

BRISTOL HEALTH PROTECTION ANNUAL REPORT 2016/17

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ACKNOWLEDGEMENTS

Thank you to members of the Health Protection Committee in particular the following individuals for their significant contributions to the authorship of this report. Becky Pollard (Bristol City Council Public Health); Sophie Prosser (Bristol City Council Public Health), Thara Raj (Bristol City Council Public Health), Annette Billing (Bristol City Council Public Health), Mike Wade (Public Health England), Helen Trudgeon (Public Health England), Julie Mann (Public Health England), Madeleine McMahon (Public Health England), Julie Yates (Public Health England Screening and Immunisations), Jo Ferrie (Public Health England Screening and Immunisations), Bridget James (Bristol Clinical Commissioning Group), Cecily Cook (Bristol Clinical Commissioning Group), Michelle Jones (Bristol Clinical Commissioning Group), James Gillman (Bristol City Council Civil Protection, Adrian Jenkins (Bristol City Council Environmental Health), Indira Barker (Bristol City Council Environmental Health), Emma Tournier (Bristol City Council Environmental Health) and Andrew Edwards (Bristol City Council City Innovation and Sustainability).

EXECUTIVE SUMMARY

This is the third annual report of the Bristol Health Protection Committee. Whilst significant progress has been made in Health Protection in Bristol, there is still more needed to address what needs to be done.

The main burden of disease is in our most vulnerable communities within Bristol. For example between April 2016 and March 2017 we have seen a rise in em66 Invasive Group A streptococcal infections (iGAS) in intravenous drug users within the homeless community in the city.

We have seen and managed multi drug resistant tuberculosis (MDR TB), in vulnerable patients such as those with no home, or coinfection with HIV, patients with alcohol and drug dependency and who need extra help from the local health economy. In 2016/17 we have taken an active case finding approach with Bristol's homeless communities focusing on TB, hepatitis and drug and alcohol use.

Influenza and antimicrobial resistance (resistance to antibiotics) remain urgent health protection risks for Bristol residents and these also appear on the national risk register of civil emergencies. Tackling tuberculosis (TB), increasing immunisation rates and reducing variation in health outcomes are also pressing issues in Bristol that are being systematically addressed.

GLOSSARY

AGW	Avon, Gloucestershire, and Wiltshire
AMR	Antimicrobial Resistance
AQMA	Air Quality Management Area
ASLRF	Avon and Somerset Local Resilience Forum
BCG	Bacillus Calmette-Guerin
BNSSG	Bristol, North Somerset and Gloucestershire
BSI	Bloodstream infections
CBRN	Chemical Biological Radiological Nuclear
CCG	Clinical Commissioning Group
CDI	Clostridium difficile (C.diff) infection
COMAH	Control of Major Accident Hazards
CPE	Carbapenemase-producing Enterobacteriaceae
DTaP	Diphtheria, Tetanus and Polio
EPPR	Emergency preparedness, resilience and response
EVD	Ebola Virus Disease
GI	Gastro Intestinal
H&WB	Health and Wellbeing Board
HCAI	Healthcare associated infections
HIB	Haemophilus influenzae type b
HIV	Human Immunodeficiency Virus
HNA	Health Needs Assessment
HPC	Health Protection Committee
HPV	Human Papilloma Virus
IGAS	Invasive Group A Streptococcal
IPC	Infection, Prevention and Control
IPV	Inactivated Polio Vaccine
LHRP	Local Health Resilience Partnership
LTBI	Latent Tuberculosis Infection
MDR TB	Multi drug resistant tuberculosis
MMR	Measles Mumps and Rubella
MRSA	Methicillin Resistant Staphylococcus Aureus
NHS E	NHS England
NICE	National Institute for Health and Care Excellence
NOIDs	Notifiable Infectious Diseases
PCV	Pneumococcal conjugate vaccine
PHE	Public Health England
PIR	Post-infection review
QP	Quality premium
RCA	Root cause analysis
STAR-PU	Specific Therapeutic group Age-sex Related Prescribing Unit
STI	Sexually Transmitted Infections
TB	Tuberculosis
Td	Tetanus and diphtheria
WHO	World Health Organisation

INTRODUCTION

This is the third annual report to be presented to the Bristol Health and Wellbeing Board (HWBB). A summary of the recommendations made in the second annual report are listed in appendix 1. This report is part of a locally agreed assurance process that was put in place following the 2012 Health and Social Care Act (section 6C regulations). Health protection arrangements are governed by a range of statutory regulation which applies to a number of organisations, including Bristol City Council (BCC).

Bristol City Council (BCC) has a critical role in protecting the health of its population. BCC's Director of Public Health has set up a local Health Protection Committee (HPC) whose role is to ensure, on behalf of the HWBB, that adequate arrangements are in place for the surveillance, prevention, planning and response required to protect the public's health.

Health protection seeks to prevent or reduce the harm caused by communicable and non-communicable diseases, and minimise the health impact from environmental hazards.

Achieving success in health protection relies on strong working relationships at a local level. The Health Protection Committee (HPC) helps facilitate this relationship, ensuring that clearly defined roles and responsibilities are in places that underpin the local response to public health threats, outbreaks and major incidents. This report has been written to a framework that was agreed by the HPC and appendix 2 outlines progress to date against the following health protection areas:

- Infectious and communicable diseases
- Screening and immunisation
- Emergency preparedness, resilience and response (EPPR)
- Environmental hazards to health, safety and air quality

Appendix 3 outlines the different responsibilities for partner organisations.

ASSURANCE STATEMENT

The Chair of the Health Protection Committee has examined arrangements for health protection in Bristol and has provided this report to the Health and Wellbeing Board in line with their statutory responsibility to ensure that adequate arrangements are in place for the surveillance, prevention, planning and response required to protect the public's health.

The Annual Report for 2015-16 outlined current progress in Health Protection arrangements within Bristol, and provided a set of recommendations. This annual report provides updates on progress made against those recommendations and identifies areas to focus on for 2017/18.

RECOMMENDATIONS

To note the significant progress that has been made in 2016/17 to ensure that sustainable and effective local systems are in place for protecting the health of Bristol residents and their neighbours.

Appendix 1: Recommended actions in the 2015/16 Bristol Health Protection Annual Report

Tuberculosis (TB)

- Continue to explore options and opportunities to provide TB screening and active case finding among migrants and other under-served populations.
- Review commissioning arrangements for paediatric TB patients.
- Explore the potential for use of mobile x-ray units (MXUs) for use in prison.
- Clearly agree and outline local sustainable funding arrangements for TB incidents and outbreaks.

Healthcare Associated Infections

- Achieve the zero target for pre 48 hour MRSA blood stream infections
- Reduce the number of Clostridium Difficile pre 72hour community cases
- Reduce overall prescribing of antibiotics in primary care by 1%
- Reduce prescribing of cephalosporin, quinolone and co-amoxiclav by 20%.
- Review arrangements for oversight of infection prevention and control outside hospital settings.

Sexual Health

- Ensure a successful mobilisation of the new sexual health service
- Develop a new sexual health strategy for Bristol, to include a strategic action plan on HIV prevention and testing
- Review the work programme of the sexual health HIT (SHIPP) to ensure it aligns with the delivery of the new sexual health service and the priorities identified in the needs assessment
- Evaluate the interventions to strengthen HIV testing in primary care
- Explore the opportunities to utilise new technologies to offer increased access to STI testing.

Foodborne Illness

- To develop a healthy eating award for the city.
- To clear the backlog of Food Safety Inspections prioritising the highest risk rated premises and new businesses.

Communicable disease management

- Funding: Clearly agree and outline funding arrangements for incidents and outbreaks.
- Infection Prevention and Control: Review arrangements for oversight of infection prevention and control outside hospital settings

Immunisations and screening

- Maintain and improve current performance across all programmes.
- Reduce variability in coverage within and between programmes, with a focus on the Inner City Bristol locality.
- Implement the extension of the Childhood Flu programme to Year 3 primary school aged children and improve uptake for all eligible children.
- Improve uptake of seasonal flu vaccines by clinical 'at risk' groups.
- Improve uptake of flu and pertussis vaccines by pregnant women.
- The Screening and Immunisation Team, Bristol City Council Public Health Team and CCG locality chairs to work together to review uptake data by practice and by provider and develop action plans to target areas of poor uptake and coverage for each of the screening and immunisation programmes.
- Continue to strengthen collaborative multi-agency action plans to target areas of poor uptake and coverage for each of the screening programmes.
- Implement the actions arising from each of the Quality Assurance visits to programmes to ensure compliance with national standards and continuous service improvement.
- Closely monitor demand and capacity, and care pathways within the cancer screening programmes, escalating concerns promptly and reviewing pathways of care, as required, to maintain service effectiveness, to ensure waiting times remain within acceptable standards, and to meet any increase in demand.

Emergency Planning, Resilience and Response

- To validate existing plans and procedures, ensuring plans are effective and well-practised.
- To review local level arrangements for mass fatalities and excess deaths

Appendix 2: Progress made on areas of health protection

1. Infectious and communicable disease

1.1 Tuberculosis (TB)

TB is a priority issue for Bristol as identified by the Health Protection Committee. TB is caused by the bacterium *Mycobacterium tuberculosis*. It is a notifiable disease in the UK.

The Collaborative Tuberculosis Strategy for England 2015 – 2020 was published in January 2015 following extensive consultation. The strategy was jointly launched by PHE and NHS England, aiming to achieve a year-on-year decrease in TB incidence, a reduction in health inequalities, and ultimately the elimination of TB as a public health problem in England.

There has been a year-on-year decline in the incidence of TB in England over the past four years, down to 10.5 per 100,000 (5,758 cases) in 2015, a reduction of one-third since the peak of 15.6 per 100,000 (8,280 cases) in 2011 but UK TB incidence is higher than most other Western European countries and the US¹ (8 per 100,000 France, 8 per 100,000 Germany and 3 per 100,000 US). The recent decline in the incidence of TB in England is likely to reflect a combination of different initiatives, including the impact of the UK TB pre-entry screening programme, a reduction in the number of new migrants from high TB burden countries and the early impact of testing and treating patients with latent TB infection (LTBI)².

Despite the reduction in overall TB cases, the number of cases with social risk factors (homelessness, drug or alcohol misuse or imprisonment) has not declined. The proportion of cases with at least one of these risk factors increased from 9.8% in 2014 to 11.8% in 2015. The rates of TB and the risks of delayed diagnosis, drug resistance, onward transmission and poor treatment outcomes are greatest among these individuals. TB cases with social risk factors are more likely to have pulmonary disease and drug resistance, and have worse TB outcomes. TB in England remains a public health priority due to current rates and the health, social and economic burden of the disease.

