Health Protection Forum Report for 2020-2021

to the Birmingham Health and Wellbeing Board

December 2021
Birmingham Public Health – Health Protection Team

Making a positive difference every day to people's lives

Birmingham City Council

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Foreword

Our large and diverse city presents us with many opportunities, as well as challenges for health protection.

Over the last two years the Coronavirus (covid-19) pandemic has presented the whole city with some of our most challenging times for a century. Many people and communities have experienced changes to everyday life, some have had illness and many the loss of family and friends. Alongside this adversity have been many examples of people, communities and organisations coming together to support each other and make a difference wherever they can.

More people know about public health and its health protection role than ever before and it's important for us all to build on this, applying it to wider health protection, not just the Covid-19 pandemic.

Health Protection is one of the three domains of public health, and it is an important pillar that contributes to the improvement and maintenance of the health of everyone living in, working in and visiting Birmingham.

On behalf of the Health & Wellbeing Board, the Health Protection Forum brings together key partners from across the city who work interdependently to deliver improvements in health protection outcomes. Also, the Forum monitors emerging situations and ensures that they are addressed thereby ensuring that the health of Birmingham citizens continues to be protected.

While the Covid-19 pandemic has been the headline health protection issue, it is important to note that other issues have been dealt with and this will continue as we move forward.

Dr Justin Varney
Director of Public Health for Birmingham

1. Introduction

Health protection is one of the three domains of public health and is an essential part of achieving and maintaining good public health in Birmingham. Health protection is about preventing and reducing the harm to the population's health caused by communicable and non-communicable diseases, and from environmental hazards such as chemicals and radiation.

Health protection activities include emergency planning, surveillance and response to incidents and disease outbreaks, and national immunisation and screening programmes.

The Health and Social Care Act (2012) gives local authorities health protection duties and identifies clear roles for Public Health England (PHE – the health protection roles have recently transferred to the successor organisation United Kingdom Health Security Agency, UKHSA), National Health Service (NHS) England and Clinical Commissioning Groups (CCGs) to deliver health protection roles at regional and local levels.

The local authority (through the Director of Public Health (DPH)) has a duty to ensure there are plans in place to protect the health of the population. Most health protection functions are delivered by teams and organisations that are not part of the local authority public health division, such as the UKHSA, NHS England, CCGs and local authority environmental health and resilience teams.

To assist with this assurance role, a Health Protection Forum (HPF) has been established since 2013. The HPF is chaired by the DPH (or a representative) and meets regularly it provides the space and time for the exchange of information necessary to ensure that relevant partners in Birmingham are acting jointly and to provide comprehensive services that cover all aspects of health protection. The HPF is a sub-group of the Health and Wellbeing Board (HWB). The HPF last provided a comprehensive overarching report to the HWB in April 2019, with regular updates provided in the intervening period.

This report describes the main health protection issues and work areas that the Forum and its partners have been engaged with in 2020 and 2021. The report describes activity across the entire life course, although some health protection activity is focused on specific age groups.

The profile of health protection activity has been elevated since the Covid-19 pandemic was declared early in 2020. The HWB has received multiple reports about the Covid-19 response throughout the last 2 years.
Although Covid-19 has been a very large focus of all public health and health protection activity this report will focus on the other health protection work areas that have continued or resulted from the Covid-19 response. However, it is recognised that the pandemic has impacted non-Covid-19 priorities and that lessons learnt from the pandemic may also apply.

Lessons are constantly being learned as new plans develop and as incidents are responded to; this report provides updates on the current situation of the city's main issues, and outlines priorities for the year ahead with recommendations to the Board.

Please refer to the glossary in section 6 for a list of acronyms used in this report.

1.1. Assurance statement

This report provides assurance to the DPH and the HWB that there are comprehensive local plans to protect population health and that appropriate action plans are in place to address and closely monitor areas of health protection that require development. The DPH is working through the HPF with its members to address the following key concerns: childhood vaccinations, cancer screening programs, and community infection prevention and control.

2. Actions from previous report

Table 1 shows the health protection actions identified in the previous HPF report (2019) and the progress that has been made on them.

