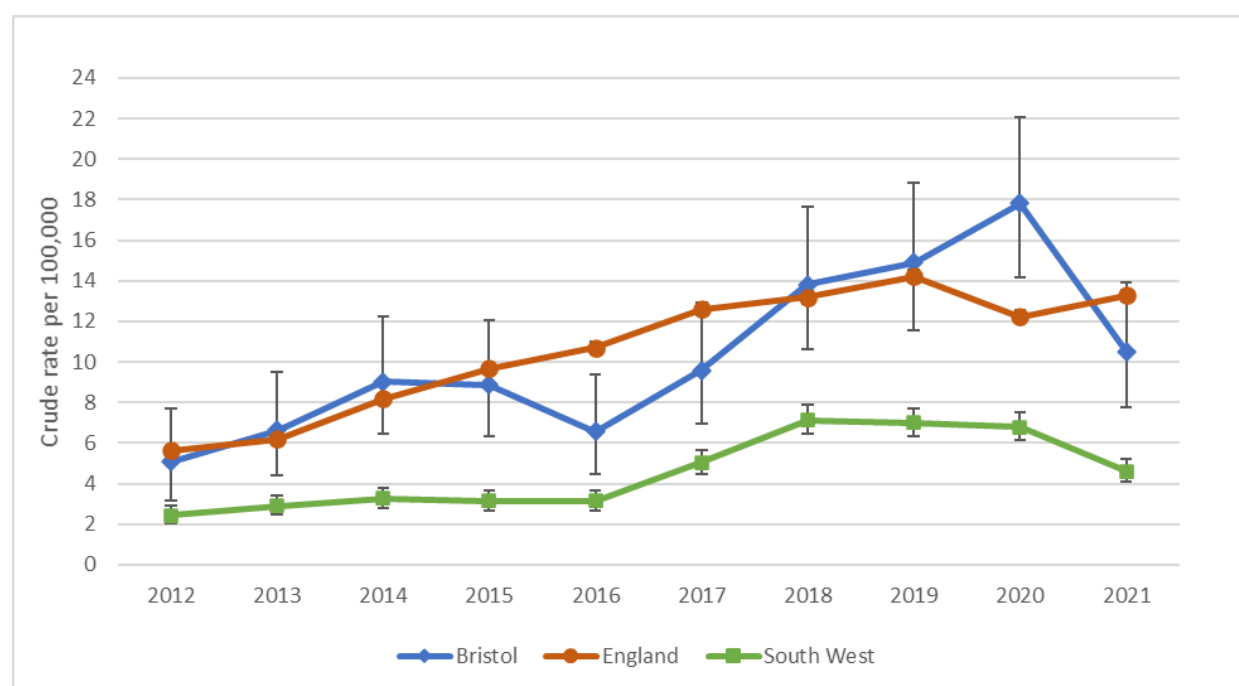
The performance data provided by Unity for this period suggests that syphilis cases are higher than those reported by UKHSA. There have been methodological changes nationally in how the data are coded and reported, and the impact of these changes on the data provided by Unity are being explored further for quality assurance purposes. The BCC Public Health team is also working with Unity to

<sup>20</sup> OHID (2022) Fingertips: Sexual and Reproductive Health Profiles – Syphilis diagnostic rate per 100,000. Available from: <https://fingertips.phe.org.uk/>



strengthen their data reporting in order to understand the inequalities between groups in Bristol. This will enable more effective targeting of health promotion messages and services.

**Figure 5.2.2: Crude rate of new syphilis cases per 100,000 people all ages in Bristol, South West, and England, 2012–21<sup>20</sup>**



### 5.3 National chlamydia screening programme (NCSP) changes

UKHSA announced changes to the NCSP in 2021 which will be implemented locally from April 2022<sup>21</sup>. The programme is changing focus to reduce reproductive harm of untreated chlamydia infection in young women only. This change removes the offer of opportunistic chlamydia screening by GPs and pharmacies to asymptomatic young men. All young people will still be able to access chlamydia tests online through Unity, and young men will continue to be contacted and tested through partner notification procedures. The Public Health teams across BNSSG worked with Unity during the last reporting period ahead of introducing these changes in April 2022.

### 5.4 HIV incidence in Bristol

There were 28 newly diagnosed cases of HIV in Bristol in 2021. In the 5 years prior to COVID-19, this figure was around 44 cases per year<sup>22</sup>. The Bristol rate of new diagnoses of HIV was 6.0 per 100,000 people (all ages), statistically similar to the

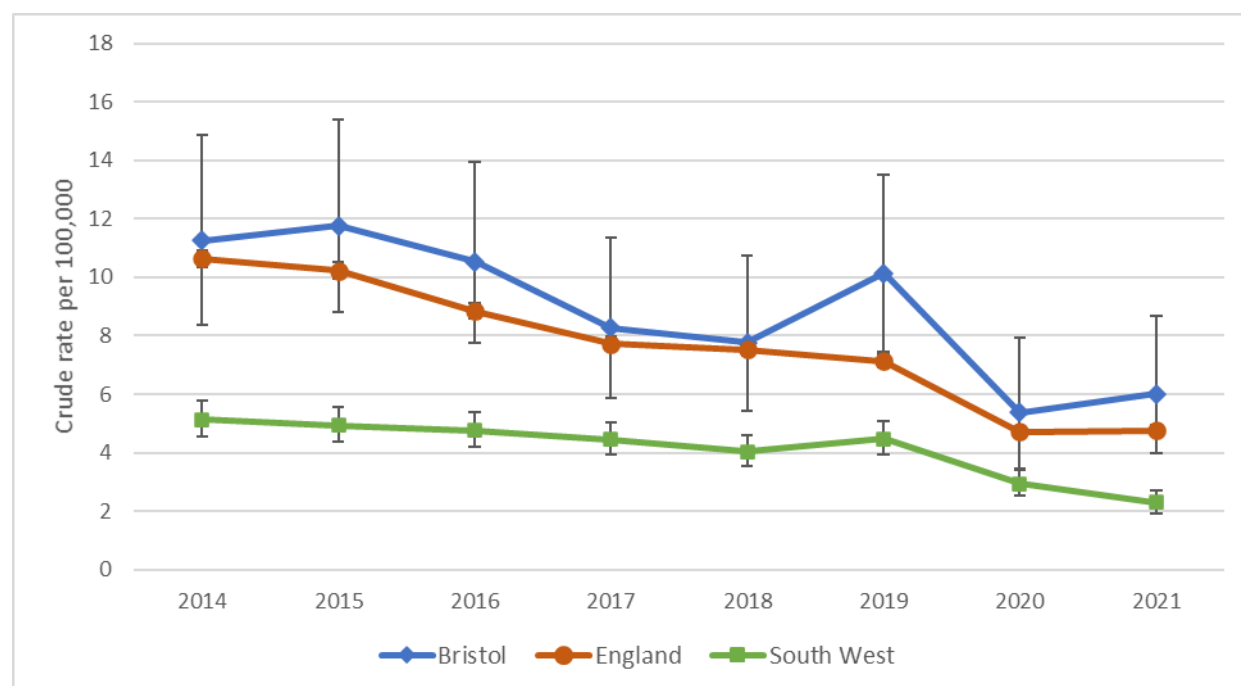
<sup>21</sup> UKHSA (2021) Changes to the National Chlamydia Screening Programme (NCSP). Available from: <https://www.gov.uk/government/publications/changes-to-the-national-chlamydia-screening-programme-ncsp/changes-to-the-national-chlamydia-screening-programme-ncsp>

<sup>22</sup> OHID (2022) Fingertips: Public Health Profiles – New HIV diagnosis rate per 100,000 (all ages). Available from: <https://fingertips.phe.org.uk/>

national average (4.8 per 100,000) (**Figure 5.4.1**). This represents a decrease compared to before the COVID-19 pandemic as seen regionally and nationally.

The percentage of people in Bristol newly diagnosed with HIV during 2019–21 who started antiretroviral therapy promptly (within 91 days of their diagnosis) was 86.0%, which is similar to the national percentage (83.5%) <sup>23</sup>.

**Figure 5.4.1: Crude rate of new HIV diagnoses per 100,000 people (all ages) in Bristol, South West, and England, 2014–21 <sup>22</sup>**

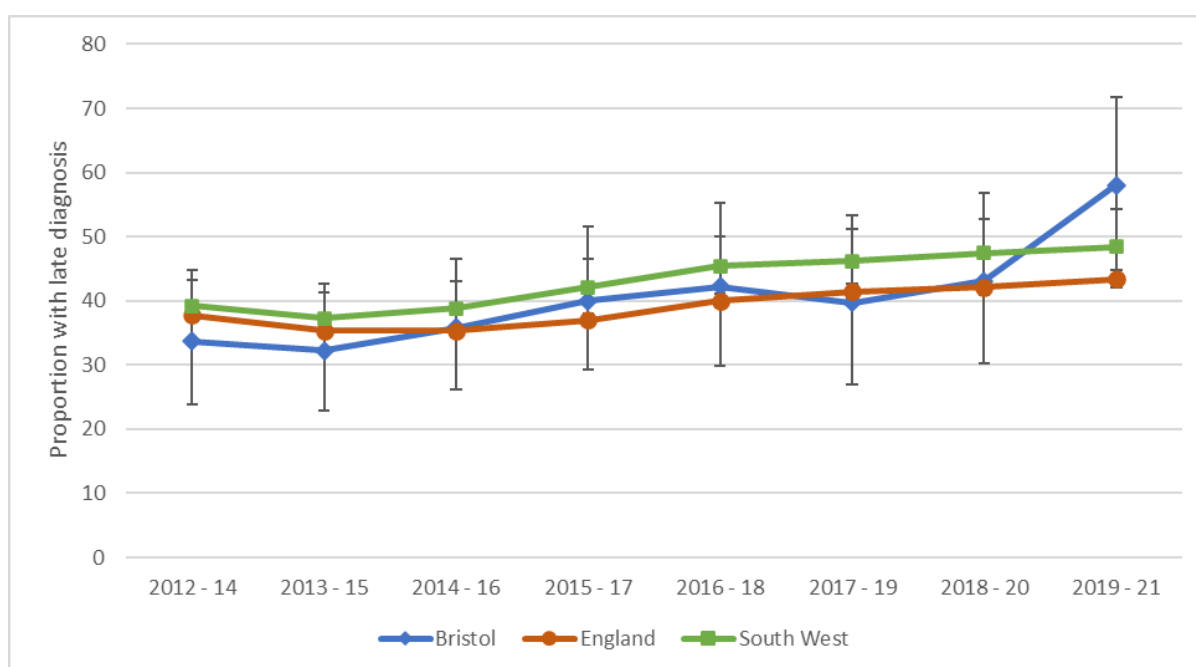


In Bristol, it is estimated that around 1 in 20 (5%) of people are unaware that they are infected with HIV based on data for 2020 <sup>24</sup>. This increases the risk of poor health outcomes and the risk of onward transmission of HIV. HIV surveillance data shows that, of people aged 15 and over with a new HIV diagnosis in Bristol in 2019–21 (and first diagnosed in the UK), almost 58% are considered to have had a late diagnosis, which represents an increase in delayed diagnosis (**Figure 5.4.2**). Heterosexuals, Black African, Black Other and Asian ethnicities are more likely to experience late diagnosis in England.