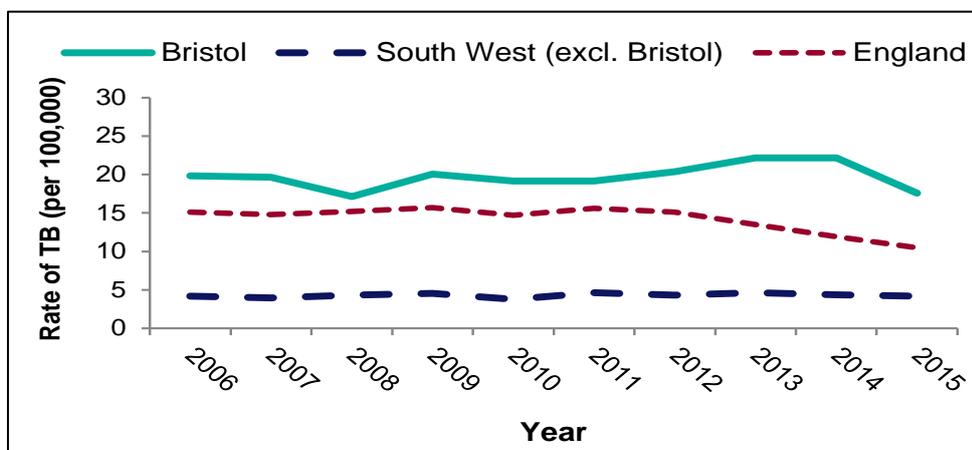
Annual TB incidence rates in Bristol remain considerably higher than in the rest of the South West and England (figure 1). At its peak in 2014, the rate of TB in Bristol was 22.4/100,000 although this has decreased in 2015 to 17.6/100,000. In 2015 from culture confirmed pulmonary cases that underwent antibiotic sensitivity testing a higher proportion of Bristol's notifications (12.2%) were found to have infections with resistance to at least one first line drug compared to the rest of the South West (3.1%). Furthermore 2.4% of 2015 infections in Bristol were multidrug resistant whereas there were none in the rest of the South West. The national picture for TB is not indicative of what is represented within the Bristol Population. Data from the BNSSG Field Epidemiology Service (South West) suggests that we are seeing

¹ [World Health Organization \(WHO\) estimates of tuberculosis incidence by country, 2015](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/581013/WHO_estimates_of_tuberculosis_incidence_by_country_2015.pdf)
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/581013/WHO_estimates_of_tuberculosis_incidence_by_country_2015.pdf Last updated January 2017.
London: Public Health England

² [Tuberculosis in England: 2016 report \(presenting data to end of 2015\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/581238/TB_Annual_Report_2016_GTW2309_errata_v1.2.pdf)
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/581238/TB_Annual_Report_2016_GTW2309_errata_v1.2.pdf London: Public Health England.

more cases of TB in Bristol Residents who are UK Born. We have also seen complicated cases of drug resistant TB in patients who are homeless, and who have no recourse to public funding.

Figure 1. Annual TB incidence rates per 100,000 resident population, 2006-2015



Data source: Enhanced Tuberculosis Surveillance (ETS). Data extracted: September 2016.

Table 1. TB epidemiology: Bristol and South West (excl. Bristol) residents, 2016-17

TB INCIDENCE	Bristol	South West*
Number of TB cases notified (proportion pulmonary TB)	79 (62.0%)	211 (67.8%)
Rate per 100,000 population	17.6	5.0
DRUG RESISTANCE		
Proportion of culture confirmed cases with any first line resistance	12.2%	3.1%
Proportion of culture confirmed cases with multi-drug resistance**	2.4%	0.0%
SOCIAL RISK FACTORS (history of past or current homelessness, imprisonment, drug and/or alcohol misuse)		
Proportion of cases with any social risk factor	19.4%	11.0%
TREATMENT COMPLETED within 12 months ***		
Number completing treatment in 2014 (Proportion completing)	66 (81.5%)	150 (73.5%)

* South West excluding Bristol upper tier local authority

**Resistant to at least isoniazid and rifampicin

***Excluding those with rifampicin resistance, CNS, spinal, miliary or cryptic disseminated TB, patients with these forms of disease may have planned treatment for 12 months or longer

Data source: Enhanced Tuberculosis Surveillance (ETS). Data extracted: September 2016.

Successes/Progress

TB Control Board

The TB Control Board for the South of England covers Bristol and has been operational since September 2015. This has resulted in coordinated leadership across Bristol, North Somerset & South Gloucestershire at a time when we are seeing more and more complex TB cases.

Bristol, North Somerset, Somerset and South Gloucestershire (BNSSG) TB Network/Strategy Group

A strategy for reducing TB incidence in the area has been created by the network/strategy group³. Recommendations from a 2016 TB Health Needs Assessment informed six priority areas for action which are identification and removal of barriers of access to TB treatment services, reduction in the time from symptom onset to treatment commencement, expansion of Latent TB Infection Screening and roll-out of retrospective screening, develop outreach services and active case finding in at risk groups, maximising BCG uptake in eligible newborns and provision of comprehensive TB services to support paediatrics. Named leads have been identified from the network group for each area.

Tuberculosis Cohort Review

Much of the work by the TB Control Board is informed by a quarterly TB Cohort Review meeting of patients being treated within their geographical boundaries. Cohort reviews aim to strengthen the prevention and control of TB through a review of case management and assessment of outcomes compared to local and national TB targets, also providing an opportunity to identify unmet health and social care needs of cases and highlight system-issues in the TB control pathway at case-level. Cohort review meetings are multidisciplinary and multi-agency with representation from nurses, doctors, and public health practitioners from the NHS, local councils, and Public Health England. This ensures that TB control is joined up at all levels. In 2016/17 Bristol has had several cohort review meetings and these have used enhanced local data collection to identify local issues for action.

Latent TB screening programme for migrants

The majority of active TB cases diagnosed in England are a result of reactivation of Latent TB infection (LTBI). Systematic screening and treatment of LTBI in new entrants should significantly reduce the incidence of TB. This is one of the key interventions supported in the 'Collaborative Tuberculosis Strategy for England'⁴ and is supported by NICE⁵ as being a cost-effective intervention. In January 2015, as a high incidence area in the South West, Bristol received funding from the TB Control Board to establish new migrant LTBI testing and treatment services in areas with high incidence (>20 per 100,000 population). Phase one of

³ PHE. (2017) *DRAFT Reducing TB Incidence in the South West . A TB Strategy for Bristol, North Somerset & South Gloucestershire*. April 2017.

⁴ PHE & NHS England (2015) *Collaborative Tuberculosis Strategy for England 2015 to 2020*. (Jan 2015).

⁵ NICE (2015). NG33: Tuberculosis. Jan 2015.

<https://www.nice.org.uk/guidance/ng33/chapter/Recommendations> [accessed 24/05/2016] PHE (2016).

the Bristol LTBI testing and treatment service was launched in January 2016. As a result a majority of GP surgeries (including the Haven) with the highest incidence of active TB in Bristol started offering IGRA blood tests to migrants who have moved to the UK in the previous 5 years. Currently phase two is underway targeting medium incidence practices.

Active TB case finding event for individuals who were homeless/used drugs

In early 2016 a cluster of TB cases was identified among individuals who were associated through recreational drug use and homelessness in central Bristol. Traditional contact tracing is challenging in these situations and a local working group had already been exploring various options for active case finding in under-served populations such as those who are homeless or use drugs. Active case-finding with mobile Chest X-Ray units has been shown to be effective in homeless and/ or drug misuse populations in London.(Jit, Stagg, Aldridge, White, & Abubakar, 2011⁶) Whilst population rates of TB are lower in Bristol, the working group identified that that a programme of active case-finding in these groups was still likely to meet the threshold for cost-effectiveness according to the NICE guidelines. (NICE (NG33), 2016)

In February 2017, the London 'Find and Treat' service was commissioned to bring a mobile chest x-ray unit to Bristol to screen homeless and/or substance-misusing individuals for TB. The event facilitated several interventions including symptom questionnaires and digital chest x-rays to identify active pulmonary TB, vaccination for Hepatitis B and Influenza, testing for blood-borne viruses (point-of-care saliva test for hepatitis C and dry bloodspot for hepatitis B, C and HIV), and a fibroscan to test for hepatitis C – associated liver disease. A rapid enrolment service was also established enabling currently un-registered individuals to register on site with homeless health primary care services and local drug outreach services were also available to link individuals into their service if required. Local TB nurses and Hepatology staff were also on site to ensure swift follow up where necessary. Over 215 individuals were screened over the two day event and nine were referred to the Avon TB Clinic following abnormal chest x rays.

The event involved staff from over 20 different organisations including the NHS and numerous third sector agencies. Front line staff training prior to the event highlighted a lack of TB awareness and referral processes which is subsequently being reviewed by a subgroup from the BNSSG TB Network/Strategy Group.

Key current risks

- **Under-served populations:** TB is not only a serious infectious disease but it also has major social impacts for those affected. TB is associated with marked inequalities in health; with deprived populations more likely to get TB and suffer worst outcomes. The local health needs assessment (HNA) indicated that TB incidence in Bristol is related to deprivation, with the highest incidence rates observed in the most deprived groups. Sixty six percent of TB cases notified were among individuals who live in the two most deprived quintiles. Of TB cases where occupation status is

⁶ Jit, Stagg, Aldridge, White, & Abubakar. Dedicated outreach service for hard to reach patients with tuberculosis in London: observational study and economic evaluation. British Medical Journal. <https://www.ncbi.nlm.nih.gov/pubmed/22067473> 2011 Sep 14;343:d5376. doi: 10.1136/bmj.d5376

recorded, 20.0% were unemployed. Some areas where we have seen high prevalence, have been in areas with a high population of white, UK born residents.

In addition, a substantial proportion of notified TB cases possess at least one social risk factor. Under-served and vulnerable populations are continuously highlighted in the qualitative findings of the HNA as well as in literature as groups requiring more support to engage with health services and complete treatment.

- **Paediatrics:** There is no dedicated paediatric TB nurse to undertake outreach work with children who have TB. This is done by the paediatric immunology nurses alongside their other work, but they have limited capacity to meet the needs of children with TB and their families.
- **Prison TB healthcare:** A lack of X-ray machines (and trained technicians) on site at HMP Horfield prison can prove a challenge for clinicians in the diagnosis of TB. This means that if a prisoner requires a chest x-ray staff need to be available to escort them to and from a hospital. In the event of a large screening exercise or an outbreak, this would be difficult.
- **Outbreak management:** The funding arrangements for TB incidents and outbreaks need further local clarity. This has been added onto both Bristol City Council Public Health and PHE SW Risk Registers. A financial plan to underpin the communicable disease framework is needed.