Table 1. Health protection actions from the previous HPF report and progress

Area of health protection	Actions from previous HPF report	Section from previous HPF report	Progress of actions from previous HPF report
Screening and immunisations	NHS England, local authority public health and CCGs need to identify uptake variation in screening and immunisation (SI) programmes, then develop and deliver plans to reduce the low uptake and inequalities that exist.	4.5	Priority remains. Given the impact on Covid-19, the recent focus has been on recovery to pre-Covid-19 levels and accelerating improvement thereafter. National deadlines for service recovery are being met by the local services – all are either ahead of, or expected to be fully restored by deadlines.
Infection prevention and control	A task and finish group need to be convened, to include local authority public health and social care, and CCGs to map out the limits and gaps in current community IPC provision (including nursing and residential homes) and develop and implement plans to address the issues found.	6.3	A group has not met due to the ongoing Covid-19 pandemic. Through the pandemic, all agencies have worked collaboratively to provide a system response. An interim solution to service needs is in place by contracting Infection prevention and control (IPC) at Birmingham Community Healthcare (BCHC) to provide an IPC Covid-19 response service. The local system IPC group will be re-established in Q4 2021/22.
	All the key local stakeholders (CCGs, PHE, NHS England and the local authority) also need to develop outbreak/incident agreements to define roles and responsibilities and ensure that joint working is effective.	6.3	A Covid-19 specific Local Outbreak Management Plan has been developed and further work is needed to fully address this action as a system through a general Local Outbreak Management Plan; the HPF will be working with partners to ensure this is completed in Q4 2021/22.
Non-communicable diseases	Local NHS, public health and local authority stakeholders need to consider how new non-regulated challenges to health protection can be addressed effectively.	3.3	Some situations where health protection issues may occur are not legally regulated so there are limited legal solutions that can be found (e.g. micro-blade tattooing). Any health protection challenges of this type are managed on a case-by-case basis through improved communication channels and case meetings between key stakeholders.

Area of health protection	Actions from previous HPF report	Section from previous HPF report	Progress of actions from previous HPF report
Communicable diseases	To develop closer working between the Tuberculosis (TB) service, mental health services, substance use services and relevant local authority departments (e.g., housing) to address the needs of people with social risk factors earlier in treatment (e.g., homelessness, drug and alcohol abuse, prison history) so that the risk of TB transmission is reduced.	2.4	Mapping of the current system approach and gap analysis to identify areas for further development was started in 2020 and has continued in 2021. As next steps and action plans to improve working relationships are being developed, the mapping and gap analysis is being updated. This is an ongoing process. A regional TB and housing pathway for patients with no recourse to public funds (NRPF) has been adopted and implemented in Birmingham over the last 18 months. Processes to support housing and social needs of patients with recourse to public funds are being developed.
	Develop a Birmingham framework with local stakeholders (CCGs, local authority public health and housing teams) to address housing need for vulnerable TB patients, using the regional TB and housing framework.	2.4	A housing pathway has been agreed across the West Midlands to address the needs of TB patients with NRPF.