<sup>23</sup> OHID (2022) Fingertips: Public Health Profiles – Prompt antiretroviral therapy (ART) initiation in people newly diagnosed with HIV (All ages). Available from: <https://fingertips.phe.org.uk/>

<sup>24</sup> UKHSA (2022) Fast Track Cities Update 2021. Not publicly available.

**Figure 5.4.2: 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 2019–21 <sup>25</sup>**



## 5.5 HIV initiatives in Bristol

During 2021–22, a national action plan for ending HIV transmission was launched.<sup>26</sup> This aligns to the global Fast Track City initiative, which BCC signed up to at the end of 2019.<sup>27</sup> 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, the Integrated Care Board 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

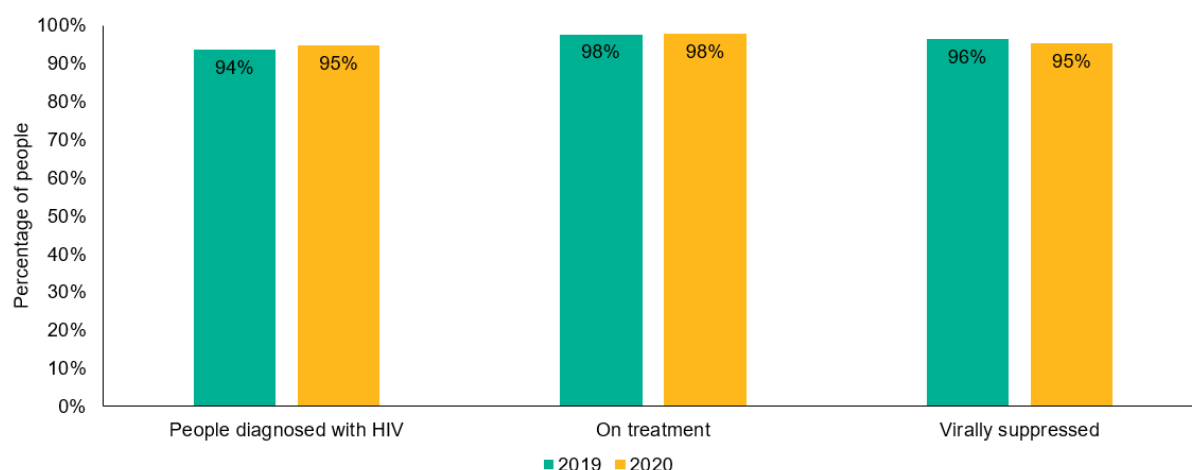
At the time of writing, data for 2021 was not available, but **Figure 5.5.1** shows Bristol's achievement in 2020 of the three targets. Bristol Fast Track City have since undertaken an exercise to compare Fast Track City work with the recommendations of the national action plan.

<sup>25</sup> OHID (2022) Fingertips: Public Health Profiles – HIV late diagnosis in people first diagnosed with HIV in the UK. Available from: <https://fingertips.phe.org.uk/>

<sup>26</sup> DHSC (2021) Towards Zero: the HIV Action Plan for England - 2022 - 2025. Available from: <https://www.gov.uk/government/publications/towards-zero-the-hiv-action-plan-for-england-2022-to-2025>

<sup>27</sup> Fast Track Cities Initiative <https://www.bristolonecity.com/fast-track-cities/>

**Figure 5.5.1: Bristol HIV Fast Track City performance, 2019–20 <sup>28</sup>**



In 2021–22, Fast Track City partners undertook a number of initiatives including:

- The development of “Hearts and Minds”, a creative arts-based resource to address HIV stigma amongst healthcare professionals <sup>29</sup>
- Look-back exercises for those diagnosed at a late stage with HIV across the two hospital trusts in Bristol
- HIV training for those leading Relationships and Sex Education (RSE) in secondary schools
- Expansion of access to pre-exposure prophylaxis (PrEP) – preventative medication for those at risk of HIV
- Successful funding bids for a new service to provide support for those not engaging in HIV treatment services and to explore the potential for pharmacies to deliver PrEP

Nevertheless, there is further work to be done on normalising HIV testing in Bristol, which is essential for reducing stigma and reducing late diagnosis. The percentage of people in Bristol who attended a sexual health service and received an HIV test has declined considerably from 67.5% in 2019, to 54.9% in 2020 and 34.3% in 2021.<sup>30</sup> Normalising HIV testing such as routine HIV screening in emergency departments is an area that the Bristol Fast Track City initiative would like to address.

### 5.5.1. Common Ambition Bristol (CAB)

Common Ambition Bristol launched in February 2021 and aims to address the HIV inequalities experienced by people of African and Caribbean heritage (ACH)

<sup>28</sup> UKHSA (2022) Fast Track Cities Update 2021. Not publicly available.

<sup>29</sup> Hearts and Minds. Available from: <https://bristolheartsminds.wixsite.com/heartsandminds>

<sup>30</sup> OHID (2022) Fingertips: Sexual and Reproductive Health Profiles – HIV testing coverage, total. Available from: <https://fingertips.phe.org.uk/>

communities<sup>31</sup>. In 2021, six ACH community members were recruited and work alongside healthcare, public health and academic partners to develop and test interventions to establish effectiveness and acceptability. The evaluation is being undertaken with five ACH community researchers. In 2021–22, the CAB website was launched, a community consultation was undertaken, and a number of community engagement events took place. CAB started work with a barber's shop, and a community clinic has been set up at Charlotte Keel Medical Practice, specifically for people of African and Caribbean heritage.

### 5.5.2. 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. In 2021–22, 134 people started taking daily PrEP, and a further 69 people started taking event-based PrEP. Of those starting PrEP in 2021–22 in Bristol, take-up has been highest among men (98%) aged 20–39 years (78%), who are White British or White Irish (71%)<sup>32</sup>.

In 2021–22, Unity focused on improving uptake among other populations at risk of acquiring HIV (e.g. Black African people) who have not been accessing this provision. This included running a dedicated health promotion campaign targeting certain groups via social media, delivering education sessions to primary care partners to raise awareness of PrEP, and working in partnership with Common Ambition Bristol to reduce HIV stigma.

## 5.6 SHIP HIT

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. Achievements of the SHIP HIT in 2021–22 included continuing to support the work of Fast Track Cities and Common Ambition Bristol (see above).

The SHIP HIT also worked with the British Association of Sexual Health and HIV to highlight the issue of commercial STI testing providers' inconsistency with national guidelines, with the aim of bringing in national regulation, and delivering a workshop to explore how sexual health data from GPs, Public Health England, BCC and specialist providers can be used to better identify inequalities and inform service design. A number of bids were put forward for funding of research around sexual health and HIV and a comprehensive research log was created to capture the work across the wider network. Considerable work was also undertaken to address the issue of partner notification of STIs diagnosed in primary care, but this project has paused following the retirement of the project lead.

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<sup>31</sup> Common Ambition Bristol. Available from: <http://commonambitionbristol.org.uk/>

<sup>32</sup> Unity 2021–22 performance data (not publicly available)

## 5.7 Relationships and sexual health education (RSHE)

RSHE became statutory in schools in 2020, 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<sup>33</sup>. All schools are required to deliver 13 modules developed by the Department for Education (DfE). There are 170 schools in Bristol, and many 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.

In 2020, the Bristol Primary Teaching School Alliance and the Cabot Learning Federation Institute in conjunction with BCC Public Health were commissioned by DfE to develop the South West RSHE Hub to provide training to schools in preparing for the statutory changes to the curriculum. This comprised a 'train the trainer' and peer support model and used new DfE materials. The project came to a close in 2021–22, and the resources will be migrated to the Healthy Schools website.

## 5.8 Future plans

### 5.8.1. Sexual health needs assessment

In 2022–23, BCC Public Health, working with North Somerset Council, South Gloucestershire Council and the local Integrated Care Board (ICB; formerly CCG), will be undertaking a comprehensive assessment of the population's sexual health needs. This needs assessment will be the first completed jointly for BNSSG and will provide important evidence and recommendations to support commissioning decisions in the future. It will include data on our sexual health and HIV outcomes, as well as data on service activity and quality. A BNSSG-wide survey will be undertaken to explore the views of the public, service users and professionals and the evidence base on the most effective interventions will be considered.

### 5.8.2. Bristol Fast Track Cities

Going into its third year as a Fast Track City, the Bristol partnership will continue to target improving HIV testing, tackling HIV stigma and providing system leadership around HIV. Plans for 2022–23 include a pilot with pharmacies in high prevalence areas to deliver point of care HIV testing; scope HIV testing in emergency departments in Bristol and implementing this; exploring feasibility of delivering PrEP treatment through community pharmacies, a study looking at barriers in GP practices to HIV testing, further work to address HIV and other blood borne virus testing in Emergency Departments in Bristol and installing; and evaluating HIV test vending machines across Bristol. The SHIP HIT will also continue to support related HIV projects such as Common Ambition Bristol.

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<sup>33</sup> PSHE Association (2022) Statutory RSHE. Available from: [Statutory RSHE \(pshe-association.org.uk\)](https://www.pshe-association.org.uk/statutory-rshe)

### 5.8.3. Sexual health promotion

Unity via its health promotion partner Terrence Higgins Trust are planning a number of different health promotion campaigns and outreach events in 2022–23. These include outreach events at Pride Bristol in July 2022, during Sexual Health Week in September 2022, and World Aids Day in late November/early December 2022. A local poster and social media campaign about HIV testing is also planned in 2022 called 'Time to Test'.

In addition, the South West Sexual Health Network, which is made up of sexual health commissioners from the local authorities in the South West region, will work together to commission a South West-wide health promotion campaign in 2022–23 to encourage access to PrEP for underserved populations.

## 6. Health Care Acquired Infections (HCAI) and Antimicrobial resistance (AMR)

### 6.1 Overview

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 into their veins. During the reporting period April 2021 to March 2022, the continued response to COVID-19 has significantly affected provider activities.

Bristol, North Somerset and South Gloucestershire (BNSSG) Clinical Commissioning Group (CCG) hosts the Bristol, North Somerset and South Gloucestershire wide Healthcare Associated Infection (HCAI) Group which 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.