Areas for focus in 2017-18

- Continue to explore options and opportunities to provide active TB screening within the city, targeting underserved populations
- Review commissioning arrangements across the BNSSG area for paediatric TB patients.
- Escalate the need for national clarification for sustainable funding arrangements for TB Incidents and outbreaks.

1.2 Infection Prevention and Control (IPC)

Preventing healthcare associated infections (HCAI) is an important component of infection prevention and control and patient safety. National Institute for Health and Care Excellence (NICE)⁷ estimated that 300,000 patients a year in England acquire a healthcare associated infection as a result of care in the NHS. In 2007, methicillin-resistant *Staphylococcus aureus* (MRSA) bloodstream infections (BSI) and *Clostridium difficile* infections were recorded as the underlying cause of or a contributory factor in, approximately 9000 deaths in hospital and primary care in England. Healthcare associated infections are estimated to cost the NHS approximately £1 billion a year and £56 million of this is estimated to be incurred after patients are discharged from hospital.

All patients identified with MRSA BSI are subject to a comprehensive post-infection review (PIR), which upon completion, is submitted to Public Health England. The purpose of the PIR is to identify how each case occurred and to agree actions to prevent the same circumstances recurring.

Similarly all cases of *Clostridium difficile* are subject to a root cause analysis (RCA) investigation to identify learning and share best practice to reduce the incidence of infections.

Successes/progress

Healthcare associated infections

A healthcare associated infection (HCAI) Group meeting is held bi-monthly chaired by Bristol Clinical Commissioning Group (CCG). Membership is drawn from commissioners (CCG and NHS England) hospital and community providers, local authority and public health England across Bristol, South Gloucestershire and North Somerset (BNSSG). The aim of the group is to ensure that the appropriate governance systems and processes are in place to prevent avoidable healthcare associated infections. The group provides regular updates and assurances on performance, antimicrobial stewardship, identified trends and associated work for improvement including sharing best practice and lessons learned from post infection reviews. In bringing together all commissioning bodies the group also supports improved oversight of infection prevention and control outside hospital settings.

During 2016/17 North Somerset CCG commissioners and providers joined the HCAI group. The terms of reference were updated to reflect the purpose of the group across a wider geographical area.

MRSA Steering Group/ Report into MRSA in people who inject drugs

During 2016/17, Bristol CCG continued the work, commenced in 2015, to reduce the incidence of MRSA amongst intravenous drug users (IVDU). This work included educating individuals on alternatives to injecting, safer injecting, skin and injecting site care, skin preparation prior to injecting, signs and symptoms of infection and signposting for prompt

⁷ NICE (2012) Healthcare-associated infections: prevention and control in primary and community care Healthcare-associated infections: prevention and control in primary and community care. CG139.

clinical intervention. These interventions have been taken forward by the Bristol Drugs Project.

In addition during 2016, funding was obtained to undertake a joint research project by University of Bristol and Public Health England, to look at intravenous drug users and transmission networks to identify interventions to reduce MRSA BSI and onward transmission, including a baseline assessment for evaluating impact of targeting and distributing chlorhexidine wipes allied to suppression strategies. The recommendations of this research are due to be published in July 2017.

The national zero tolerance target for MRSA was not achieved in 2016/17. Through the concerted work of the healthcare associated infection group in partnership with communities in Bristol, the number of CCG assigned healthcare associated pre 48 hour MRSA cases remained the same as the previous year at three cases. However the overall number of cases rose with a notable increase amongst the homeless drug injecting population. These cases were not associated with healthcare interventions, but tackling such infections will continue to be a key priority for the health community in 2017/18 to meet the zero tolerance target.

Clostridium difficile (C.diff) review meetings

A Clostridium difficile post infection review meeting, including public health infection control specialists and Bristol CCG quality and medicines management representation is held each month with acute trust providers. The purpose of the post infection review meeting is to review every case of post 72 hour Clostridium difficile and identify any learning that can be addressed and shared to improve practice. In 2016/17 NHS England assigned a local ambition for Bristol CCG to have no more than 131 cases of C.diff. This figure takes into account Bristol acute hospital trust apportioned cases and community apportioned cases. The total number of C.diff cases in 2016/17 was 122 which meant the local ambition was successfully achieved and was a reduction of 12 cases from the previous year.

During 2016/17 an electronic version of the root cause analysis (RCA) tool for primary care (GP practices and community pharmacies) was developed to support the review of pre 72 hour C.diff cases. The aim of the electronic tool was to aid the completion of root cause analysis by GP practices and support the further analysis of the information collated. Unfortunately the compliance for completing the electronic tool dropped during 2016/17 to 59% from 73% the previous year when the tool was paper based. As a result of this a reminder process has been established, which includes notifying the practice pharmacist, plus improved feedback to practices to support learning.

All the pre-72 hour C.diff community cases were reviewed by quality and medicines management colleagues. All learning identified was fed into an action plan to aid the reduction in incidence of C.diff infections in the community.

Antimicrobial Resistance (AMR)

The Medicines Management team at Bristol CCG continue to work with colleagues and partners across Bristol to address antimicrobial resistance. AMR is of global, national and local concern. The World Health Organisation (WHO) cites the issue as a great threat to human health. The government published a UK 5 Year Antimicrobial Resistance Strategy 2013 to 2018 (DH, 2013) which sets out actions to slow the development and spread of antimicrobial resistance.

In 2016/17, a national quality premium (QP) target was introduced for primary care to reduce the overall prescribing of antibiotics by 4% or equal to (or below) the England 2013/14 mean performance of 1.161 items per STAR-PU (Specific Therapeutic group Age-sex Related Prescribing Unit) and to reduce the prescribing of cephalosporin, quinolone and co-amoxiclav by 20% (due to broad spectrum antibiotics being associated with an increased risk of *Clostridium difficile* infection and antimicrobial resistance). Work was undertaken by local GPs and Medicines Optimisation Pharmacists to support this quality premium across Bristol. This involved a re-audit of broad spectrum antibiotic prescribing. The results positively demonstrated that there has been a reduction in the number of patients prescribed any antibiotic, a reduction in broad-spectrum antibiotic prescribing and increased compliance with BNSSG antimicrobial guidelines over the previous year. The quality premium targets were met for 2016/17.

A new quality premium has been introduced for 2017/18 which aims at reducing gram negative blood stream infections (BSI) across the whole health economy, part of this quality premium involves a reduction of inappropriate antibiotic prescribing for urinary tract infections in primary care as well as reducing inappropriate prescribing of all antibiotics in primary care. Supportive projects involve a review of prophylactic antibiotic prescribing for urinary tract infections as well as an educational project aimed at improving urinary tract infection diagnosis in a Care Home with Nursing setting.

In addition to this, clinicians across Bristol have access to locally endorsed evidence based guidance on the use of antibiotics in primary care settings⁸. This guidance helps prescribers to choose the most appropriate antibiotic for the infection they are treating, and to prescribe it for the most appropriate duration. These guidelines encourage the use of narrow-spectrum antibiotics rather than broad-spectrum antibiotics where appropriate and are updated every two years or more frequently if there are significant changes to recommendations. Further to these guidelines, extra guidance on recurrent urinary tract infections, lower urinary tract infections and supportive guidance for nursing homes have been developed.

A local BNSSG Antimicrobial Pharmacist network continues to meet three times a year to share clinical audit, best practice and to provide support to healthcare professionals. It offers a reliable communication cascade system and an opportunity to collaborate on the delivery of the AMR QPs and CQUINs as well as local best practice guidance.

⁸ NHS Bristol, North Somerset and Gloucestershire (BNSSG) [Antimicrobial Prescribing Guidelines for BNSSG Health Community v4.1, May 2017](#)

Key current risks

- Infection prevention and control is fundamental to stop the spread of infectious and communicable disease. Performance in Bristol has improved in terms of reducing the number of C.diff infections, but the MRSA zero target was not met for 2016/17 and an increase was noted in cases amongst homeless individuals who inject drugs.
- Maintaining an oversight of infection prevention and control outside hospital settings, to ensure all different commissioning bodies including the local authority, CCG, NHS England and Public Health England are sighted and aligned on infection prevention and control risks.
- Improved prescribing practice of antibiotics including broad spectrum antibiotics needs to be maintained so that the right people receive the right antibiotics at the right time.

Areas for focus in 2017/18

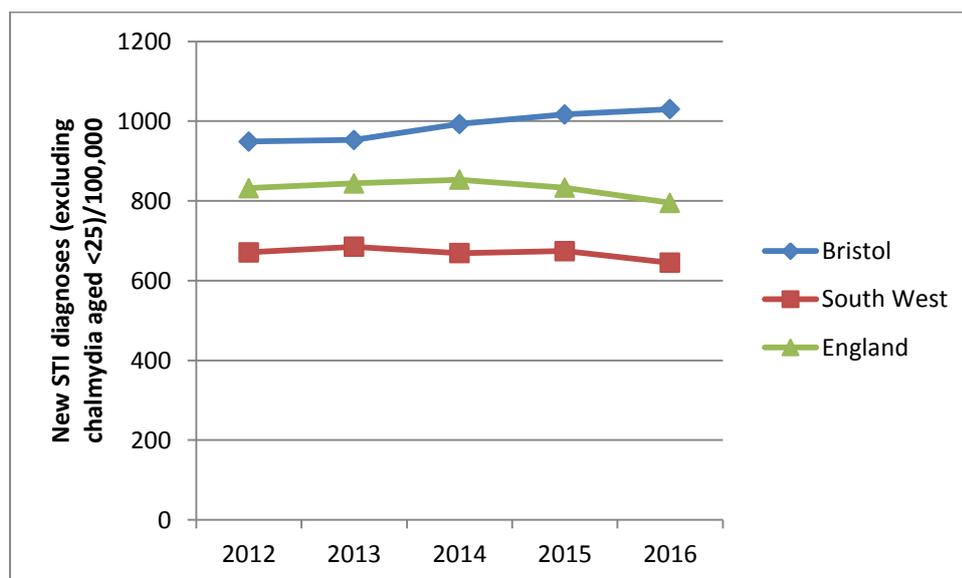
- Increased focus on the number of MRSA blood stream infection amongst the intravenous drug user population. Relaunching the MRSA IVDU task and finish group with input from all agencies. Achieve the zero target for pre 48 hour MRSA blood stream infections
- Maintain a reduction in the number of Clostridium Difficile pre 72 hour community cases
- Maintain a reduction in overall prescribing of antibiotics in primary care, with antibiotic items/STAR-PU being equal to or below England 2013/14 mean performance value of 1.161 items per STAR-PU.
- Reduce the number of trimethoprim items prescribed to patients aged 70 years or greater by 10% on baseline data (June15-May16)
- Reduce the Trimethoprim: Nitrofurantoin prescribing ratio by 10% based on CCG baseline data (June15-May16)
- Focus on reduction of E.coli bacteraemias through establishing a task and finish group and developing a PIR process for investigating and analysing all cases.