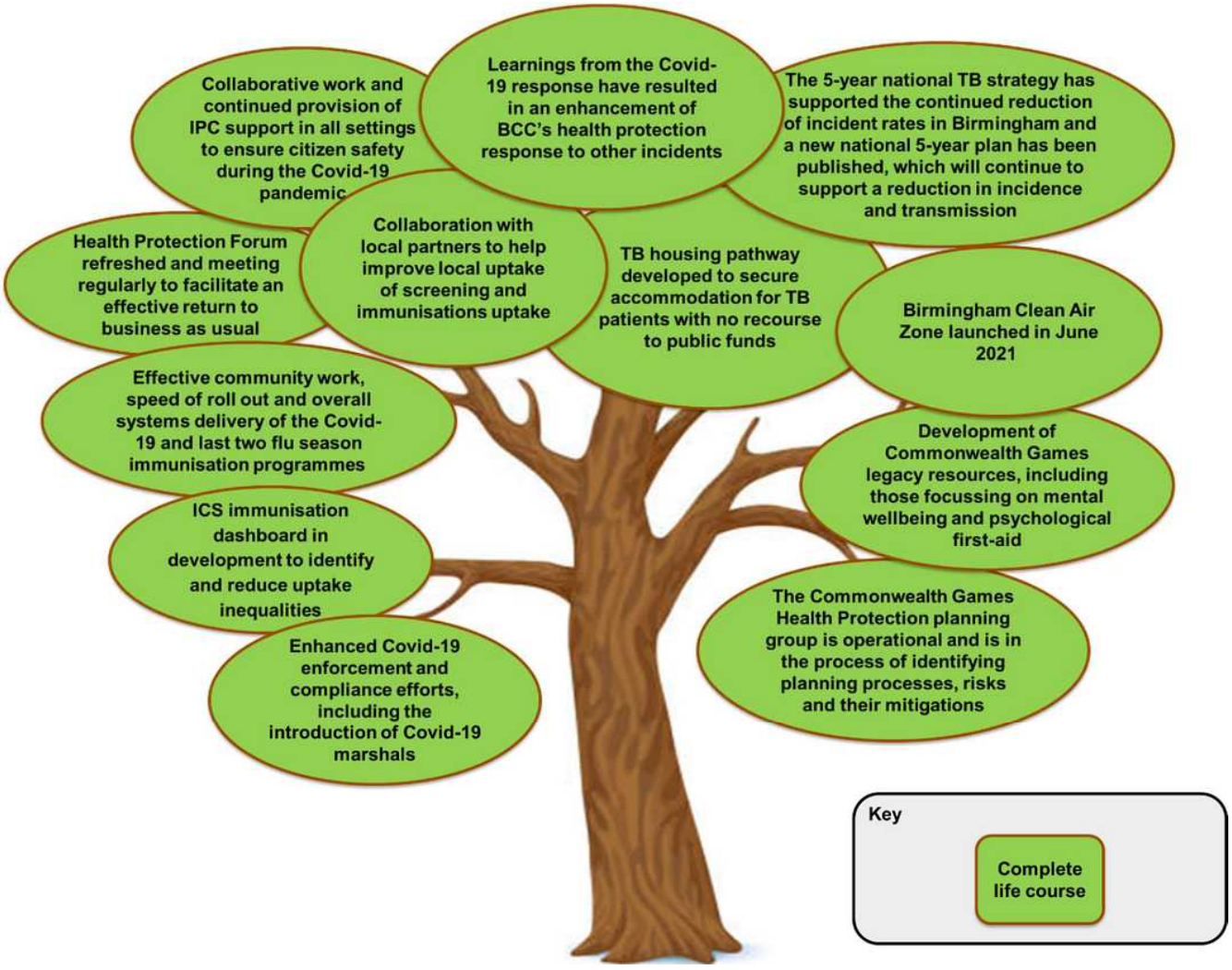
3. Health Protection updates

This section provides an at-a-glance summary of health protection developments over the last 24 months. These developments are presented in colour-coded trees that incorporate the life course approach adopted in the new HWB strategy. The colour-coding of each tree reflects the following:

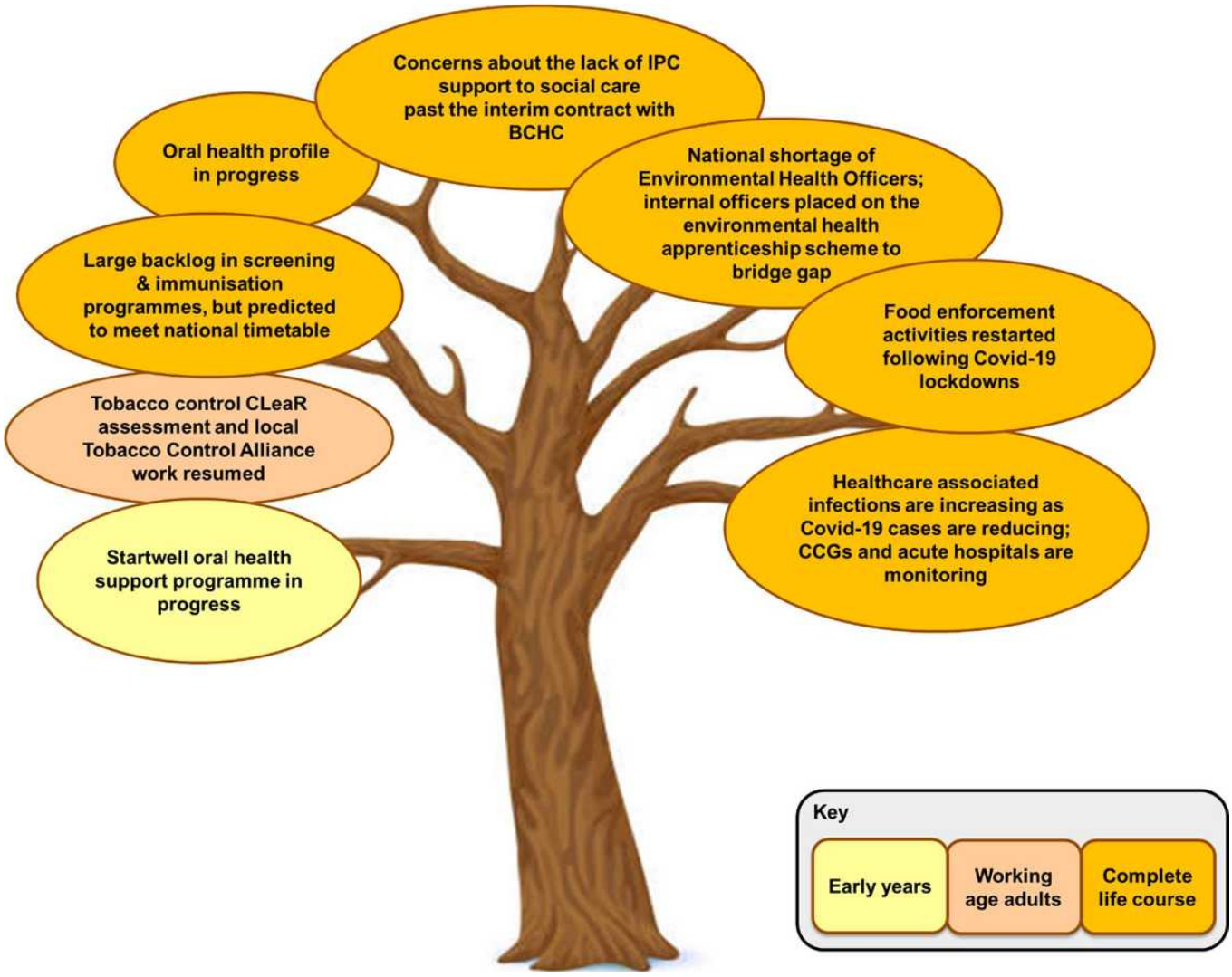
- Green = updates of positive achievements
- Amber = updates where work is ongoing, but concerns remain
- Red = updates of greatest concern

Further information on specific subject areas can be found in Section 4.