The data presented in this section is taken from the CCG HCAI annual report 2021–22.

### 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.

During 2021–22, BNSSG CCG aimed for a 'zero tolerance' approach in line with national strategies, although the system remained challenged by COVID-19 pressures resulting in MRSA case reviews not being undertaken.

For the BCC locality there were 28 MRSA cases reported in 2021–22, constituting the majority (73%, 28/38) of cases in BNSSG. The rate of cases across BNSSG is higher compared to the South West and England.

MRSA bacteraemia cases are classified as 'Hospital Onset' (where testing is done on day 3 onwards of a hospital admission) or 'Community Onset' (all other cases). During 2021–22, 19% of BNSSG cases were classified as hospital onset during 2021–22. The Post Infection Review process has indicated a recurring theme of comorbidities among the hospital onset cases, including renal failure, liver disease,



diabetes, and chemotherapy. People Who Inject Drugs (PWID) also continues to be a significant theme within the 2021–22 data, with 12 community onset cases in Bristol linked to injecting drug use.

The Reducing Bacterial Infections (REACT) project is continuing to work with system partners including BCC Public Health, BNSSG CCG, Bristol University, Bristol Drugs Project (BDP) and UKHSA to develop a range of interventions to optimise harm reduction amongst PWID. A 12-month pilot trial of project of Chlorhexidine wipes (used in hospitals as a treatment for MRSA) was initiated in April/May 2021 for this group, in collaboration with BNSSG and BDP.

### 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 2021–22, there were 144 cases of Clostridium Difficile infection (CDI) in Bristol, with an unexpected and unexplained spike of incidents in June 2021; this represents a substantial increase since the last two reporting periods (117 cases in 2020–21 and 74 cases in 2019–20).

In response to the increase in CDI cases which has been noted across the whole of BNSSG, NHS England convened a South West Clostridium Difficile collaborative group (first meeting in July 2021) with active contributions from BNSSG CCG. This group produced a leaflet which will be used in primary and secondary care, giving relevant information to patients wherever they are diagnosed and treated for CDI.

Due to the redeployment of staff as part of the COVID-19 response, review meetings were suspended, and no case reviews were completed during 2021–22. Additionally, no community onset case reviews were routinely undertaken during the reporting period. An agreement was reached where BNSSG and Providers would reset and only review cases from April 2022 onwards; this takes a collaborative approach using shared learning and BNSSG is working towards “end to end” reviews.

### 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.

There were 232 cases of E.coli in Bristol during 2021–22; this represents a decrease in the number of E.coli cases from the last two reporting periods in line with trends reflected across BNSSG. Most of the cases across BNSSG were community onset

and community associated. There were no cohort reviews undertaken in 2021–22 but UKHSA have noted a seasonal increase in cases between July and September each year, which has also been noted in the local dataset. The most frequent known source of infection is urinary tract infections and this remained an area of focus for the CCG during the reporting period.

## 6.5 Other bloodstream infections (BSI)

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

**Table 6.5.1 Number of cases of MSSA, Klebsiella and Pseudomonas aeruginosa bacteraemia in Bristol, 2019–20 to 2021–22**

Pathogen	Number of cases in Bristol		
	2019–20	2020–21	2021–22
Pseudomonas Aeruginosa	25	33	28
Klebsiella bacteraemia	75	85	86
Methicillin-Sensitive Staphylococcus aureus (MSSA)	90	78	73

National data has indicated that urinary tract infections are the primary source of *Pseudomonas aeruginosa* bacteraemia. A local cohort review is planned during the next reporting period 2022–23 to capture local drivers and identify recurring cases.

## 6.6 Seasonal influenza vaccination rates for frontline staff

Vaccine uptake during flu vaccine season 2021–22 (running to end of Feb 2022) was lower compared to 2020–21 (end of Feb 2021) in all four providers in BNSSG (**Table 6.6.1**).

**Table 6.6.1 Influenza vaccine uptake in winter seasons by BNSSG healthcare provider, 2020–21 and 2021–22**

Provider	Winter season 2020–21*	Winter season 2021–22*	Direction of change from 2020–21 to 2021–22 (%)
UHBW*	86.40%	84%	↓ (3%)
Sirona*	86%	73%	↓ (15%)
AWP	71%	57%	↓ (20%)
NBT	65%	59.1%**	↓ (10%)

UHBW = University Hospitals Bristol and Weston NHS Foundation Trust

AWP = Avon and Wiltshire Mental Health Partnership NHS Trust

NBT = North Bristol NHS Trust

\*The winter season is defined as September to February by UKHSA

\*\*From NHSE data based on staff on ESR record and so may include some non-frontline staff. Work is ongoing to review data flows into Foundry.

The decrease in vaccine uptake across all providers may be partly attributable to the diversion of resources to the COVID-19 vaccination programme and workforce

availability due to COVID-19 infection. Uptake may also be underestimated if staff received their vaccine off-site.

Nevertheless, evaluation of vaccine uptake at UHBW (where ethnicity was monitored as part of their flu and covid vaccination programmes) indicated considerable differences between Black, Asian, and other Minority Ethnic populations; this will be a target for pilot interventions to improve uptake in the next flu season.

## 6.7 Serious incidents

During 2021–22, most HCAI related serious incidents reported by BNSSG providers to the CCG were related to COVID-19. During 2021–22, 46 individual COVID related cases were reported by University Hospitals Bristol and Weston (UHBW), North Bristol Trust (NBT), and Sirona Care and Health. Additionally, there were three HCAI incidents reported in 2021–22 that did not relate to hospital-onset COVID-19.

All completed serious incident reports were reviewed by the CCG Quality Team HCAI manager to identify learning and associated actions to mitigate future risk. There are some provider reports on hospital-onset COVID-19 cases that have not yet been received by the CCG for 2021–22 however so this will be a focus for the next reporting period.

## 6.8 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 was established in 2020–21 aiming to support and enable the delivery of the national five-year AMR Action Plan<sup>34</sup>.

In 2021–22, there was an increase in community antibiotic prescribing though prescribing levels remained below pre-pandemic levels, therefore meeting the STAR-PU<sup>35</sup> weighted target in Bristol and across BNSSG.

Bristol and other BNSSG localities also met the broad-spectrum antibiotics target in 2021–22 (whereby broad-spectrum antibiotics<sup>36</sup> should constitute  $\leq 10\%$  of all prescribed antibiotics). However it is worthwhile noting that this was influenced by the substantial decrease in all antibiotic prescribing; the proportion of broad-spectrum antibiotics of all prescriptions has remained stable in the reporting period.

In hospital settings, the 2021–22 NHS Standard Contract included a requirement to reduce antibiotic consumption by 2% compared to 2018, measured as Defined Daily Doses (DDD) per 1000 admissions. Data available to quarter 3 of 2021–22 indicating

<sup>34</sup> 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>

<sup>35</sup> 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.

<sup>36</sup> Cephalosporins, Quinolones and Co-amoxiclav

both secondary care service providers NBT and UHBW are currently meeting the target.

Antibiotic prescribing levels in children aged 0–9 years across BNSSG are well below that seen nationally. Nevertheless, looking across the reporting period, there was an increase in prescribing as the national COVID-19 restrictions were stood down and children mixed more. Of note is the spike in the summer when viral infections, commonly seen autumn and winter were circulating, highlighting room for further reductions in antibiotic use.

Community antibiotic guidelines continue to be reviewed and updated and stewardship work continues across BNSSG. In 2021–22 this included the release of a new diagnosis and treatment pathway for cellulitis and a focus on the course length of amoxicillin prescriptions. During World Antimicrobial Awareness Week (18–24<sup>th</sup> November 2021), there was a focus on raising awareness of antibiotic prescribing in children supported by the use of local data, which garnered local media coverage (BBC Radio Bristol breakfast programme). No antibiotic prescribing projects were set as part of the Medicines Optimisation Prescribing Quality Scheme in 2021–22 however there are plans for two in the next reporting period of 2022–23: a review of the treatment of cellulitis, ensuring the new diagnosis and treatment pathway has been embedded, and a review focusing on the treatment of pyelonephritis.

## 7. Tuberculosis (TB)

### 7.1 Overview

Tuberculosis (TB) is a contagious disease caused by the *Mycobacterium* species of bacterium that generally affects the lungs. The vast majority of infections result in asymptomatic latent TB which is not infectious while 5–10% of cases develop active TB <sup>37</sup>.

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).

Additionally, TB disproportionately affects underserved and often socially marginalised populations, where the risks of transmission and delayed diagnosis, drug resistance, and mortality are highest.

Please note the latest available data is presented where possible, based on the following sources, some of which were presented in last year's Health Protection report:

- UKHSA South West annual report 2021 (data covering Jan–Dec 2020, published in June 2022)
- UKHSA National annual report 2021 (data covering Jan–Dec 2020, published in October 2021)
- UKHSA National quarterly report Q1 2022 (provisional data up to April 2022, published in April 2022)

### 7.2 TB incidence

In Bristol, there were 43 cases of TB diagnosed in 2020. This is equivalent to 9.2 per 100,000, and represents the highest TB rate in the South West (**Figure 7.2.1**). The incidence rate of TB in Bristol has been decreasing in recent years, in line with regional and national trends.

Bristol continues to have significantly higher TB incidence rates than England and the South West as noted for the last twenty years (**Figure 7.2.2**). The latest data points available for comparison (average incidence in 2018–20) shows TB incidence in Bristol was 10.1 cases per 100,000 compared to 3.5 per 100,000 across the South West and 8.0 per 100,000 in England during the same period.

However, Bristol is distinct in more ways than one to the South West region. Comparing TB rates in Bristol to the other Core Cities in England, and CIPFA nearest neighbours (statistically similar areas), shows that incidence rates are not too anomalous (**Figure 7.2.3** and **Figure 7.2.4**).