1.3 Sexually Transmitted Infections

Sexually Transmitted Infections (STIs) is a term used to describe a variety of infections passed from person to person through unprotected sexual contact. STIs can have lasting long term and costly complications if not treated and are entirely preventable.

Over the last decade the rates of all STIs diagnosed in genitourinary medicine (GUM) clinics have risen across England as a whole, and these increases have been reflected in Bristol. This is partly explained by increased testing through the National Chlamydia Screening Programme (NCSP) and improvements in diagnostic tests, however also reflects ongoing unsafe sexual behaviours. In Bristol syphilis rates are now better than the national average, and gonorrhoea rates are similar to the national average. **Figure 2** shows the trends in new STI diagnoses between 2012 and 2016. Bristol's rate of new STI diagnoses in 2016 was 1,030 per 100,000 (excluding chlamydia in the under 25s). The Bristol rate was higher than the national average of 795 per 100,000 and has continued to increase since 2014, when nationally the rate is declining.

Figure 2. Rate per 100,000 population of STI diagnoses in England (2012 to 2016)
(Data from PHE Fingertips)

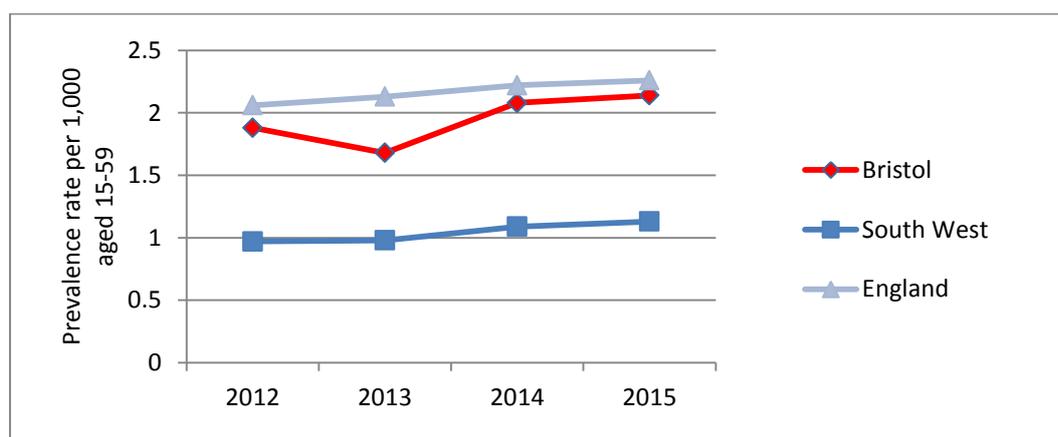


There is variation in the distribution of the most commonly diagnosed STIs by age, gender, sexual orientation and ethnicity as outlined below.

- Young people (15-24 year olds) continue to experience the greatest burden of STI diagnoses.
- Diagnoses of chlamydia, syphilis and gonorrhoea are more likely to be reported in men who have sex with men than other groups.
- There is wide variation in the rates of STIs diagnosed within different ethnic groups. The highest rates of STI diagnoses are found among persons of black ethnicity, and the majority of these cases were among persons living in areas of high deprivation, especially in urban areas.

HIV is associated with considerable morbidity and mortality and requires significant long-term care and treatment. Drug therapies have reduced the incidence of HIV-related deaths but it remains a life-threatening infection. The overall prevalence of HIV for Bristol increased in 2015 to 2.14 per 1,000 residents aged 15-59 year which means Bristol is now considered to be over the threshold for expanded HIV testing (see **figure 3**). The prevalence rate is slightly below the national average. Some groups in society are affected disproportionately by HIV, including MSM and black African communities. Late diagnosis of HIV remains a concern, with 43.2% of people in Bristol presenting at a late stage of infection between 2013 and 2015, which is slightly higher than the national rate of 40.1%.

Figure 3. HIV prevalence rate per 1,000 population (2012-2015) (Data from PHE Fingertips)



Successes/Progress

Procurement of new integrated sexual health services

During 2016/17 a new integrated sexual health service was successfully procured as a collaboration between Bristol, North Somerset and South Gloucestershire local authorities and the accompanying Clinical Commissioning Groups. Bath and North East Somerset Council joined the collaboration for the chlamydia screening programme only. A competitive tender was advertised in 2016, following an extensive consultation exercise. The contract was awarded to University Hospitals Bristol (UHB) NHS Foundation Trust as lead provider, with UHB subcontracting to a number of local NHS trusts and national voluntary sector providers, including Brook and Terrence Higgins Trust. The contract started on 1 April 2017 and the service now operates under the brand name 'Unity'. Commissioning the new service has provided an opportunity to address some of the gaps in the previous current sexual health system in order to achieve better outcomes for Bristol residents.

Introducing online STI testing

Unity has launched a new website which gives Bristol residents the option to order STI self-test kits online. The test kits available include a female, male and MSM kit. The service is being promoted through social media channels that target high risk groups.

Relationships and Sex Education

Bristol Public Health have continued to support Bristol schools to deliver high quality PSHE, including relationships and sex education (RSE). A notable success this year has been the investment in a comprehensive primary PSHE education curriculum, which has allowed Bristol schools to purchase the resource at a reduced price. A full training programme was delivered to support schools to introduce the scheme. This curriculum includes age appropriate progressive lessons for the teaching of Relationship and Sex Education, which means that Bristol schools using the resource are fully prepared in advance of the new statutory status for primary schools. PSHE is an integral part of the Healthy Schools programme and from September 2017 schools will be able to gain recognition in good and outstanding delivery of RSE through a 'Bristol Ideal' badge.

Sexual Health Population and Patients Health Integration Team (SHIPP HIT)

The mission of the Sexual Health Improvement HIT is to transform services to improve sexual health for the people of Bristol, North Somerset and South Gloucestershire. The team tackles a range of local sexual health challenges, including increasing rates of HIV infection, higher than national average rates of chlamydia, high teenage pregnancy rates in some disadvantaged communities and a rise in abortions amongst women over 25. During 2016/17 the work programme of the sexual health HIT (SHIPP) to ensure it aligns with the delivery of the new sexual health service and the priorities identified in the needs assessment.

Key current risks

- The local authority continues to need to achieve financial efficiencies in spend on sexual health services whilst managing an increasing demand for the services.
- Cost pressures on local authority sexual health budget arising from the introduction of HPV vaccine, Hepatitis A vaccine and the national Pre Exposure Prophylaxis trial in GUM services
- Concerns of emerging gonorrhoeal antibiotic resistance
Increasing number of national STI outbreaks, such as hepatitis A and hepatitis B

Areas for focus in 2017-18

- Ensure schools continue to be supported to teach high quality relationship and sex education in order to equip young people with the skills to improve their sexual health and overall wellbeing, in light of the recent decision to make RSE statutory in all secondary and primary schools
- Develop a strategy to improve chlamydia diagnosis rate in 15 -24 year olds through opportunistic screening, which has been in constant decline from 2012 to 2015.
- Involvement in the national trial of HIV PrEP (Pre-Exposure Prophylaxis). The trial should begin towards the end of 2017.
- Strengthen local prevention efforts focused on groups at highest risk, including young adults, black ethnic minorities and MSM.
- Strengthen partner notification work across sexual health services and primary care
- Further explore the opportunities to utilise new technologies to offer increased access to STI testing.

1.4 Foodborne 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 the majority of cases in the UK are mild they are unpleasant, result in absences from education or the workplace and place a significant demand on healthcare services. Occasionally foodborne illness can lead to complications or even death.

Access to safe food and water is one of the most fundamental human needs. Latest figures from the Food Standards Agency state that there are over 500,000 cases of food poisoning per year across the UK from identified causes and if the unidentified causes were to be included this figure would more than double. In Bristol, there were 842 cases of gastrointestinal infection reported between April 2016 and March 2017 (see **Table 1**).

Table 1: Confirmed cases of gastrointestinal infection reported to HPZone in residents of Bristol local authority, April 2016 to March 2017*

Source: PHE HPZone

Infection	Total cases reported to HPZone
Campylobacter	506
Cryptosporidium	76
E. coli VTEC	13
Giardia	147
Shigella	17
Salmonella	78
Paratyphoid Fever	5
Typhoid Fever	0

* Cases were extracted and analysed based on date entered onto HPZone.

Table 2: Cases of norovirus and rotavirus in residents of Bristol local authority, April 2016 to March 2017^

Source: PHE Second Generation Surveillance System (SGSS)

Infection	Total cases reported to SGSS
Norovirus	235
Rotavirus	26

^ Cases were extracted and analysed based on specimen date.

Please note that under-reporting to SGSS from Severn Pathology is known to have occurred in October 2016 – December 2016. This is in the process of being rectified .

Successes/Progress

Food Standards Agency Audit Report

The food service was recently audited by the Food Standards Agency, and as a result an action plan has been agreed with the agency. A key action included identifying additional funding from the public health ring fenced budget in order to act as a catalyst to address barriers to the food businesses inspection programme and to develop a new Healthy Eating Award for the city with public health. Additional budget was secured for 2016-18 and a number of Fixed term EHOs have been recruited. This has led to an increase in the percentage of inspection's undertaken from 38% to 46% for the 2016-17 year. Although there has been an increase the FSA require the backlog is reduced at a faster pace.

Key current risks

The key risks relate to the ability to clear the backlogs and sustain the service on a long term basis, this will be affected if Environmental Health are unable to recruit suitably qualified Authorised Officers to undertake this work and the availability of Environmental Health Contractors. Although funding has been secured on a temporary basis longer term funding is required, and a report will be presented to Senior Management to try and secure this.

Some cases of Shigella may be associated with sexual health practices. EHOs are aware of this and can refer these cases to the Health Protection Team at PHE if further investigation is needed.

Areas for focus in 2017-18

- To continue to develop a healthy eating award for the city.
- To continue clear the backlog of Food Safety Inspections prioritising the highest risk rated premises and new businesses. Secure funding past March 2018 and put a more sustainable plan to reduce the backlog and prevent it building up in future/continue to build up.
- Sexual Health history taking training is needed for EHOs

1.5 Communicable Disease Management

The PHE Health Protection Team responds to any Notifiable Infectious Diseases (NOIDs) in Bristol as well as the rest of England. In 2016/17 the team managed a range of enquiries, cases and outbreaks in Bristol. The majority of outbreaks the team managed in Bristol were Norovirus and Gastroenteritis in care homes and school settings.