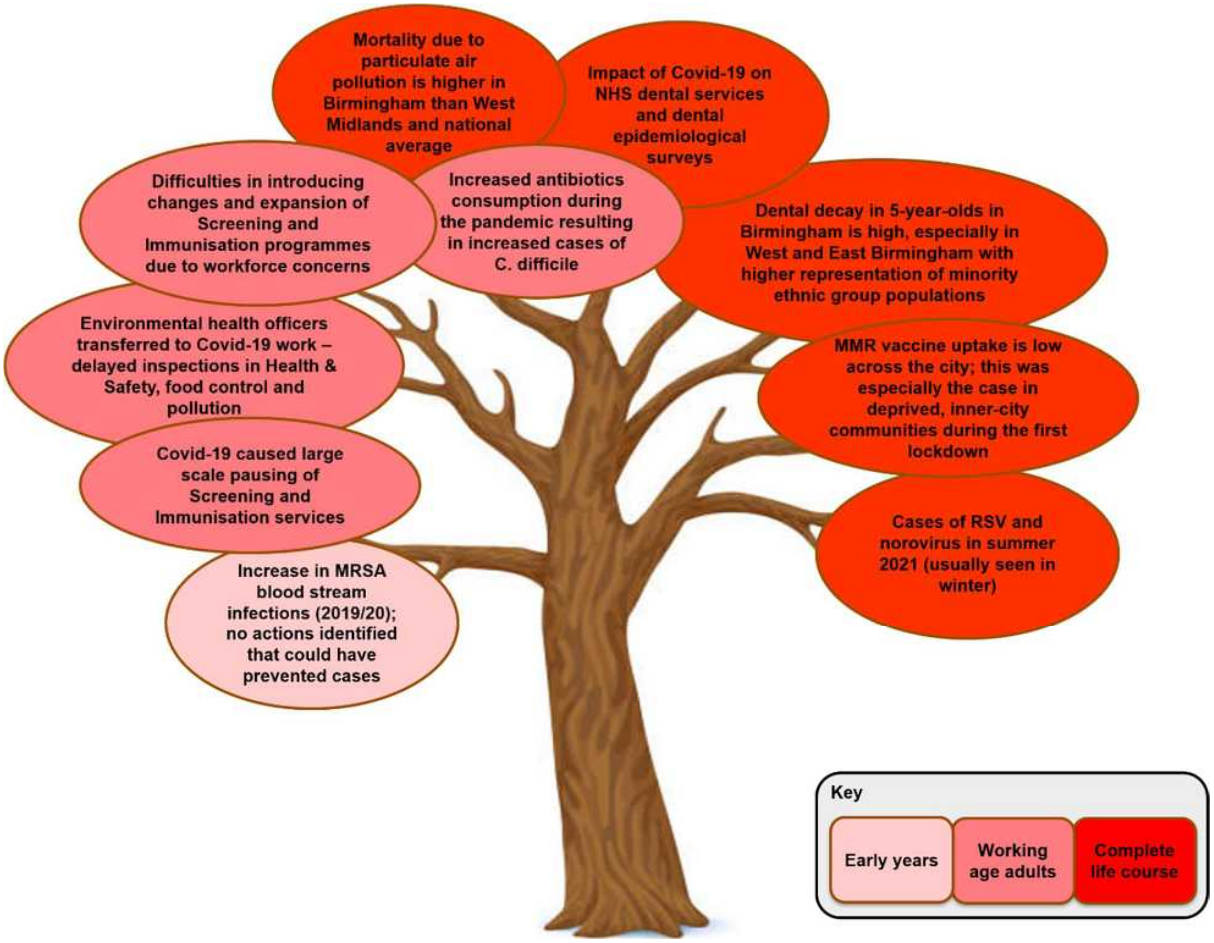
3.1. Updates of positive achievements



3.2. Updates of ongoing work where concerns remain



3.2. Updates of greatest concern



4. Health Protection Topic Areas

Sections 4.1-4.7 explore the Health Protection work discussed in Section 3 in further detail. A brief description is provided for each area of Health Protection, alongside an explanation of how this work is carried out in Birmingham. The tables lay out the next steps for each area – showing how recent successes have helped to identify new priorities, and form recommendations for the next 12 months.

4.1. SARS CoV-2 (Covid-19)

Coronavirus (COVID-19) is an infectious disease caused by the SARS-CoV-2 virus. The local health protection response (HPR) has included contact tracing, preparing and responding to incidents and providing specialist public health advice and support to care, education and business settings.
The table below details the number of situations by setting type dealt with by the HPR team since Nov 2020. During this period, they have also attended 199 incident management meetings alongside PHE/UKHSA and other stakeholders.

Table 2. Number of situations by setting type dealt with by the local health protection response (HPR) since November 2020.

Type of setting	Number of situations dealt with
Clinical	228
Education	3517
Other Residential	253
Social Care Residential Settings	1261
Workplaces and Public Venues	1619
Total	**6878**

Analysis of the COVID-19 response in Birmingham shows that there were significantly more patients in hospital during the third wave than in the first wave. Approaching spring in 2021, the numbers of patients in hospital and deaths from COVID had significantly declined although hospital patient numbers increased again around August 2021; this has begun to decrease. The number of cases, PCR positivity rate, LFD positivity rate and vaccine uptake through most of the pandemic show inequalities across Birmingham Wards, MSOAs and LSOAs.

From March 2020 to summer 2020, the Covid-19 health protection response was jointly delivered by UKHSA (then PHE) and the BCC public health division via an emergency cell structure. Following summer 2020, a new Test and Trace subdivision was created to sit within the public health division to continue to support the Covid-19 response.