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<sup>37</sup> WHO (2022) Tuberculosis Fact sheet. Available from: <https://www.who.int/news-room/fact-sheets/detail/tuberculosis>

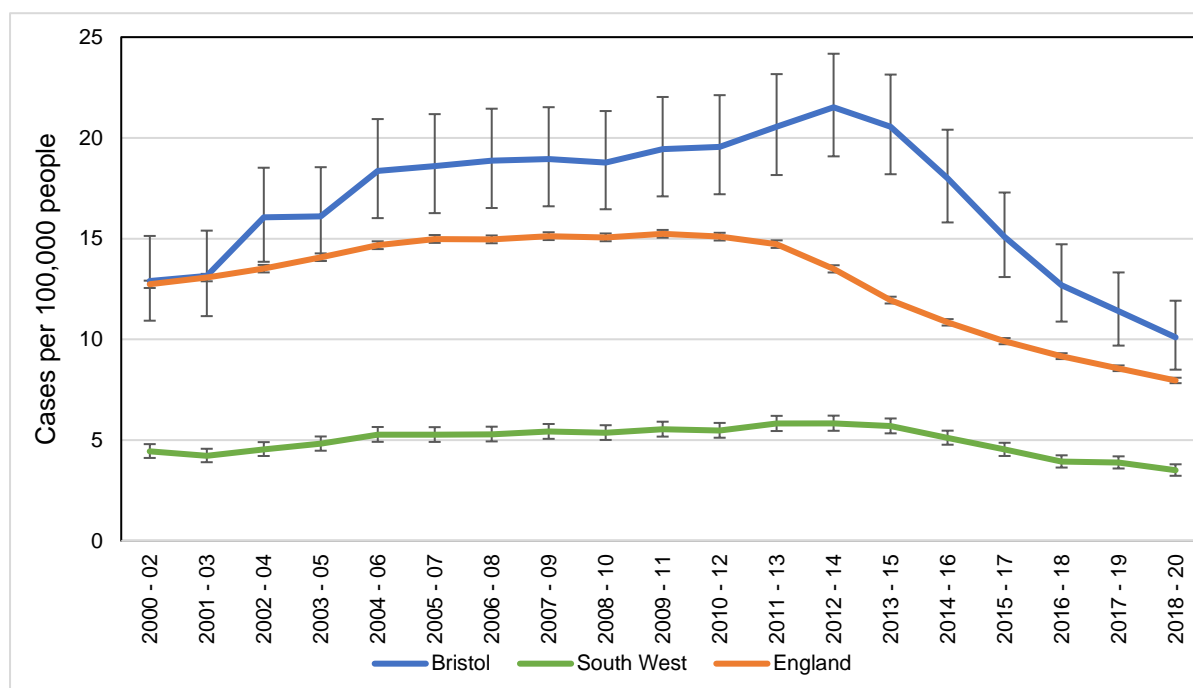
The incidence rate of TB in UK-born children under the age of 15 years can be used as an indicator for ongoing local transmission. During 2020, the rate was 0.6 per 100,000 children in the South West representing a decrease compared to the rate reported in the past 3 years <sup>38</sup>.

**Figure 7.2.1: TB Incidence count and rate per 100,000 by UTLA of residence in the South West, 2020 <sup>38</sup>**

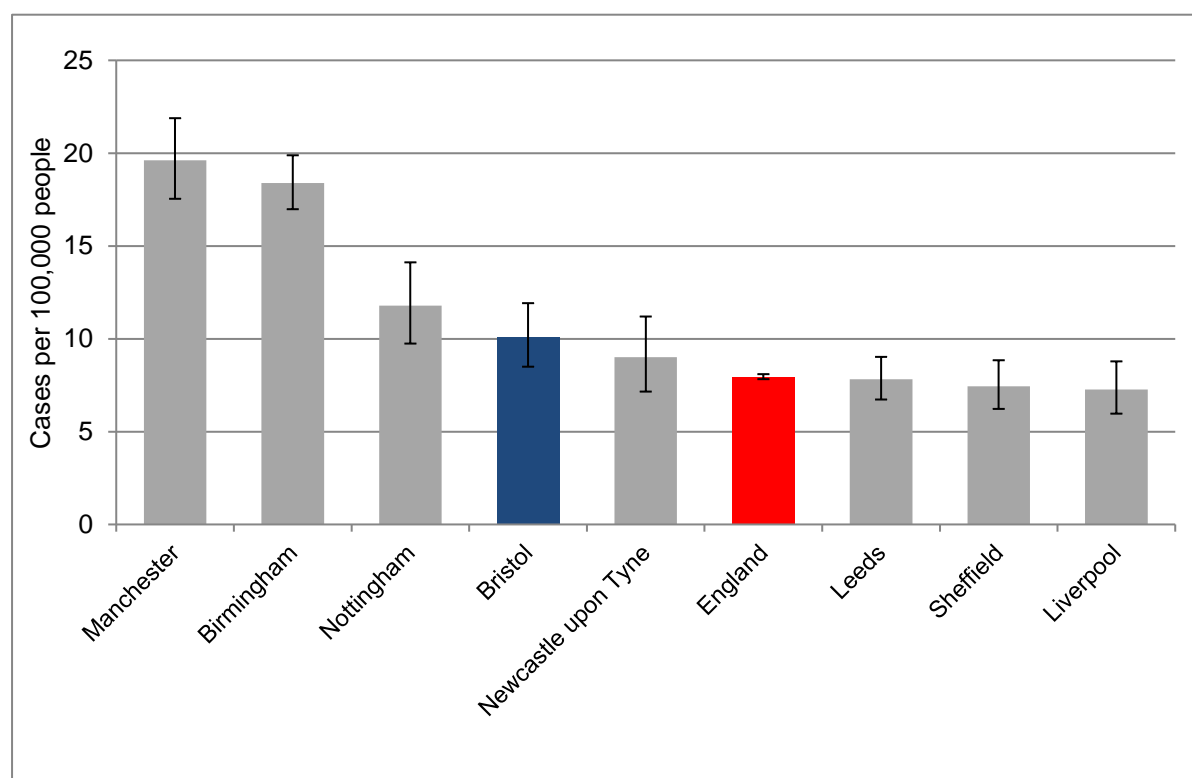
<sup>38</sup> UKHSA (2021) Tuberculosis in the South West: annual review 2021. Available from:

<sup>39</sup> UKHSA (2022) National quarterly report of tuberculosis in England: Q1 2022, provisional data. Available from: <https://www.gov.uk/government/statistics/tuberculosis-in-england-national-quarterly-reports>

**Figure 7.2.2: Three-year average TB incidence rates in Bristol, the South West, and England, 2000–02 to 2018–20** <sup>40</sup>

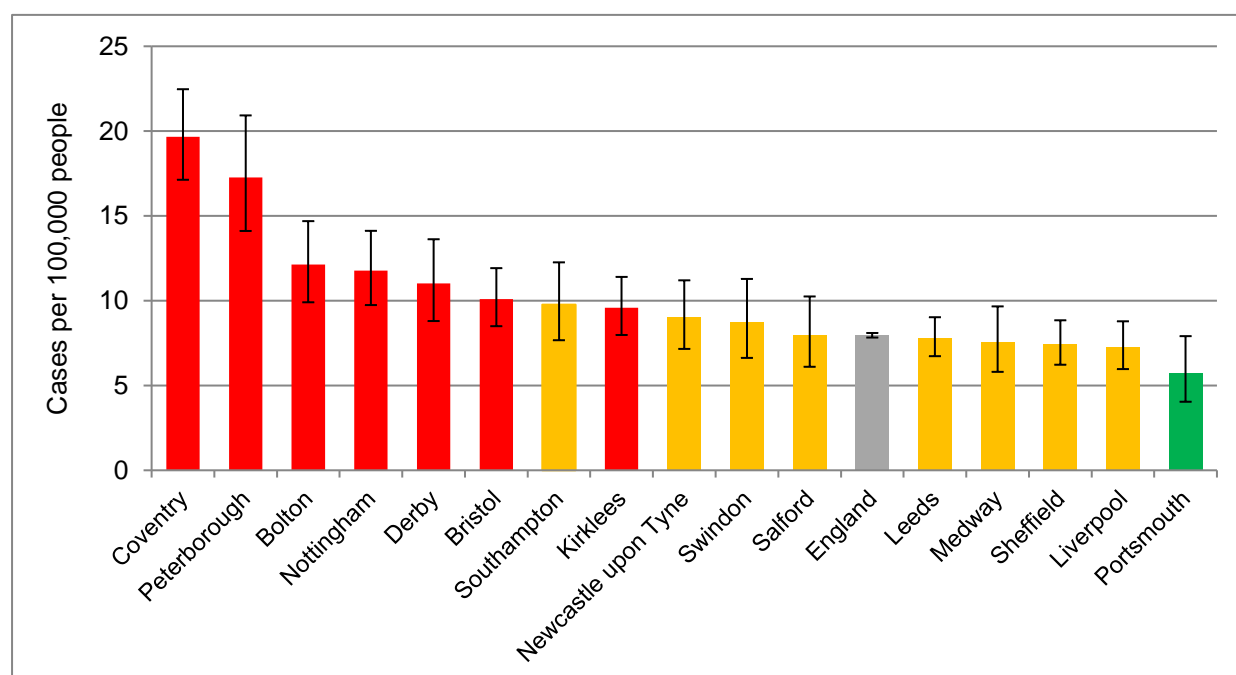


**Figure 7.2.3: TB incidence rates in Core Cities and England, 2018–20** <sup>40</sup>



<sup>40</sup> OHID Fingertips (2022) Public Health profiles. Available from: <https://fingertips.phe.org.uk/>

**Figure 7.2.4: TB incidence rates in Bristol and its CIPFA nearest neighbours, 2018–20<sup>40</sup>**



Relative to the overall incidence rate in England, red bars indicate statistically significantly higher rates; amber bars indicate statistically similar rates, and green bars indicate statistically significantly lower rates.

### 7.3 TB 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<sup>41</sup>. No culture confirmed TB cases were found to be multi-drug resistant (MDR) across the SW in 2020<sup>38</sup>.

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.

There is an established TB service operating across Bristol which leads on 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.

### 7.4 Inequalities in TB

#### Ethnicity

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

<sup>41</sup> OHID (2022) Fingertips: TB Strategy Monitoring Indicators. Available from: <https://fingertips.phe.org.uk/>



(14%) among those with known ethnicity <sup>42</sup>. 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.