Health Protection Team incidents of note

National increase in Vero cytotoxin-producing Escherichia coli O157 Phage Type 34

At the end of June 2016 there was a national increase in Vero cytotoxin-producing E. coli O157 phage type 34. The South West was the most affected region in the country, with a total of 56 cases associated with the outbreak. The majority of cases in the South West were in residents of South Gloucestershire and Gloucestershire local authorities although some affected individuals were residents from Bristol. A case control study found a significant association with the consumption of mixed salad leaves, bagged salad and consumption of salads purchased in restaurants. The outbreak was pronounced over in August 2016.

UK-wide Norovirus Outbreak

In October 2016 there was a UK-wide norovirus outbreak associated with a chain of restaurants. The outbreak included the Bristol branch, with norovirus reports amongst staff and patrons of the restaurant. Investigations indicate there to be an association between illness and a nationally distributed ingredient used at the time of the outbreak.

Influenza in Care Home Residents

There was substantial influenza activity among cases resident in care and residential homes across PHE South West during the 2016/17 winter season. This was associated with significantly higher reports of outbreaks of influenza-like illness in care homes compared to the previous winter season.

Invasive Group A Streptococcal infection (iGAS) emm66 in homeless individuals/people who inject drugs (PWID)

An increase in iGAS infections in homeless people and PWID was identified nationally in January 2016. Clusters were noted in several parts of the country including Bristol (10 cases identified between January 2016 and March 2017), all with strain type emm66 (a sequence type infrequently seen in the UK prior to 2016). An enhanced questionnaire was completed with every case where possible to investigate potential links or common exposures between cases. Work was undertaken with local hostels and drug services to raise awareness of the infection amongst service users and staff. Enhanced surveillance was ceased in June 2017 and the final outbreak report is still pending.

Notifications of TB

(See also TB section in this report.) Cases of TB continue to be managed in Bristol. Outbreak control teams have been convened where needed

Any failure to comply with TB treatment is followed up and where there have been concerns teleconferences with appropriate parties have been convened to improve compliance.

Any cases in healthcare professionals have been followed up promptly and multiagency teleconferences convened as appropriate and follow up of workplace contacts was conducted to identify those who needed screening at the Bristol Royal Infirmary.

Successes/Progress

Scenario Testing and Development of an operational Communicable Disease plan for Bristol

Building upon the work conducted in 2016 surrounding potential outbreak scenarios, clarification of the role and responsibilities of local health partners and identification of resource access as part of possible outbreak responses in Bristol, a localised mass response framework to sit underneath the Avon, Wiltshire and Gloucestershire (AGW) Communicable Disease Framework. Bristol City Council Public Health and PHE was drafted. The plan includes guidance on how to coordinate mass incidents requiring prophylaxis, vaccination, screening and a meeting was held in the first quarter of 2017 with key stakeholders from Bristol City Council Public Health, PHE, the CCG and various other organisations to review the document and agree to the contents. This response framework is held by Bristol City Council Public Health team. This plan was then adopted by the LHRP, amended to suit all localities involved leading to a more consistent approach across the area.

Integration of Local Authority Public Health and PHE Health Protection

A year in post, the integration of a Public Health Consultant split between the local authority and PHE Health Protection team has brought a more coordinated approach to health protection in the locality. This cross-organisational working has facilitated the PHE screening and immunisation team and health protection team to contribute to the Bristol local authority work plan and vice versa, also enabling a more focussed approach to various aspects of health protection during the year, including reviewing TB in the homeless community and rates of invasive Group A Streptococcal infection (iGAS) in people who inject drugs (PWID).

Key current risks

- **Funding Arrangements for Health Protection Incidents:** There is a lack of clarity from stakeholders that confounds the management of communicable disease regarding which organisation is responsible for funding which part of the incident response.

Areas for focus in 2017/18

- **Infection Prevention and Control:** Review arrangements for oversight of infection prevention and control outside hospital settings.

2. Immunisations and Screening

Immunisation is one of the most effective ways of protecting against serious infectious diseases. Immunisations are given at various points across a person's lifetime, at times when they are vulnerable to disease. Performance across the range of immunisation programmes is improving, however, coverage is variable and this requires attention to ensure that the local population is protected and does not become susceptible to outbreaks of these diseases.

In Bristol, there were 261 cases of vaccine preventable diseases notified between April 2015 and March 2016 (See Table 2).

Table 1. Total cases of vaccine preventable infections in Bristol local authority area between April 2016 to March 2017

Infection	Confirmed Cases on HPZone residents of City of Bristol Local Authority April 2016 to March 2017
Measles	7
Mumps	19
Rubella	0
Diphtheria	<5
Tetanus	0
Pertussis	107
Polio	0
Meningococcal*	14
HiB	0

*includes all cases (possible, probable and confirmed) Source: Public Health England HPZone record system

Successes/Progress

Influenza Vaccine Uptake 2016/17

Bristol achieves uptake above the national average for seasonal flu vaccination rates for over 65 year olds, at risk groups and pregnant women. Vaccination of 2, 3 and 4 year olds follows the national trend with uptake being highest in 3 year olds, and uptake in Bristol is higher than the national average.

During 2016/17 there was a significant change to the childhood flu programme for school aged children where the model moved from pharmacy based to school based delivery. This saw uptake improve significantly from 2015/16. Despite this improvement Bristol's uptake

for school aged children remains lower than the national average, however, it is anticipated that 2017/18 will see further improvements as the delivery model builds on school relationships established this year. 2017/18 will see the extension of the school based programme to include Reception and Year 4. Local commissioning arrangements will also see all children at special schools being offered vaccinations by the school based team in order to address health inequalities by improving access to vaccinations for vulnerable young people.

Maintaining uptake for routine immunisations

Childhood immunisations

For uptake of Hib/MenC (meningitis strain C) at 2 and 5 years, PCV booster at 2 years, MMR at 2 (one dose) and 5 years (two doses) coverage remains similar to 2014/15 levels and Bristol is now consistently meeting the 95% target for MMR at 5 years (one dose).

In April 2016 a South West Needs Assessment for 0-5 year old vaccinations was published, which included a Bristol chapter. The Needs Assessment's recommendations for Bristol included: improving data flows between Child Health and GP surgeries; supporting practices with low uptake; and improving awareness of immunisations training. Other local work to address improving childhood immunisation uptake includes: immunisations becoming part of the 'Bristol Standards' for children's centres and piloting easy read information to support MMR uptake. Priorities for 2017/18 include: delivering immunisation training to all Health Visitors in Bristol; including immunisations as part of core children's centre training; continuing to address and improve uptake of MMR vaccination; supporting the introduction of the hexavalent vaccine. All these work streams are supported through the Bristol Immunisations Group which is chaired by the Screening and Immunisations Team.

School age immunisations

Uptake for HPV and MenACWY for 2015/16 (academic year) remained lower than national and South West figures, however, during 2016/17 there have been significant changes to provider engagement. This has resulted in changes to staffing structures and the team now have staff exclusively targeting immunisation uptake. 2016/17 is the last academic year of the MenACWY catch-up for Year 11 (school based) and Year 13 (GP based) vaccinations. From September 2017 Td/IPV (teenage booster) will move to Year 9 school based vaccination and will be delivered alongside the routine MenACWY cohort. Td/IPV uptake in Bristol has been historically very low uptake and moving to school based delivery will ensure 100% offer of vaccination to young people and see a marked improvement in uptake.

Adult immunisations

The uptake of pertussis vaccination in pregnancy during 2016/17 has seen significant and sustained improvement in comparison to 2015/16, ranging from 69.6 to 78.7%. This is higher than the England average. During 2017/18 the Screening and Immunisations Team will be working with providers to move towards midwifery led vaccinations to further support improving immunisation uptake.

Uptake of pneumococcal vaccine was 71.3% in 2015/16 and is 71.2% in 2016/17. The shingles (varicella zoster) vaccine has an annual cohort and for the last cohort (vaccinated

between 01.09.2015 – 01.09.2016) uptake was 52.9% for 70 year olds, and 55.3% for 78 year olds (catch up cohort): this is a small decline from the previous year, but in line with a national decrease in uptake.

Targeted immunisations

In January 2017 dry blood spot serology testing was introduced for Hepatitis B at 12 months of age. This is a change from a blood test and is an improvement in patient care.

Key immunisation groups

The organisation and governance of processes to ensure the effectiveness of local immunisation programmes is now well-established. This governance process reports to the Health Protection Committee and comprises of:

- **Bristol Immunisations Group**

The group provides an operational forum for key stakeholders involved in the delivery of immunisations in Bristol. It is well attended and has clear action plans in place to improve immunisation uptake and reduce inequalities.

- **Bristol Immunisation Group Health partners Integration Team (BIG HIT)**

The BIG HIT is a collaboration of key senior stakeholders formed as part of the CLARHC and allows key stakeholders from clinical practice and academia to work together to steer clinical and research development priorities for immunisation in Bristol.

- **Vaccine Preventable Diseases Group**

The Vaccine Preventable Diseases Group is the high level strategic oversight and governance group for immunisations. It sets the strategic direction for the overarching work plan for programme delivery and provides strategic response to issues raised by the previous two groups.

Key current risks

- **Meningococcal disease:** Incidence of meningococcal disease (W) continues to increase nationally and atypical presentations of both strain B and strain W have occurred, particularly in teenagers. GPs and hospital clinicians have been alerted to this via Bulletins and national Briefing Notes. It is important that uptakes of ACWY vaccine for school leavers and university students 'Freshers' aged under 25 are improved to minimise the potential for cases and outbreaks.
- **Pertussis:** Incidence continues to increase nationally with cases across all ages, but with higher incidence in younger children resulting in neonatal deaths. New public health guidelines for the management of pertussis are being developed nationally and the priority remains the promotion of the maternal immunisation programme.
- **Measles and MMR:** Cases of measles continue to arise and a large outbreak has recently occurred in London with transmission to local areas. There remain pockets of under-immunised populations within the Bristol locality who remain susceptible to

measles. Targeted immunisation plans for specific groups need to be developed to provide an effective response

- **BCG supply:** See section 1.2 of this report. An international shortage has occurred following problems associated with the manufacturing of BCG vaccine. This situation is being managed by the national immunisation team and alternative supplies are being sourced but in the interim supply is restricted, with priority being given to the neonatal programme for infants of high risk mothers. Records are being kept of those who would normally be eligible but not able to be prioritised and these individuals will be recalled when further vaccine supplies become available.