Table 3. Covid-19 successes, new priorities and recommendations

Covid-19 - successes	Covid-19 – new priorities	Covid-19 - recommendations *(for action by)*
A. Recruitment of Covid-19 marshals within Environmental Health (EH). They have distributed over 45,000 face masks and patrolled high streets and other areas of high foot fall. They continue to aid schools, religious establishments, and food banks and occasionally vaccination centres with queuing, social distancing and providing masks. They have also assisted in supporting public health around localised outbreaks. They have supported the police by working together in areas of concern or where there are increasing case rates B. Local Contact Tracing Team handle weekly over 930 cases, ensuring citizens are self-isolating where needed and receiving the care and support needed to isolate safely. Many other LAs have adopted our processes to maximize outputs. They also alert HPR to situations at schools, workplaces and care settings as well as weekly reports which help the HPR and EH identify other settings which may need their attention or help. C. Covid-19 vaccination rates of clinically extremely vulnerable (1st dose: 86.87%, 2nd dose: 83.75%, booster 62.21%) and 50 years + (1st dose: 85.3%, 2nd dose: 83.5%, booster: 69.3%) as of 11/01/22 D. Case rates reduced to below national average as of 06/01/22 (National Average 1,796/100k; BCC 1,600/100k)	A. Continuing Covid-19 preparedness, including Covid-19 marshals and enforcement teams by EH B. Increasing uptake of Covid-19 vaccine in 12-15-year-olds C. Increasing uptake of Covid-19 booster in eligible population	A. Maintain effective working partnerships to provide a broad and evidence-based response to Covid-19 *(BCC T&T, UKHSA, BCC HPT)* B. Use local learning from the pandemic to prepare an appropriate Covid-19 response for the upcoming Commonwealth Games (*BCC T&T, UKHSA, BCC HPT)*

4.2. Screening and immunisations

Many infectious diseases of public health concern can be prevented through the administration of vaccines through immunisation programmes. Screening programmes identify healthy people who are at increased risk of a non-communicable disease or cancer. Individuals with positive results will be referred for further tests and treatment as necessary. Both screening and immunisation programmes run throughout the life course.

All immunisation and screening programmes delivered in Birmingham are nationally specified, co-ordinated and commissioned locally by a UKHSA team embedded in the NHS England West Midlands Team. Updates are routinely reported to the HPF on all the screening and immunisation programmes delivered in Birmingham. The local services are provided by different healthcare providers (including GP Practices, Community Pharmacies, Hospital and Community Trusts).

Table 4. Screening and immunisations successes, new priorities and recommendations

Screening and immunisations - successes	**Screening and immunisations – new priorities**	**Screening and immunisations – recommendations *(for action by)***
A. Effective community work and flexible provision during the Covid-19 immunisation programme B. Systems delivery of the Covid-19 immunisation programme and the last two flu seasons; learning from this can help the other immunisation and screening programmes C. Local partner contributions to help guide local uptake improvement planning; experience and insight gained from them has value – for example, PHE West Midlands Field Epidemiology Service authored a West Midlands Measles Needs Assessment in June 2019, and the local NHS Screening and Immunisations team consistently delivers data-driven local insights to the Health Protection Forum	A. Learning from the good practice in the Covid-19 vaccine programme, such as the community-focused work, to facilitate the spread of best practice to other immunisation and screening programmes B. Begin working as a system, ahead of and once the Integrated Care System (ICS) becomes a legal entity, to enable the partnership working needed to effectively increase coverage and reduce inequity in screening and immunisations C. Fully and sustainably restoring programmes, so that they have the capacity to deliver screening and immunisations going forward and maintain programme standards, such as coverage and intervals D. Making a full return to the 'health improvement' agenda within screening and immunisations, namely addressing overall coverage and the equity in it E. Gaining access to data that will identify specific communities to be targeted to increase Measles Mumps and Rubella (MMR) vaccination uptake; access to this data will provide evidence for any locally designed immunisation improvement programmes	A. Design a joint way of working (with shared values and goals) with all relevant partners – *(NHSEI, BCC HPT)* B. Create a clear, local and shared way of working with General Practitioners (GPs) – *(NHSEI, BCC HPT)* C. Develop data partnerships to ensure timely access to relevant screening and immunisation data – *(NHSEI, BCC HPT)* D. NHS England, local authority public health, CCG and ICS to identify uptake variation in screening and immunisation programmes, then develop and deliver plans to reduce the low uptake and inequalities that exist - *(NHS England and NHS Improvement (NHSEI), BCC Health Protection team (BCC HPT))* E. Ensure any uptake improvement programmes or efforts are multi-component – *(NHSEI, BCC HPT)* F. Prioritise outreach work with low-uptake communities to develop trust in healthcare professionals and systems – *(NHSEI, BCC HPT)*

4.3. Infection, prevention and control (IPC)

Infection prevention and control (IPC) is a systematic solution to prevent avoidable harm to patients, and health or social care workers from infections. Effective and quality IPC measures prevent the spread of Healthcare Associated Infections (HCAIs).