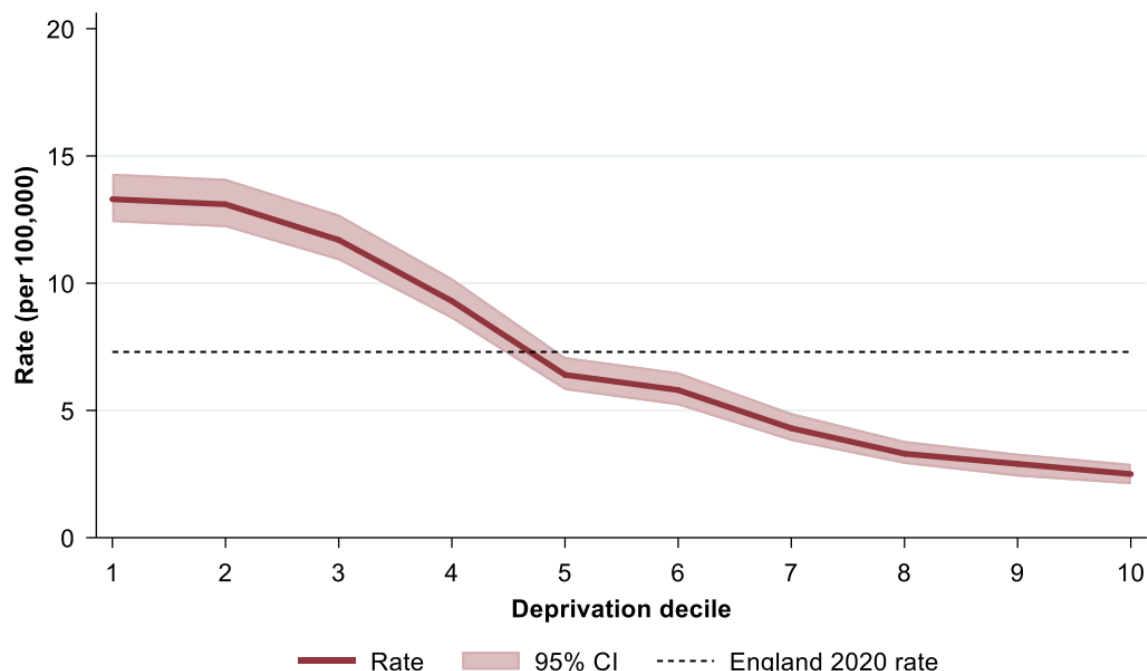
Similarly in the South West, the most frequently reported ethnic groups of TB cases diagnosed in 2020 were White (50%), Indian (16%) and Black African (15%), but the equivalent incidence rate among non-UK born individuals was 20.3 per 100,000 people, which was substantially higher than the incidence rate among the UK-born population (1.3 per 100,000 people) <sup>38</sup>.

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 <sup>38</sup>.

## Deprivation

National data indicated a social gradient in TB incidence rate for the calendar year ending 2020. Specifically, the incidence rate of TB in the 10% of the population living in the poorest areas (IMD decile 1) was over five-fold higher than the incidence rate of TB in the 10% of the population living in the most well-off areas (IMD decile 10) (Figure 7.4.1).

**Figure 7.4.1 TB incidence rate by Index of Multiple Deprivation (IMD) decile, England 2020** <sup>42</sup>



In the South West, similar patterns of inequality have been found with almost a third (32%) of cases diagnosed in 2020 living in areas from the most deprived IMD decile. Additionally, information regarding the occupation of TB cases also highlights inequalities by socioeconomic status. Among cases of working age (16–64 years) in

<sup>42</sup> 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>

the South West, 24.4% reported no occupation or being a housewife / husband (7.9%). Other common occupations that were listed include taxi driver (3.9%), factory worker (2.4%), warehouse worker (1.6%), construction worker (1.6%) and cleaner (1.6%).

## 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
- 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 <sup>42</sup>.

In 2020, 30 (22%) TB cases in the South West reported one or more social risk factors <sup>38</sup>. 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 2035 <sup>43</sup>.

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 pandemic <sup>44</sup>. 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 increased <sup>45</sup>.

The regional NHS England and UKHSA teams will launch the South West TB Control Board in December 2022. The Control Board will have the overall responsibility to set the strategic priorities in the South West and facilitate the

<sup>43</sup> WHO (2015) The End TB Strategy. Available from: <https://www.who.int/teams/global-tuberculosis-programme/the-end-tb-strategy>

<sup>44</sup> UKHSA (2021) TB Action Plan for England, 2021 to 2026. Available from: <https://www.gov.uk/government/publications/tuberculosis-tb-action-plan-for-england>

<sup>45</sup> 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>

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.

## 8. COVID-19 response

### 8.1 Overview

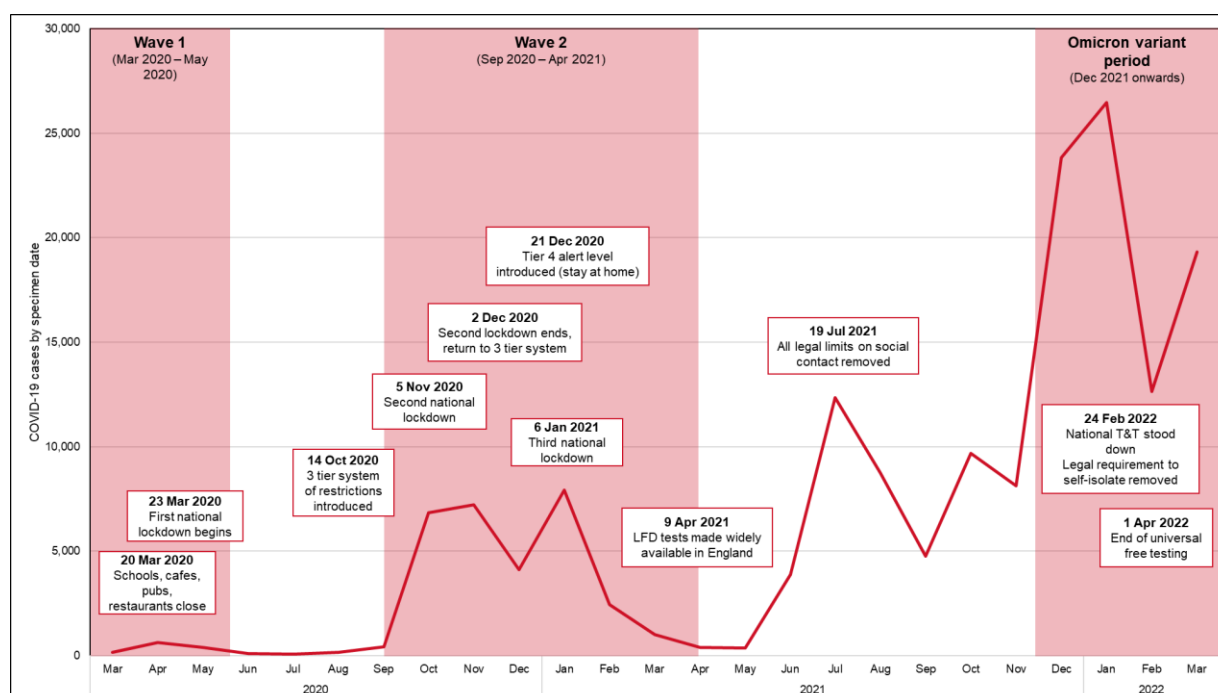
The COVID-19 response remained an important priority for Bristol City Council (BCC) led health protection during the reporting period (1<sup>st</sup> April 2021 to 31<sup>st</sup> March 2022).

As highlighted in the [JSNA COVID profile 2022–23](#), case rates in Bristol during the reporting period broadly followed national trends. Considering March 2020 to Feb 2022, Bristol had a lower COVID-19 mortality rate than England overall, but it was significantly higher than the South West regional average. Vaccination uptake was comparable to the English average, though slightly lower than the uptake noted across BNSSG as of 31<sup>st</sup> March 2022.

### 8.2 Cases and testing

Since the beginning of the pandemic there have been 161,988 reported cases of COVID-19 in Bristol (as at 31<sup>st</sup> March 2022). **Figure 8.2.1** illustrates the trend in cases over time, along with a summary of events.

**Figure 8.2.1: COVID-19 cases by specimen date in Bristol, Mar 2020 – 2022** <sup>46</sup>



Following the emergence and spread of the Omicron variant over the winter months of 2021, case rates in Bristol reached the highest rate to date in January 2022 reaching 2,022 per 100,000 on 4th January 2022 (this equates to 9,402 new cases in 7 days). The rate had halved by the 6<sup>th</sup> February (1,020 per 100,000) and stood at 846 per 100,000 on the 31<sup>st</sup> March 2022.

The government's announcement of the Living with COVID-19 plans in February 2022 was almost immediately followed by decreasing testing rates (and therefore

<sup>46</sup> UKHSA (2022) Coronavirus dashboard. Available from: <https://coronavirus.data.gov.uk/>

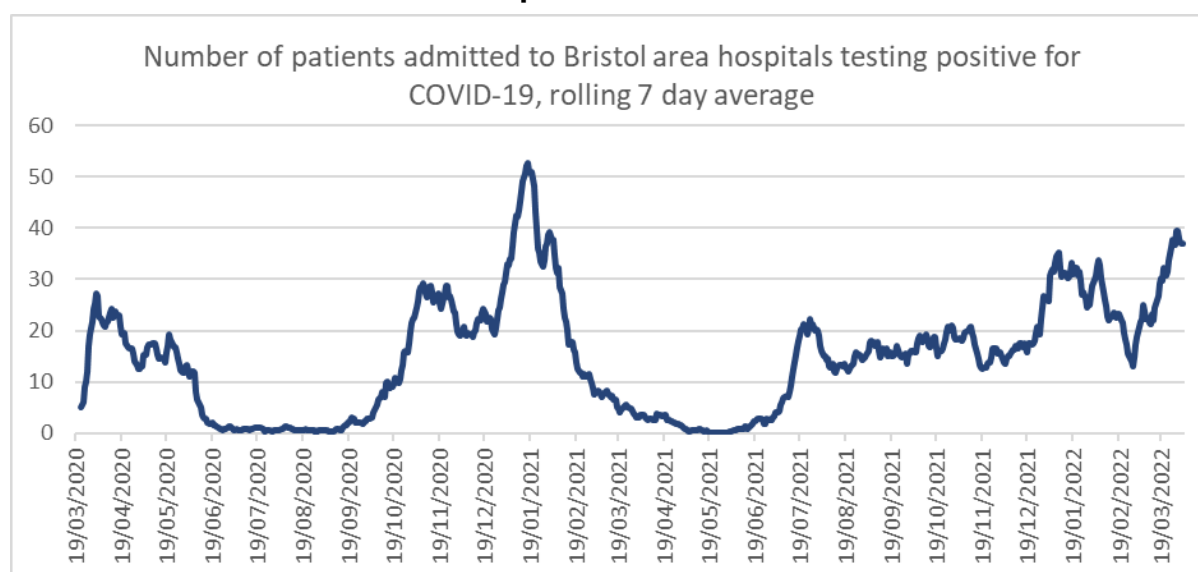
case ascertainment) in the general population. All COVID-19 restrictions were lifted on 1<sup>st</sup> April 2022 with the offer of free testing only being retained for health and social care workers and other vulnerable groups.

### 8.3 Hospitalisation and deaths

There was a total of 2,935 people with COVID-19 admitted to the two main hospital trusts that serve Bristol (not necessarily all Bristol residents) between April 2021 and March 2022 compared to 2,783 people hospitalised in the previous reporting period (**Figure 8.3.1**). These numbers do not differentiate between those in hospital “for” COVID-19 and those in hospital “with” COVID-19; the differentiated data is available at regional level only <sup>47</sup>.