Areas for focus in 17/18

- Maintain and improve current performance across all programmes.
- Reduce variability in coverage within and between programmes, with a focus on the Inner City Bristol locality.
- Implement the extension of the Childhood Flu programme to Reception and Year 4 primary school aged children and improve uptake for all eligible children.
- Improve uptake of flu and pertussis vaccines by pregnant women.
- The Screening and Immunisation Team, Bristol City Council Public Health Team and CCG locality chairs to work together to review uptake data by practice and by provider and develop action plans to target areas of poor uptake and coverage for each of the screening and immunisation programmes.
- Implementation of the hexavalent vaccine
- Movement to school based vaccination for Td/IPV
- Continuing to support improvement of the school based programmes

2.2 Screening

The UK National Screening Committee defines screening as “The process of identifying apparently healthy people who may be at increased risk of a disease or a condition so that they can be offered information, further tests and appropriate treatment to reduce their risk and/or complications arising from the disease or condition.”

There are currently three national cancer screening programmes: breast, bowel and cervical; and eight non-cancer screening programmes: six antenatal and new-born (Fetal 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).

Successes/Progress

Cancer screening

The Screening and Immunisation Team have worked with colleagues in the local authority and the CCG to collaboratively address health inequalities in relation to these programmes. Service reviews and equity audits have been completed for each of the three cancer screening programmes and actions identified to improve uptake and coverage. Specific activity has included the production of a DVD for women with learning difficulties to provide accessible information for them on what to expect when attending for a cervical screening test ('smear test'). This resource received a national award and can now be accessed via The Jo's Trust and NHS Choices national websites.

Focus groups were also convened in collaboration with community groups and leaders in inner city Bristol to look at potential barriers to accessing bowel cancer screening amongst minority ethnic and other under-represented groups. A work plan has been developed to implement the actions arising from this piece of work which continues to be led by the provider (UHB) and informed by local community representatives. The Bristol and Weston Bowel Cancer Screening Programme had a very successful Quality Assurance visit in 2015/16 and has continued to improve.

Antenatal Screening

University Hospitals Bristol performs at the higher achievable level for all indicators within the Antenatal screening programmes, with the exception of timely referral of hepatitis B positive women for specialist assessment, which is not achieved within acceptable timescales, and timeliness of the Antenatal sickle cell and thalassaemia test which is achieved but at the lower acceptable level. Hepatitis B pathways have been reviewed and these standards continue to be closely monitored. The Antenatal and Newborn Screening Service (including the Newborn Hearing Screening Service) had a PHE Quality Assurance visit during 2015/16 and a comprehensive action plan has been developed to ensure continuous service improvement going forward.

Antenatal screening for rubella ceased on 1st April 2016. Instead there is renewed focus on improving MMR uptake across the whole population as a more effective way of preventing congenital rubella infection

In the Fetal Anomaly Screening Programme, screening for Trisomy13 and Trisomy18 was introduced to the combined first trimester screening test, and the 3-vessel/trachea (3VT) screening was introduced in to the mid-trimester fetal anomaly scan.

Newborn Bloodspot Screening

Screening tests for four additional inherited metabolic disorders were added to the newborn bloodspot screening programme in 2015 / 16. The six disorders now screened for include:

- phenylketonuria (PKU)
- medium-chain acyl-CoA dehydrogenase deficiency (MCADD)
- maple syrup urine disease (MSUD)
- isovaleric acidaemia (IVA)
- glutaric aciduria type 1 (GA1)
- homocystinuria (pyridoxine unresponsive) (HCU)

About 1 in 10,000 babies born in the UK has PKU or MCADD. The other conditions are rarer, occurring in 1 in 100,000 to 150,000 babies. Without treatment, babies with inherited metabolic diseases can become suddenly and seriously ill. The diseases all have different symptoms. Depending on which one affects their baby, the condition may be life threatening or cause severe developmental problems. They can all be treated with a carefully managed diet and, in some cases, medicines as well. The Newborn and Infant Physical Examination (NIPE) screening programme saw the roll-out of the new IT system, NIPE SMaRT. This, for the first time, has provided a systematic and robust way of identifying the eligible cohort for the NIPE examination, for recording screening results, referral in to diagnostic services and outcomes, and for failsafe.

The move from HV registered to resident populations required the NHSP teams to work together to address boundary changes and ensure all babies were offered screening. In addition, the new national IT screening system, Smart4Hearing (S4H) went live in December 2016. Both these transitions were achieved without disruption to patients and screening services.

Adult screening programmes

Non Cancer Screening

In relation to the adult screening programmes, the Bristol Diabetic Eye Screening and the Abdominal Aortic Aneurysm Screening programme continue to perform well.

Cancer Screening

The cervical screening programmes in the South West have continued to perform well with no significant issues or incidents. Reducing coverage has been the main issue over several years with local rates mirroring the slow but consistent reduction in national rates. The Screening and Immunisation Team has identified cervical screening coverage as a priority and has targeted work to groups here uptake is lowest. Sample-taker training and its effective oversight is a critical factor in the quality and safety of the screening programme. The Screening and Immunisation Team has reviewed and updated the training policy including escalation procedures, and created a single South West sample-taker data base to

ensure that all sample-takers are registered, have a unique ID code to track samples, and are alerted to when they need to update.

Breast screening services have seen significant and continued pressure on the programme due to a combination of demand from the symptomatic service and capacity pressures within screening teams due to shortages of key staff (radiographers, radiologists, and specialist breast care nurses). This is a national problem that is starting to affect many programmes across the country. The workforce issue has been escalated nationally and a working group is developing options to address the issue. In some areas, the increasing number of GP practice mergers and closures is having a negative impact on round length. As breast screening is a three yearly cycle, women who have to re-register, or move into a new practice due to a merger, may have their screening invitation date delayed depending on where the practice is the three year cycle. These women have to be slotted in to already busy routine lists across the area creating pressure on the service and impacting temporarily on KPIs. This issue is affecting all areas of the country and has been escalated nationally. Potential solutions are being investigated for the service and also to track affected women to ensure screening is offered within the appropriate timescales, as far as possible.

There continues to be a lot of activity in the bowel screening programme. This is primarily due to the continued roll-out of Bowel Scope screening and ongoing work to maintain delivery to national standards in the face of a national shortage of endoscopists and radiographers that have created significant pressures within colonoscopy services. Providers have so far maintained KPI performance despite these challenges.

Key current risks

There has been an increase in demand on the symptomatic / treatment end of the service. This is having an impact on the screening services, resulting in increased waiting times for patients at points during 2015/16. There are a number of reasons for the increase in demand, including demographic change resulting in more eligible people within the population, a greater focus on prevention and early diagnosis, and a number of successful, high profile awareness raising 'Be clear on Cancer' campaigns, and other activities to improve uptake of these services. The increase in demand has occurred at a time of reduced staffing capacity which has compounded the problem. There is a national shortage of specialist staff, especially specialist clinical staff, radiographers, radiologists and pathologists and recruitment to vacancies within the programme teams has proved challenging. This issue has been escalated nationally.

Areas for focus in 17/18

- Continue to strengthen collaborative multi-agency action plans to target areas of poor uptake and coverage for each of the screening programmes.
- Implement the actions arising from each of the Quality Assurance visits to programmes to ensure compliance with national standards and continuous service improvement.
- Closely monitor demand and capacity, and care pathways within the cancer screening programmes, escalating concerns promptly and reviewing pathways of care, as required, to maintain service effectiveness, to ensure waiting times remain within acceptable standards, and to meet any increase in demand.

Successes/Progress

Cancer screening

The Screening and Immunisation Team have worked with colleagues in the local authority and the CCG to collaboratively address health inequalities in relation to these programmes. Service reviews and equity audits have been completed for each of the three cancer screening programmes and actions identified to improve uptake and coverage. Specific activity has included the production of a DVD for women with learning difficulties to provide accessible information for them on what to expect when attending for a cervical screening test ('smear test'). This resource received a national award and can now be accessed via The Jo's Trust and NHS Choices national websites.

Focus groups were also convened in collaboration with community groups and leaders in inner city Bristol to look at potential barriers to accessing bowel cancer screening amongst minority ethnic and other under-represented groups. A work plan has been developed to implement the actions arising from this piece of work which continues to be led by the provider (UHB) and informed by local community representatives. The Bristol and Weston Bowel Cancer Screening Programme had a very successful Quality Assurance visit in 2015/16 and has continued to improve.

Antenatal Screening

University Hospitals Bristol performs at the higher achievable level for all indicators within the Antenatal screening programmes, with the exception of timely referral of hepatitis B positive women for specialist assessment, which is not achieved within acceptable timescales, and timeliness of the Antenatal sickle cell and thalassaemia test which is achieved but at the lower acceptable level. Hepatitis B pathways have been reviewed and these standards continue to be closely monitored. The Antenatal and Newborn Screening Service (including the Newborn Hearing Screening Service) had a PHE Quality Assurance visit during 2015/16 and a comprehensive action plan has been developed to ensure continuous service improvement going forward.

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About 1 in 10,000 babies born in the UK has PKU or MCADD. The other conditions are rarer, occurring in 1 in 100,000 to 150,000 babies. Without treatment, babies with inherited metabolic diseases can become suddenly and seriously ill. The diseases all have different symptoms. Depending on which one affects their baby, the condition may be life threatening

or cause severe developmental problems. They can all be treated with a carefully managed diet and, in some cases, medicines as well.

Adult screening programmes

In relation to the adult screening programmes, the Bristol Diabetic Eye Screening programme has had a successful Quality Assurance visit and has achieved all three key performance targets and the Abdominal Aortic Aneurysm Screening programme also continues to perform well.

Key current risks

There has been an increase in demand on the symptomatic / treatment end of the service. This is having an impact on the screening services, resulting in increased waiting times for patients at points during 2015/16. There are a number of reasons for the increase in demand, including demographic change resulting in more eligible people within the population, a greater focus on prevention and early diagnosis, and a number of successful, high profile awareness raising 'Be clear on Cancer' campaigns, and other activities to improve uptake of these services. The increase in demand has occurred at a time of reduced staffing capacity which has compounded the problem. There is a national shortage of specialist staff, especially specialist clinical staff, radiographers, radiologists and pathologists and recruitment to vacancies within the programme teams has proved challenging. This issue has been escalated nationally.

Areas for focus in 17/18

- Continue to strengthen collaborative multi-agency action plans to target areas of poor uptake and coverage for each of the screening programmes.
- Implement the actions arising from each of the Quality Assurance visits to programmes to ensure compliance with national standards and continuous service improvement.
- Closely monitor demand and capacity, and care pathways within the cancer screening programmes, escalating concerns promptly and reviewing pathways of care, as required, to maintain service effectiveness, to ensure waiting times remain within acceptable standards, and to meet any increase in demand.