IPC services in Birmingham are delivered and reported mainly by teams based in the Clinical Commissioning Groups (CCGs) while working very closely with local partners including UKHSA and other NHS partners. The CCGs are responsible for monitoring and managing improvement plans for HCAIs and infection prevention in various community settings.

Table 5. Infection, Prevention and Control successes, new priorities and recommendations

IPC - successes	IPC – new priorities	IPC – recommendations *(for action by)*
A. Collaborative working has been effective in the provision of IPC support throughout the Covid-19 pandemic B. The continuation of IPC provision as a priority in all settings throughout the pandemic, ensuring the safety of Birmingham citizens	A. Supplying a comprehensive response to Covid-19 B. Response to national requirements including HCAI reduction C. Development of IPC within ICS	A. Investment and adequate resourcing of IPC – *(Integrated Care System (ICS))* B. Continuing collaborative working to advance the IPC agenda within the ICS – *(ICS)*

4.4. Non-communicable disease and environmental hazards

Non-communicable diseases (NCDs) are diseases not caused by infection. Many non-communicable diseases can result from individual behavioural risk factors (e.g., smoking, alcohol, poor diet) and are therefore preventable. Environmental hazards include adverse weather events or poor air quality, which can be harmful to the health of the population. These effects can be mitigated by effective public health planning.

Birmingham public health and city council officers in the regulation and enforcement division (including environmental health, trading standards and licensing) lead on services and projects with outcomes contributing to reduced impacts of NCDs on health outcomes. At the HPF this health protection work area is reported on by Birmingham environmental health, with support from UKHSA and NHS England.

Table 6. Non-communicable disease and environmental hazards successes, new priorities and recommendations

Non-communicable disease and environmental hazards – successes	Non-communicable disease and environmental hazards – new priorities	Non-communicable disease and environmental hazards – recommendations *(for action by)*
A. Learnings from the Covid-19 response, including effective partnership working, communication, data sharing and shared outcomes have helped to improve BCC's health protection response to other environmental incidents; Developing an enhanced understanding of each partners roles, responsibilities, resources, skills, scopes and limitations has also been of assistance in dealing with situations B. Launch of the Clean Air Zone (CAZ) in June 2021; effective partnership working helped this launch and continues to assist the development of associated air quality monitoring and evaluation processes	A. Delivery of statutory environmental health functions including delivery of the Food Standards Agency (FSA) - directed food programme; response to requests for assistance from the Birmingham community (including pest control and animal welfare); and continuation of interventions surrounding air quality and environmental protection B. Progressing the schools air quality sensor project and supporting the ongoing work of the Brum Breathes programme to improve air quality outside the CAZ and mitigate the effects of poor air quality among people experiencing health inequalities C. To collaboratively develop a tobacco control strategy and action plan with key partners and work towards creating a smoke-free city by 2030, where everyone can grow-up, live, work and age well, free from tobacco-related harm D. Commonwealth Games (CWG) preparedness	A. NHS Long Term Plan (LTP) partners (CCG/ICS and NHS Trusts) to implement the LTP tobacco work programme actions in Birmingham – *(ICS, NHS Trusts, BCC HPT)* B. BCC public health to facilitate the establishment of a local Tobacco Control Alliance (TCA - firm up TCA membership, terms of reference, operational plan and schedule meetings), tobacco control strategy and action plan – *(BCC HPT, TCA partners)* C. Birmingham Secondary Care Trusts to complete the acute settings and maternity deep dive self-assessment – *(BCC HPT, TCA partners)*

4.5. Communicable disease

Communicable diseases (also known as infectious diseases) are illnesses that can spread between people. Work focusing on communicable diseases aims to prevent disease and protect the population from the spread of disease. This is achieved through collaborative working, monitoring and surveillance, and preparing for and responding to incidents.

The main assurance and reporting for communicable disease to the HPF is received from the UKHSA Health Protection Team.