Examining the number of registered deaths involving COVID-19 can give a greater indication of the burden of COVID-19. There were 213 registered deaths related to COVID-19 in 2021–22, representing a substantial decrease compared to the 465 deaths noted in 2020–21 (**Figure 8.3.2**).

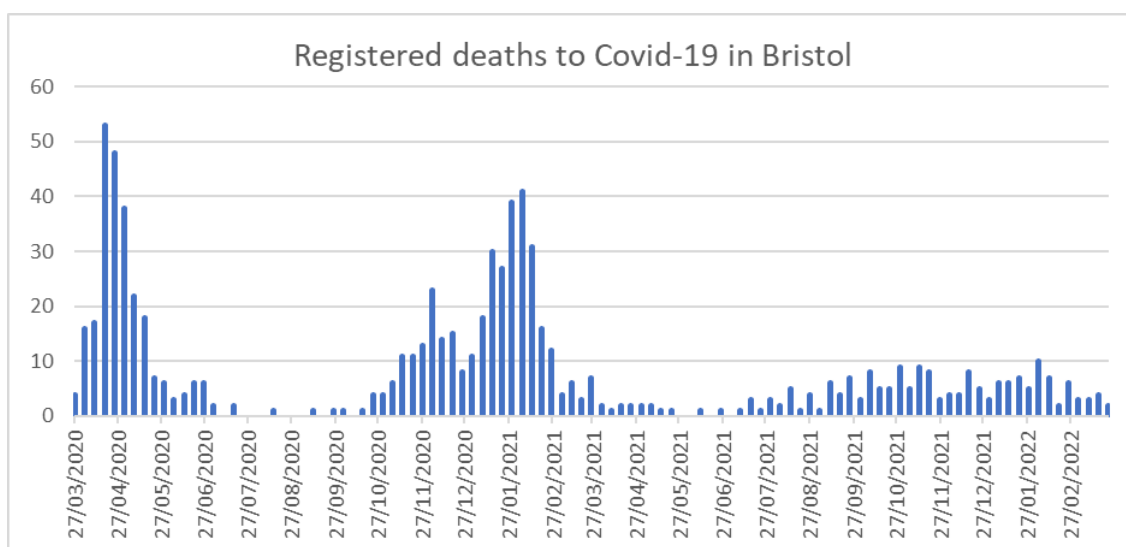
**Figure 8.3.1 Trend in number of individuals admitted to Bristol area hospitals who tested positive for COVID-19 <sup>48</sup>**



<sup>47</sup> NHS England (2022) COVID-19 Hospital Activity. Available from: <https://www.england.nhs.uk/statistics/statistical-work-areas/covid-19-hospital-activity/>

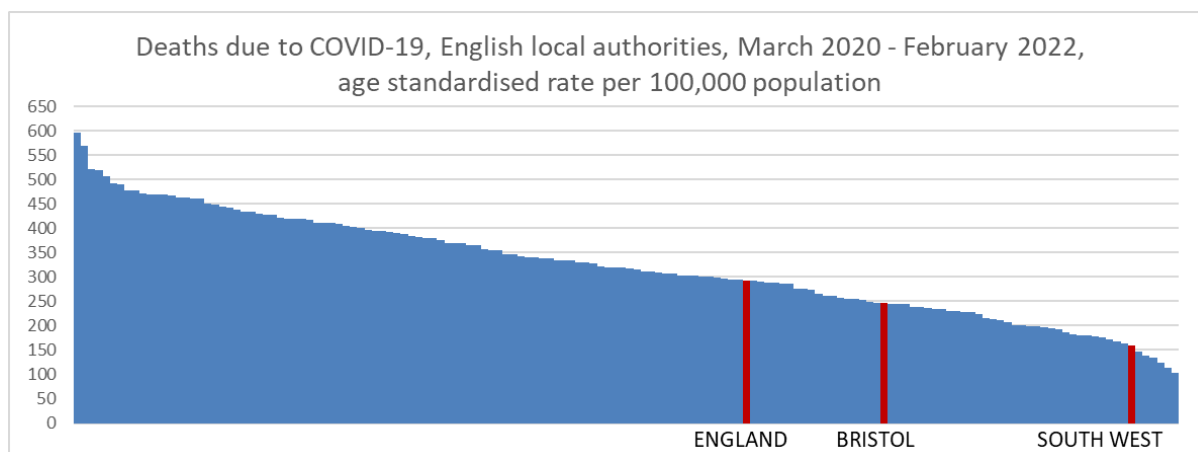
<sup>48</sup> UKHSA (2022) Coronavirus dashboard. Available from: <https://coronavirus.data.gov.uk/>

**Figure 8.3.2 Trend in number of COVID-19 deaths registered in Bristol <sup>49</sup>**



Accounting for differences in age structure, Bristol had a significantly lower COVID-19 mortality rate than the majority of local authorities in England (and England overall) though it was significantly higher than the South West regional average (Figure 8.3.3).

**Figure 8.3.3 Age standardised COVID-19 mortality rates, English local authorities <sup>50</sup>**



## 8.4 Vaccinations

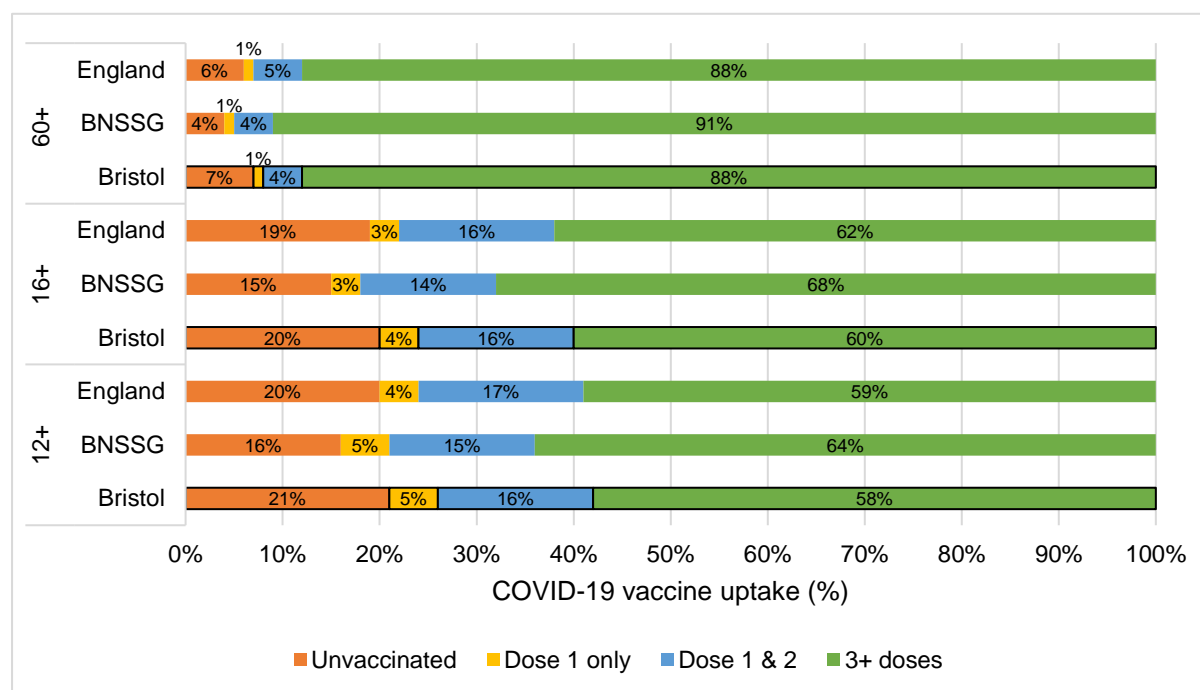
The COVID-19 vaccination programme started in Bristol on 8<sup>th</sup> December 2020. As at 31<sup>st</sup> March 2022, 76% of adults (16+ years) in Bristol had had 2 doses for COVID-19 and 60% have received a booster/third dose. **Figure 8.4.1** below shows the breakdown by different age groups and compares Bristol to the local health system

<sup>49</sup> ONS (2022) Death registrations and occurrences by local authority and health board. Available from: <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/causesofdeath/datasets/deathregistrationsandoccurrencesbylocalauthorityandhealthboard>

<sup>50</sup> Office for Health Improvement and Disparities (2022) COVID-19 Health Inequalities Monitoring for England (CHIME) tool. Available from: <https://analytics.phe.gov.uk/apps/chime/>

across Bristol, North Somerset and South Gloucestershire (BNSSG), and England overall <sup>51</sup>.

**Figure 8.4.1 COVID-19 vaccine uptake in different age categories as of 31 Mar 2022 in Bristol, BNSSG, and England**



## 8.5 Long COVID

Long COVID is defined as ‘signs and symptoms that develop during or following an infection consistent with COVID-19 which continue for more than 12 weeks and are not explained by an alternative diagnosis’ by NICE <sup>52</sup>. People who received the COVID-19 vaccine are less likely to develop long COVID symptoms compared to people who were unvaccinated or partially vaccinated <sup>53 54</sup>.

According to the latest Office for National Statistics (ONS) UK Coronavirus (Covid-19) Infection survey, an estimated 1.7 million people living in private households in the UK (2.7% of the population) were experiencing self-reported long COVID<sup>55</sup> as of 5<sup>th</sup> March 2022 <sup>56</sup>. Applying the same estimates to Bristol suggests there are 12,580 Bristol residents experiencing self-reported long COVID.

<sup>51</sup> NHS England & Improvement (2022)

<sup>52</sup> NICE (2020) Post Covid syndrome <https://www.nice.org.uk/news/article/nice-sign-and-rcgp-set-out-further-details-about-the-uk-guideline-on-management-of-the-long-term-effects-of-covid-19>

<sup>53</sup> Antonelli M et al., (2022) Risk factors and disease profile of post-vaccination SARS-CoV-2 infection in UK users of the COVID Symptom Study app: a prospective, community-based, nested, case-control study. *Lancet Infectious Diseases*. Available from: [https://doi.org/10.1016/S1473-3099\(21\)00460-6](https://doi.org/10.1016/S1473-3099(21)00460-6)

<sup>54</sup> UKHSA (2022) The effectiveness of vaccination against long COVID: A rapid evidence briefing. Available from: <https://ukhsa.koha-ptfs.co.uk/cgi-bin/koha/opac-detail.pl?biblionumber=64359>

<sup>55</sup> Defined as symptoms persisting for more than four weeks after the first suspected COVID-19 infection that were not explained by something else

<sup>56</sup> ONS (2021) Prevalence of ongoing symptoms following coronavirus (COVID-19) infection in the UK <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/prevalenceofongoingsymptomsfollowingcoronaviruscovid19infectionintheuk/1april2021>

## 9. Environmental health

### 9.1 Food and water borne illness

Foodborne illness (more commonly referred to as food poisoning) is any illness that results from eating contaminated food. Foodborne illness can originate from a variety of different foods and be caused by many different pathogenic organisms at some point in the food chain, between farm and fork. Although most cases in the UK are mild, they are unpleasant, resulting in absences from education or the workplace and place a significant demand on healthcare services. Foodborne illness can lead to further complications or death, although this is less common.