3. Emergency Preparedness, Resilience and Response (EPRR)

The local health economy needs to plan for and respond to a wide range of incidents and emergencies that could affect health or patient care. These could be anything from extreme weather conditions to an outbreak of an infectious disease or a major transport accident.

The Civil Contingencies Act 2004 (CCA2004) requires health organisations to show that they can deal with such incidents while maintaining services. Organisations must have effective, well-practiced emergency plans in place in order to protect the population of Bristol.

In Bristol, EPRR is facilitated by two fora; The Local Health Resilience Partnership and the Local Resilience Forum.

3.1 The Local Health Resilience Partnership

The Local Health Resilience Partnership (LHRP) is a strategic forum for organisations in the local health sector. The LHRP facilitates the production of local sector-wide health plans to respond to emergencies and contribute to multi-agency emergency planning.

Each constituent organisation remains responsible and accountable for their effective response to emergencies in line with their statutory duties and obligations. This includes maintaining plans detailing organisational capability to support the response to a major incident, including pandemic flu, mass casualty and chemical, biological, radiological and nuclear (CBRN) incidents.

3.2 The Avon and Somerset Local Resilience Forum

The Avon and Somerset Local Resilience Forum (ASLRF) is one of a number of Local Resilience Forums (LRFs) across England set up to align with the local police area. The LRF is not a legal organisation in itself, but a partnership made up of a number of organisations and agencies.

The overall aim of the Avon and Somerset Local Resilience Forum is to ensure that agencies and organisations plan and work together, to ensure a co-ordinated response to emergencies that could have a significant impact on communities in Avon and Somerset.

Key current risks

- **Emerging infectious diseases:** An emerging disease is one that has appeared in a population for the first time, or that may have existed previously but is rapidly increasing in incidence or geographic range. Many of these emergent diseases are zoonotic, meaning there can be transmission between animals and humans, such as Ebola Virus Disease (EVD) or Zika Virus.
- **Pandemic Influenza:** The impact of a new pandemic on health and social care services will vary according to the nature of the virus and its effects, as well as the underlying status of the health economy and the context such as severe weather.

Excess Deaths: Significant events can occur that are detrimental to the health of the population and can result in an excess of deaths locally. These events challenge the delivery of the routine death management process, and can be health-related (e.g. due to a communicable disease outbreak) or environmentally related (e.g. heatwave or cold weather).

- Excess winter mortality in England and Wales was back in line with average trends in 2015/16. There were an estimated 24,300 excess winter deaths where 15% more deaths occurred in winter months than non-winter months. In 2015/16 excess winter mortality significantly decreased from 2014/15 when the number of excess winter deaths was uncommonly high. The demand on local body holding capacity has been highlighted as a risk at both the LHRP and the LRF since the loss of Frenchay hospital and its mortuary in 2014.
- Recent high-profile incidents in London and Manchester have highlighted the need to expand and strengthen emergency and continuity planning arrangements in the city.

Areas for focus in 17/18

- To validate existing plans and procedures, ensuring plans are effective and well-practised.
- To review local level arrangements for mass fatalities and excess deaths.
- To review emergency and continuity planning arrangements in the city.

4. Environmental hazards to health, safety and pollution control

Poor air quality can have an impact on health at all stages of life, from being associated with low birth weight, impacts on lung function development in children, an increased risk of chronic disease and acute respiratory exacerbations, to acute and chronic premature death. Latest evidence is linking air pollution with impacts on cognitive function. All these health impacts can impact upon a person's quality of life. The most vulnerable are the young and old.

Air quality in Bristol is sufficiently poor in many locations for the health impacts described in the previous paragraph to be experienced by citizens in Bristol. Monitoring data shows continued exceedances of the annual and hourly nitrogen dioxide (NO₂) air quality objective close to roadside locations in the city centre and along the main arterial routes.

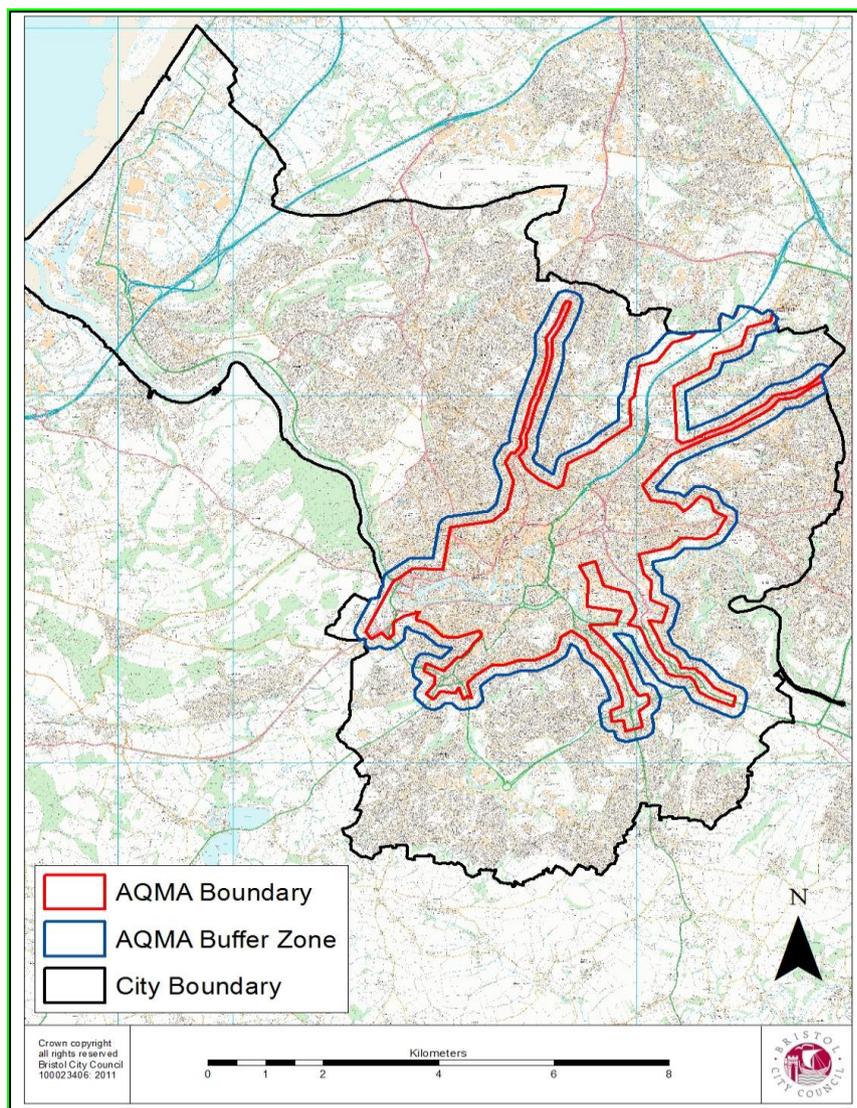
A report commissioned by BCC⁹ calculated that approximately 300 deaths of Bristol residents can be attributed to air pollution (particulate matter - PM_{2.5} and nitrogen dioxide – NO₂) in 2013,. This equates to 8.5% of all deaths in Bristol annually. These deaths attributed to air pollution compare, on average, to 9 people killed in road traffic collisions in Bristol each year.

Local authorities are required to declare an Air Quality Management Area (AQMA) (**see figure 5**) where exceedances of air quality objectives occur and people are present for the relevant averaging period. The current air quality management area for Bristol is shown in Figure 3 and covers those locations where exceedance of objectives for NO₂ has been measured and relevant exposure to this pollution occurs. Once an air quality management area has been declared, an air quality action plan is required in order to identify measures aimed at achieving compliance with the air quality objectives.

Monitoring of NO₂ concentrations in the Avonmouth and Lawrence Weston areas showed one location exceeding the annual objective for this pollutant. This is a location close to the M5 where no relevant exposure occurs. Monitoring at 12 other locations showed compliance with the objective and no requirement for an AQMA to be declared. The situation will continue to be monitored closely.

⁹ Air Quality Consultants (2017). Health Impacts of Air Pollution in Bristol.: Air Quality Consultants Ltd

Figure 5. Bristol Air Quality Management Area



Successes/Progress

Avonmouth Air Quality and Dust Nuisance

The Environment Agency and Bristol City Council carried out monitoring of Air Quality in Avonmouth from August 2014 until September 2015 in response to resident concerns about air quality. The Bristol City Council monitoring station measured the very small particles in the air which can't be seen, finer than the kind of dust which people see on car window screens or window sills. These small particles can get past the body's natural filters and into people's lungs. They are measured at 10 microns ('PM₁₀') and 2.5 microns ('PM_{2.5}').

The results after 12 months of monitoring showed that all the measurements were well under the European Union Air Quality limits. The dust monitoring also analysed the heavy metal content in the Avonmouth samples. Four key metals in terms of their impact on human health have been measured: lead; arsenic; cadmium and nickel all were within European Air Quality standards.

Avonmouth 2nd Phase Nuisance Dust Monitoring

A second phase of monitoring has taken place focusing on larger depositional dust for six months between July 2016 to January 2017. As this type of dust can be seen, typically appearing on cars windscreens and other locations, it has been a concern to the community. However as this type of dust cannot be inhaled it is not considered a human health risk such as PM10. Monitoring consisted of six omnidirectional deposition monitors with directional monitors located throughout Avonmouth with one control site taking fortnightly samples. The public helped identify locations for the monitors and also asked to report issues if any dust problems if they arose during the study. A private contractor, SLR Consulting, were procured to undertake the monitoring and they used accredited laboratories to analyse samples.

A report was produced at the end of the monitoring period and Environmental Health Officers from the Pollution Control Team will further review the findings against custom and practice values and also procure further detailed analysis of samples if likely to be helpful in establishing whether there is any likelihood of a statutory nuisance and if so where the potential sources of such dust arise and if any regulatory effort can help resolve.

For the duration of the monitoring two dust events were reported, investigated by officers and reflected in the deposition results:

- July 2016 - Complaints alleging dust from Avonmouth Dock area (the part of the docks running parallel to Portview road) and this was reflected in a higher than average reading from one monitor although it should be noted this was still only 64% of the Custom and Practice limit value of 200mg/m²/day
- August 2016 – Complaints regarding dust from road resurfacing works, this reflected a higher than average reading at the childcare centre site but was only 51% of the Custom and Practice limit value of 200mg/m²/day

Other reports made to us were not reflected in the monitoring results. Due to a lengthy procurement process for a new scientific services provider for the Council and financial restrictions during the latter part of the 2016/2017 financial year we have only recently been able to submit additional samples to the new provider and are currently awaiting these results. Once received a final report will be prepared and provided to the public.