There were 567 confirmed cases of notifiable food infections reported to Bristol City Council (BCC) during the reporting period with the highest number of monthly reports seen in June 2021 (75 notifications)<sup>57</sup>. This is an increase in cases from the last reporting period: there were 509 confirmed cases during 2020–21. *Campylobacter* was the most common pathogen, accounting for 443 notifications, followed by *Giardia* (55 notifications).

The BCC Public Protection Team works closely with relevant health protection agencies and businesses to minimise spread and to investigate serious cases and outbreaks throughout the year.

There were 670 service requests during the reporting period. The majority (405, 60%) were COVID-19 related service requests, while over a third (228, 34%) were reports of suspected food poisoning and 37 reports were for suspected Infectious Diseases. The highest number of requests were processed in June and July 2021.

Legionellosis is caused by the *Legionella* family of bacteria, which are found in the environment. Infection can result in self-limiting fever and illness (called Pontiac fever) and more rarely, severe respiratory disease (called Legionnaire's disease). It is linked to poor water management where water is left stagnant at a lukewarm temperature, allowing the bacterium to survive, and transmitted through exposure to contaminated water aerosols and soil. There were five cases of Legionellosis reported to BCC during 2021–22, which were investigated jointly by UKHSA, HSE and BCC Environmental Health<sup>57</sup>.

### 9.2 Food Safety Inspections and Interventions

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

Authorised environmental health officers (EHOs) have the right to enter and inspect food premises without appointment or approval to ensure that businesses meet the requirements of the [Food Standards Agency](#) (FSA). Inspections utilise the FSA's '[Food Hygiene Rating Scheme](#)', awarding relevant businesses a 'rating' upon

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<sup>57</sup> UKHSA notifications recorded on Civica system (not publicly available)



completion of the examination. 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 schedules varying from every 6 months to every 36 months.

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. Towards the end of the last reporting period (2020–21), 14% of the required inspections/interventions had been achieved, compared to 79% achieved in 2019–20. Between April 2021 and March 2022, the lifting of restrictions for periods of time meant the recommencing of inspections at normal capacity; 3176 inspections were completed representing 66% of the total due. This remained below the FSA's expectations.

During 2021–22 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 sets out the timescale for authorities to clear the backlog of inspections by the end of March 2023. There was a backlog of 1728 visits by the end of 2021–22, which will add to the programmed visits and anticipated new business registrations giving an estimated total of 3448 visits due by the end of 2022–23.

The 2021–22 compliance rate across food businesses in Bristol was 97% excluding the establishments awaiting first inspection (81% 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 2021–22, BCC conducted 277 re-visits, issued 584 written warnings, with 13 voluntary closures or surrenders.

Looking forward, the backlog of inspections remains significant and a serious concern and risk to public health. We have reported the issues to the FSA as part of their regular monitoring of LA activity. Food inspector capacity during the reporting period was supported through temporary 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 contractors to reduce the backlog as much as possible. Subject to grant funding, the team plan to contract out a further 600 inspections for completion by the end of March 2023.

### 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 operating the long-established low throughput

International Border Control Point based at Avonmouth in liaison with Border Force, the Animal and Plant Health Agency, DEFRA, and the FSA.

A second Border Control Point funded by central Government and the Bristol Port Company has been built at Royal Portbury Docks where the deep-water dock is located, with input and liaison from BPHA regarding the necessary Border Control Point requirements. This facility is currently on hold.

During the reporting period (April 2021 to March 2022), 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, 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 included 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 Certificates. There was a steady record of manifest checks (197 over the reporting period) and checks on Maritime Declarations of Health (1324 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 Avonmouth fly situation update

The fly pollution problem reported in last year's Health Protection report (2020–21) has been resolved, which coincided with the closure of a local waste process. Given the industrialised environment, the Bristol City Council (BCC) Environmental Health team continue to be aware of the potential for environmental problems and will endeavour to respond to and investigate any future concerns.

## 10. Global population health

Population movement through travel and migration contribute to the spread of infectious diseases, as most recently demonstrated by the COVID-19 pandemic and Ebola prior to this. In addition the continuing effects of global warming may contribute to changes in how and where infectious diseases present, for example malaria in non-endemic countries <sup>58</sup>. Alongside the transmission of disease, a further consideration is the increased use of media routes to share information. This can be a very useful tool raising awareness but can have the potential to cause undue alarm in the population through misinformation. Global health priorities and potential infectious diseases of importance is therefore a critical part of Bristol's approach to health protection <sup>59</sup>.

Anti-microbial resistance (AMR) as described earlier in this report ([Section 6.1](#)) is a significant public health challenge internationally. Global surveillance systems are now in place to monitor antimicrobial resistance and antibiotic use at a global level, and the UK continues to contribute to international efforts through international aid such as the [Fleming Fund](#) and the [Global AMR Innovation Fund](#). There remains grave concern regarding inappropriate use of antibiotics across human, animal and agriculture.

Relatedly, despite decreasing incidence of tuberculosis (TB) in England, the rise of multidrug-resistant tuberculosis remains a priority nationally as highlighted in the national TB Action Plan for England, 2021–26 <sup>60</sup>. Bristol has higher TB incidence compared to other areas in the South West region, and monitoring both the detection of cases and treatment completion will be important parts of TB elimination ([Section 7](#)). Upstream prevention through TB vaccination among eligible high-risk babies is also key ([Section 3.2](#)).

The elimination and eventual eradication of other vaccine preventable diseases such as polio and measles remain elusive in a global context. The COVID-19 pandemic set back much of this work in 2020 and 2021; recovery and improving access globally are noted priorities for the WHO <sup>61</sup>. In the UK, novel technologies and methods such as wastewater surveillance <sup>62</sup> could contribute to early warning systems for outbreak management, but local health protection expertise is likely to remain valuable.

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<sup>58</sup> Fernando SD (2009) Climate Change and Malaria: A Complex Relationship. Available from: <https://www.un.org/en/chronicle/article/climate-change-and-malaria-complex-relationship>

<sup>59</sup> WHO (2022) Systems for Health: everyone has a role. Flagship report of the Alliance for Health Policy and Systems Research. Available from: <https://apps.who.int/iris/handle/10665/363923>

<sup>60</sup> UKHSA (2021) TB Action Plan for England, 2021 to 2026. Available from: <https://www.gov.uk/government/publications/tuberculosis-tb-action-plan-for-england>

<sup>61</sup> WHO (2020) 10 global health issues to track in 2021. Available from: <https://www.who.int/news-room/spotlight/10-global-health-issues-to-track-in-2021>

<sup>62</sup> UKHSA (2022) Expansion of polio sewage surveillance to areas outside London. Available from: <https://www.gov.uk/government/news/expansion-of-polio-sewage-surveillance-to-areas-outside-london>

## 11. Asylum Seeker and Refugee Health

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

A multi-agency group of statutory, community and voluntary partners was set up in August 2021 by Bristol City Council (BCC) to coordinate and facilitate the care of those arriving through the Home Office-organised initial accommodation hotel for ASRs. In September 2021, two further hotels were opened for people resettled from Afghanistan. In early 2022 this group worked to support the arrival of those fleeing conflict in Ukraine. This group meets regularly to focus on the health and wider needs of the ASR population. The health needs of the ASR population include a range of physical and mental conditions including post-traumatic stress disorder (PTSD) and trauma. The UKHSA Migrant Health Guide<sup>63</sup> continued to provide key guidance on health-related policy for health providers serving migrant populations.

[The Haven](#), a specialist primary healthcare care service for ASRs provided by Sirona Health and Care continued to provide 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.

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. Meanwhile work continued to promote the [Safe Surgeries initiative](#) to support GP practices in their work with ASRs.

The number of ASR is expected to continue to increase in the year 2022–23 which will create additional demand and system pressure on local services.

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<sup>63</sup> UKHSA (2021) Migrant Health Guide collection of guidance. Available from: <https://www.gov.uk/government/collections/migrant-health-guide>

## 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 death <sup>64</sup>.

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 inequalities <sup>65</sup>.

International and national actions to improve air quality often focus on particulate matter (PM<sub>10</sub>), fine particulate matter (PM<sub>2.5</sub>), and nitrogen dioxide (NO<sub>2</sub>) which are major components of urban air pollution <sup>66</sup> and 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 2020, 6.1% of all deaths in Bristol were attributable to long-term exposure to PM<sub>2.5</sub> pollution <sup>67</sup>. 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 others <sup>68</sup>. 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 (NO<sub>2</sub>) and fine particulate matter (PM<sub>2.5</sub>) so are slightly higher than the figure quoted above.

In Bristol, monitoring data shows continued exceedances of the annual mean NO<sub>2</sub> air quality objective close to roadside locations in the city centre and along the main arterial routes. While concentrations of NO<sub>2</sub> are declining, further urgent action is needed to comply with legal limits. Additionally, domestic solid fuel burning (a major source of PM<sub>10</sub> and PM<sub>2.5</sub>) is of increasing concern with limited awareness among the population.

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<sup>64</sup> 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](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)

<sup>65</sup> 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>

<sup>66</sup> PHE (2018) Health matters: air pollution. Available from: <https://www.gov.uk/government/publications/health-matters-air-pollution/health-matters-air-pollution>

<sup>67</sup> 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/yr/1/cid/4/tbm/1/page-options/car-do-0>

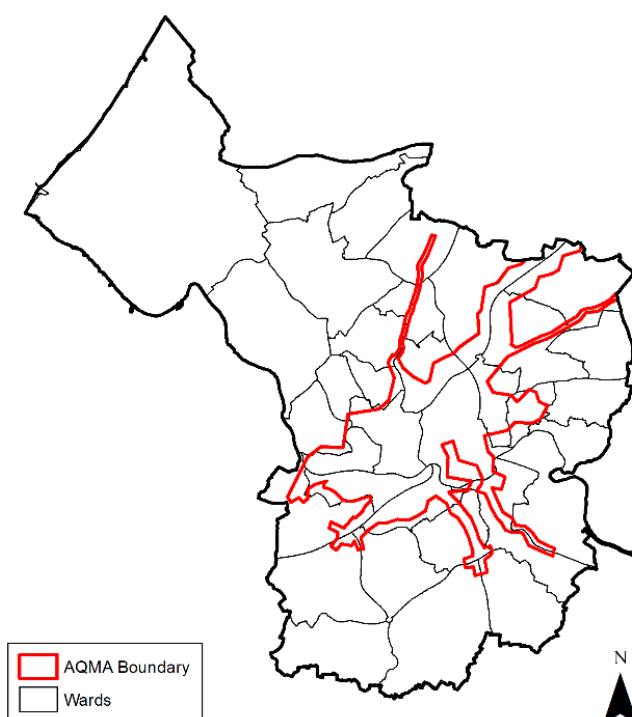
<sup>68</sup> Air Quality consultants (2017) Health Impacts of Air Pollution in Bristol. Available from: <https://www.bristol.gov.uk/files/documents/599-health-impacts-of-air-pollution-in-bristol-february-2017/file>

## 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<sub>x</sub> and 12% of PM<sub>2.5</sub> emissions in the UK<sup>69</sup>. At busy roadside locations, the contribution of traffic to NO<sub>2</sub> 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 12.2.1**). Approximately 100,000 people live within Bristol's AQMA, which has been in place since 2001.