The first round of samples were analysed for heavy metals but were found to be “all significantly below the relevant EA criteria” and not attributable to any particular source. We have submitted further analysis of later samples to compare with the original results.

The SLR report comes to the following conclusions “the results of the dust deposition monitoring using omni-directional Frisbee Gauges have recorded rates consistently below the custom and practice criteria of 200mg/m²/day.” None of the monitors recorded dust at a level above the criteria throughout the duration of the monitoring period”. This was also reflected in the low number of complaints made directly to ourselves during this period.

At this time results are indicating that there is no underlying depositional dust issue for residents from industrial activities in and around Avonmouth. However with all industrial areas should there be an acute dust episode residents are advised to

continue to report concerns to the Pollution Control Team by calling the Customer Service Centre on 01179 222500 Option 3.

Mayoral Air Quality Working Group

A Mayoral Air Quality Working Group (MAQWG) has been established tasked with improving air quality in the city. The key focus of the group is to provide a positive impact on health and wellbeing for all communities including the most vulnerable, support a flourishing local economy and accelerate the transition to a zero emission city. The group is co-chaired by the cabinet member for transport and cabinet member for health and wellbeing.

Key objectives of the MAQWG are;

- To advise on the implementation of the Administration's Air Quality Commitments.
- To guide the development of a new Air Quality Action Plan that improves health and addresses compliance with the exceedances of air quality objectives and fulfils the council's statutory duty.
- To develop plans for the implementation of a Clean Air Zone as part of the Air Quality Action Plan.
- To contribute to national policy and guidance such as from DEFRA and NICE.
- To monitor the impact of interventions on air quality and public health in Bristol.

The Group is attended by Bristol City Council officers from across the authority, including Public Health, who seek to engage with all stakeholders on the impact of poor air quality on public health and wellbeing, communities, economics and the need for city wide air quality improvement measures in order to promote less polluting lifestyle and business choices.

Key current risks

- Maintaining an effective dialogue with Bristol residents about environmental hazards to health.

Areas for focus in 2017-18

- Initiate a Liaison Group to bring together Community members and representatives from the Avonmouth Industrial companies to discuss improvements in community impacts and improve the working relationship/good neighbours culture. Work to create this Liaison group has been started by the Neighbourhood Partnership with local residents and will be put in place in 2016/17. With the changes to the NP system this Liaison group needs to be reviewed moving forward.
- Issue the final nuisance dust deposition report to the community
- Work with the BCC Sustainable City and Climate Change Service and Strategic Transport to develop a new air quality action plan for the Bristol AQMA. This will include supporting the development of a CAZ Feasibility Study as part a wider air quality action plan. An important part of this will be to ensure the right messages are

communicated to citizens and stakeholders with regards to the health impacts associated with current levels of pollution in Bristol. The aim is to implement measures to achieve compliance with air quality objectives in shortest time possible. Promoting a wider understanding of the health issue associated with air pollution is considered to be a vital part of the consultation process for air quality action plan measures.

- Support BCC Sustainable City and Climate Change Service with the development of an awareness raising and communications campaign with the aim of engaging the citizens and wider stakeholders in the city and surrounding areas on the causes, and impacts of air pollution.

Appendix 3 : Primary organisational roles and responsibilities in the prevention and control of infectious disease outbreaks or health protection incidents in Bristol

<p>PHE Centre (AGW)</p> <p>The Centre Director will ensure that PHE, through the health protection team will lead the epidemiological investigation and provide the specialist health protection response to public health outbreaks / incidents. They or their designate (Deputy Director of Health Protection / Consultant in Communicable Disease Control / Health Protection Consultant) have the responsibility to declare a health protection incident, major or otherwise.</p>	<p>Preparation</p> <ul style="list-style-type: none"> • Providing advice (through the Local Health Resilience Partnership) to local NHS providers and commissioners regarding any preparation that they might need to undertake to ensure an effective and timely response when a public health outbreak / incident occurs; • supporting local authorities to understand and respond to potential threats; • collection, analysis, interpretation of surveillance data; • providing expert advice on hazards that pose a risk to the public's health and effective interventions to prevent and respond accordingly; • coordinating an out of hours rota for the delivery of specialist health protection advice by qualified personnel; • participating in arrangements for exercising and testing plans to respond to outbreaks / incidents; • providing access to regional and national PHE expertise as required; • advising on the requirement for prophylactic treatment and immunisation for all health protection incidents; • keeping the DPH informed about significant health protection issues and actions being taken to overcome them; • providing the local authority with information to support the Joint Strategic Needs Assessment and Joint Health and Wellbeing Board strategies as required; • supporting local authorities to develop a trained and knowledgeable workforce in the area of health protection. <p>Response</p> <ul style="list-style-type: none"> • Leading the Public Health response to declared Major Incidents; receiving and investigating notifications (with partners); • initiating immediate control measures when required; providing expert epidemiological advice through field epidemiology teams to support incident / outbreak investigation (both in the response and recovery phases); • sharing information concerning incidents / outbreaks with the local authority through the Director of Public Health; • chairing the 'Outbreak/Incident Management Team' and keeping health protection risks under review throughout the incident; communicating to partners when an Outbreak/Incident Management Team is established; • providing updates until the outbreak/incident is declared
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	<p>over;</p> <ul style="list-style-type: none"> • coordinating public communications / media response in collaboration with the local authority, CCG and NHS England.
<p>BCC Public Health</p> <p>Through the Director of Public Health, the Local Authority has overall responsibility for the strategic oversight of an incident / outbreak impacting on their population's health. They should ensure that an appropriate response is put in place by NHS England South West and PHE supported by the CCG.</p> <p>In addition, they must be assured that the local health protection system is robust enough to respond appropriately in order to protect the local population's health and that risks have been identified, are mitigated against and adequately controlled.</p>	<p>Preparation</p> <ul style="list-style-type: none"> • Preparing for and leading the local authority's response to incidents that present a threat to the public's health; providing information, advice, challenge and advocacy; • chairing the Bristol Health Protection Committee to ensure that the health protection system is meeting the needs of its local authority population and that risks identified are adequately mitigated against and control arrangements are in place; • coordinating the Joint Strategic Needs Assessment to support the understanding of local health protection risks; • reporting local health protection arrangements and escalating health protection risks to the Health and Wellbeing Board; • ensuring that relevant commissioned services (including providers of sexual health services, drug and alcohol services and school health services) can provide an appropriate response to any incident that threatens the public's health and that business continuity plans are in place; • participating in arrangements for exercising and testing plans to respond to outbreaks / incidents. <p>Response</p> <ul style="list-style-type: none"> • Collaborating with PHE to lead the PH response to a major incident; • participating (as required) in Outbreak/Incident Management Teams, to help inform decision about the appropriate level of NHS response from providers AND working alongside PHE and the CCG to agree and source through agreed plans the resources needed to be released; • briefing Local Authority colleagues and elected members regarding health protection incidents/outbreaks; • mobilising local authority resources required to support an incident (e.g. Scientific Services and Animal Health and Welfare & Trading Standards).
<p>BCC Environmental Health</p> <p>Local authorities have defined health protection functions</p>	<p>Preparation</p> <ul style="list-style-type: none"> • Ensure that relevant services and providers have effective health protection and business continuity arrangements in place to guarantee an appropriate response to any incident that threatens the public's health; • exercising powers under the health protection regulations to prevent or limit the spread of an infectious disease;

<p>and statutory powers in respect of environmental health and health and safety.</p>	<ul style="list-style-type: none"> • prosecuting environmental and public health offenders; • informing the Drinking Water Inspectorate of an outbreak of illness associated with, or suspected to be associated with, a private water supply; • participating in arrangements for exercising and testing plans to respond to outbreaks / incidents. <p>Response</p> <ul style="list-style-type: none"> • With the Public Health England Centre, supporting local leadership in responding to communicable disease incidents and outbreaks; • inform Director of Public Health / Public Health England Centre of any emerging outbreaks/incidents; • with the Public Health England Centre, investigating clusters and outbreaks of foodborne infectious diseases; • participating (as required) in Outbreak/Incident Management Teams to help inform decisions about the appropriate level of Environmental Health (specialist and administrative) resources required to support the incident response; • provide specialist help and advice on the environmental aspects of the outbreak; • when required, undertake inspections, collection of specimens and investigations of implicated premises; • as an Health and Safety enforcement authority, execute the statutory duty to investigate infectious disease linked to workplace settings, undertake inspections, regulate; • as a Port Authority, responding to any outbreak of infectious or gastrointestinal disease at Bristol Seaports (Avonmouth and Royal Portbury Dock).
<p>Bristol CCG</p> <p>The primary role of the CCG is to ensure through contractual arrangements with provider organisations that healthcare resources are made available to respond to health protection incidents or outbreaks (including screening/diagnostic and treatment services).</p>	<p>Preparation</p> <ul style="list-style-type: none"> • Ensuring provider organisations commissioned by the CCG are able to respond adequately to health protection incidents / outbreaks where screening, diagnosis, treatment or vaccination might be required; • disseminating information as required by PHE or the local authority regarding the prevention of / response to, health protection incidents/ outbreaks across the local system of health care; • with regards to planning and preparedness, obtain appropriate advice from persons with the professional expertise in the protection or improvement of public health; • participating in arrangements for exercising and testing plans to respond to outbreaks / incidents. <p>Response</p> <ul style="list-style-type: none"> • Participating (as required) in Outbreak/Incident Management Teams to help inform decisions about the appropriate level of NHS response from providers and any

	<p>CCG resources needed to be released;</p> <ul style="list-style-type: none"> • Providing (if requested by NHS England South West), clinical support for the prescribing and administration of medication.
<p>NHS England</p> <p>Has responsibility for managing/overseeing the NHS response to the incident, ensuring that relevant NHS resources are mobilised and commanding / directing NHS resources as necessary. Additionally NHS England South West is responsible for ensuring that their contracted providers will deliver an appropriate clinical response to any incident that threatens the public's health.</p>	<p>Preparation</p> <ul style="list-style-type: none"> • Planning and securing the health services needed to protect the public's health; • with regards to planning and preparedness, obtaining appropriate advice including from persons with a broad range of professional expertise in the protection or improvement of public health. • participating in arrangements for exercising and testing plans to respond to outbreaks / incidents. <p>Response</p> <ul style="list-style-type: none"> • Mobilising NHS resources in response to incidents and outbreaks; • participating (as required) in Outbreak/Incident Management Teams to help inform decisions about the appropriate level of NHS response from providers and working alongside the CCG to agree the resources needed to be released; • co-ordinating the primary care response to the incident with the Area Team Pharmacy Advisor (as required); • Supporting CCGs to coordinate any response required by Community Trusts and/or Acute Trusts.