**Figure 12.2.1 Map of Bristol's Air Quality Management Area (AQMA)** <sup>70</sup>



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](#).

A Clean Air Zone (CAZ) is scheduled to start in Bristol on Monday 28<sup>th</sup> November 2022. The CAZ will charge polluting vehicles to enter a zone in Bristol's city centre and is predicted to deliver compliance with the NO<sub>2</sub> 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 will be applied to ensure impact on low-income households is mitigated. Further

<sup>69</sup> DEFRA (2019). Clean Air Strategy 2019. Available from: <https://www.gov.uk/government/publications/clean-air-strategy-2019>

<sup>70</sup> Source: OS data © Crown copyright & database rights 2021 Ordnance survey 100023406



information is available on the [Clean Air for Bristol](#) website. The CAZ, along with an Air Quality Strategy, will shape local actions to tackle air pollution going forward.

### 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<sub>2.5</sub> emissions from domestic wood burning have been increasing in the last decade, and there is increasing evidence regarding PM<sub>2.5</sub> and a range of long-term diseases and deaths<sup>71</sup>. Recent evidence shows that domestic combustion accounted for 15% and 25% of PM<sub>10</sub> and PM<sub>2.5</sub> respectively in the UK in 2020, most of which comes from burning wood in closed stoves and open fires<sup>72</sup>.

In Bristol, additional measures are being considered to address PM<sub>2.5</sub> emissions from domestic solid fuel burning. For example, the DEFRA air quality grant funded “Slow the Smoke” citizen engagement project which started in 2021 aims 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.

### 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.

In the reporting period, the team worked with UKHSA, the BCC Housing team, and the BCC Public Health team regarding possible and confirmed lead-poisoning cases. This involved thorough environmental sampling, investigation, and supporting those affected to find the source of the problem and reduce exposure.

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<sup>71</sup> Thangavel P et al., (2022) Recent Insights into Particulate Matter (PM<sub>2.5</sub>)-Mediated Toxicity in Humans: An Overview. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9223652/>

<sup>72</sup> DEFRA (2022) Emissions of air pollutants in the UK – Particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>). Available from: <https://www.gov.uk/government/statistics/emissions-of-air-pollutants/emissions-of-air-pollutants-in-the-uk-particulate-matter-pm10-and-pm25>

## 13. Emergency Preparedness, Resilience and Response

### 13.1 Overview

Bristol City Council's Civil Protection Unit (BCC CPU) responded to 44 incidents throughout the reporting period. These included house fires, water leaks, suspected bombs, public disorder, and Storm Eunice, and therefore required the coordination of multiple services from the Council.

### 13.2 Interruption to Water Services

Bristol Water has a duty to provide water in bottles and bowlers in the event of a burst main or other loss of service. Bristol Water has a list of priority and vulnerable customers. BCC holds similar information. In the event of water failure Bristol Water and CPU work together to ensure that vulnerable people are identified and provided with water. This plan is activated a few times each year. The CPU has also mapped pre-identified bowser sites with Bristol Water, as part of a workstream to build resilience in communities.

In July 2021 a large water main, which feeds the city from a reservoir in Clifton, burst and a major incident was declared. In coordination with Adults and Children's services, the CPU identified potential vulnerable individuals who might need support as a priority; and additionally coordinated mutual aid and voluntary agencies to support the logistics of delivering water to those identified in need. This incident was during a spell of hot weather and warning and informing advice was shared via partners to communities.

### 13.3 G7 Summit, Cornwall

The G7 Summit was hosted in Cornwall during July 2021. The CPU supported Cornwall Local Authority with contingency plans for dedicated disaster mortuaries, utilising the final stages of the COVID-19 Excess Deaths storage capacity supplied by the Government as part of the COVID-19 response.

### 13.4 Control of Major Accident Hazards

The CPU has a duty to work with operators of Control of Major Accidents & Hazards (COMAH) sites and leads the Severnside External Emergency Plan, which covers sites in both Bristol and South Gloucestershire. This plan coordinates the emergency response of many organisations to a COMAH incident within Severnside. The Severnside multi-agency activation and notification was tested in Exercise Nova One, November 2021. The exercise and subsequent recommendations identified included the need to review rendezvous points for emergency services on the site used during the exercise; updates to the notification cascade; and updated references regarding the Radiation, Chemicals and Environment advice line and Science & Technical Advice Cell from UKHSA.



### 13.5 Avon and Somerset Local Resilience Forum

The Avon and Somerset Local Resilience Forum (ASLRF) is a multi-agency partnership with representation from local authorities (Bath and North East Somerset, Bristol, North Somerset, Somerset, and South Gloucestershire), local health services, emergency services, the Environmental Agency, the Maritime and Coastal Agency, utility companies, transport providers, military and volunteer agencies <sup>73</sup>.

Upcoming ASLRF Health related priorities, in collaboration with Local Health Resilience Partnership (LHRP) partners are:

- Psychosocial support (linked to Friends and Family Reception Centres, Survivor Reception Centres, and Humanitarian Assistance Centres) – LHRP to lead development of Regional Psychosocial and Mental Health Response Plan for incidents
- Mass casualties Plan/Framework – This work stream is included in NHSE&I South West EPRR Strategic Plan 2021-2024
- Review Vulnerable People Information Sharing Document – ASLRF 2022
- Identify Monitoring Sites and control measures for Surveillance of Invasive Mosquitoes – UKHSA 2023

The ASLRF is also looking at future risks to the health system, including those caused by supply chain failures, collapse of a care provider, pandemic flu, and other issues.

### 13.6 Demonstrations

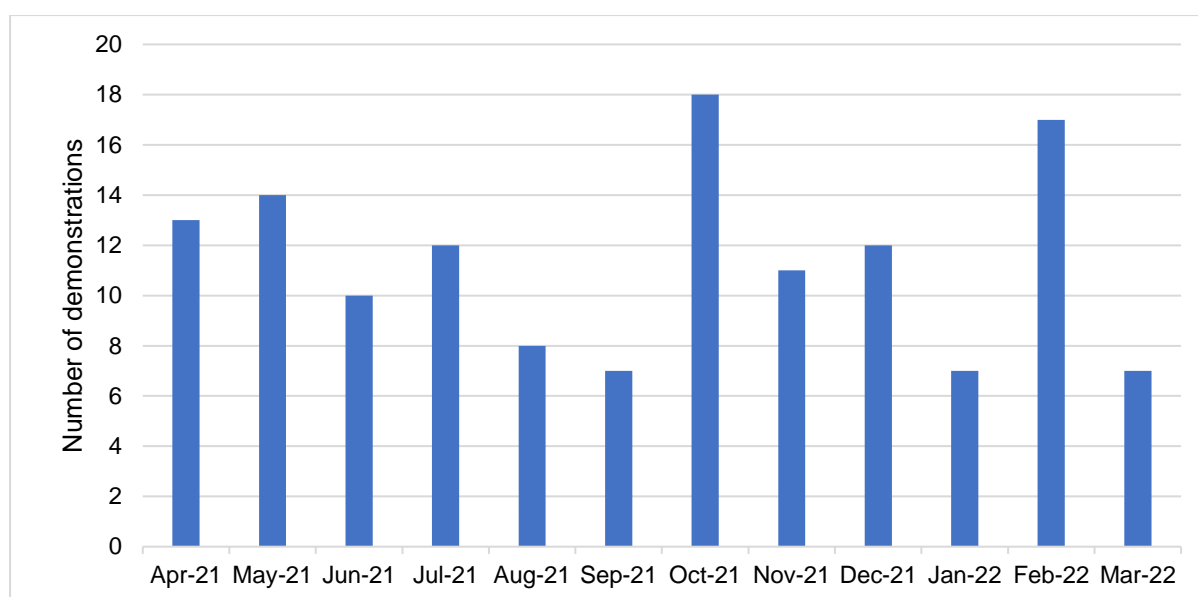
There were 136 demonstrations during 2021–22 noted in Bristol compared to 60 during the last reporting period (see **Figure 13.6.1**). There were also many more public open-air community engagement activities by groups who organised the demonstrations.

The subject of demonstrations was broad, as well as methods used i.e. static protests, vigils and rallies. During this time, there were 14 demonstrations relating to COVID-19, four regarding the NHS and one with the subject of Health and Mental Wellbeing.

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<sup>73</sup> Avon and Somerset Police (2022) Avon and Somerset Local Resilience Forum (LRF) described as part of Community Risk Register page. Available from: <https://www.avonandsomerset.police.uk/about/policies-and-procedures/community-risk-register/>

**Figure 13.6.1 Number of demonstrations during April 2021 – March 2022**



### 13.7 CPU COVID-19 response

Throughout the reporting period COVID-19 testing was delivered at many sites across the city by UKHSA with the support of BCC, commercial site owners, the University of Bristol, and other organisations. Publicly accessible free testing came to an end on 1<sup>st</sup> April 2022 and the sites have since been dismantled.

The surge testing programme (Operation Eagle) was thoroughly debriefed, and the associated learning will be used as a template if there is an outbreak of any infection, COVID-19 or otherwise, that needs a surge response.

### 13.8 Future plans

BCC CPU has reviewed and updated the Incident Response Plan with a look to update the Recovery Plan in winter 2022. Work has also commenced on an 'IT Response and Recovery Plan'.

The CPU has also commenced reviewing the Business Continuity templates for both Impact Assessments and Plans for each service, with a new Business Continuity Framework to structure internal escalations of impacts affecting critical services.

## Appendix A: Organisational roles and responsibilities across health protection in Bristol

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).

[End of document]