Table 7. Communicable disease successes, new priorities and recommendations

Communicable disease – successes	**Communicable disease – new priorities**	**Communicable disease – recommendations *(for action by)***
A. A TB housing pathway has been agreed with CCGs and other partners, which ensures there is a process for securing accommodation for TB patients with NRPF to facilitate their treatment B. The 5-year national TB strategy has supported the continued reduction in incidence of TB in Birmingham (and nationally) C. A new national 5-year TB action plan has been published, which will support yearly reduction in TB incidence and transmission D. Project and steering groups are working to develop the plans for the Birmingham Fast-Track Cities Plus (FTC+) program that will work to deliver the international and local targets to reduce transmission of HIV, Hepatitis B/C and TB	A. Develop a robust multi-agency process for identifying and addressing the health and social care needs of TB patients who have social risk factors and chaotic lifestyles - this is essential to support and encourage adherence to the prolonged course of treatment needed and prevent drug resistance and wider risks to public health B. Re-establish a multi-agency network to drive forward work to deliver the new 5-year TB action plan	A. Undertake a desktop exercise to help identify challenges for health and social care services in supporting the needs of TB patients with social risk factors and chaotic lifestyles – (UK Health Security Agency (UKHSA), BCC HPT) B. Develop a memorandum of understanding among relevant organisations for supporting the health, social and economic needs of patients with TB – (UKHSA) C. Produce a work plan for the FTC+ program after the Needs Assessment has been approved in 2021/22 Q4 (FTC+ Steering Group)

4.6. Oral health

Oral Health concerns the health of the mouth, with good oral health used as a general measure for good health and wellbeing within a population. As risk factors (including smoking, unhealthy eating) can be modified, many oral health conditions are preventable.

The Office for Health Improvement and Disparities (OHID) leads on Oral Health work nationally. NHSE&I leads on Oral Health regionally. This work is supported by BCC Public Health.

Table 8. Oral health successes, new priorities and recommendations

Oral health – successes	**Oral health – new priorities**	**Oral health – recommendations *(for action by)***
A. Previous Oral Health Profile (2019) provides local recommendations that can be built on through upcoming work	A. Completion of an oral health profile, exploring the oral health of adults, children and vulnerable groups in Birmingham, as well as oral health services and interventions to improve oral health within BCC boundaries B. Completion of an epidemiological survey of 5-year-olds oral health (2021-2022)	A. Use the findings from the previous (2019) epidemiological survey of 5-year-olds to inform targeting of visits by health visitors and early years workers in relation to oral health messages, encouraging dental attendance and to inform future oral health interventions targeted at areas with greatest need – (BCC HPT*)* B. Learn from and utilise the findings of the oral health profile to create a data-driven and locally informed action plan – *(BCC HPT, NHSEI)* C. Given the increased prevalence of dental decay in 5-year-olds in the West Midlands in individuals that identify as being from 'other ethnic backgrounds', Asian/Asian British or mixed ethnicity, there is a need to explore opportunities for collaborative working across the system to better understand and address oral health inequalities and potential language and cultural barriers in delivering oral health messages – *(BCC HPT, NHSEI)*

4.7. Commonwealth Games

The 2022 CWG are being hosted in Birmingham from the 28th of July to the 8th of August with sporting events being held in Birmingham and across a total of five local authority areas, with a single event in London. Other venues/sites include Games accommodation, Games time training venues, live sites (known as fan zones) and non-competition venues such as media hub, volunteer centre and Games headquarters.

UKHSA are leading the health protection response and planning to the upcoming CWG. This has been supported by the CWG health protection planning group, that is working to prepare thorough responses to public health risks during and prior to the Games. A health protection risk assessment has been drafted and is being maintained by the UKHSA team, and they are overseeing multiple strands of work including testing protocols, lab testing capacity and processes, venue access, air quality, emergency planning, food, water and environment safety, venue risk assessments, media and communications. All the planning for infectious disease responses includes Covid-19 and all other possible diseases that UKHSA and the local health protection system would also manage. UKHSA's planning is supported by the Global Health Team that have worked on previous national and international large participation events.

Plans will be tested through a programme of Exercises during the Winter and Spring of 2020-2021. These will include UKHSA and other partners – planning is ongoing.

Joint working between UKHSA and Birmingham City Council is being facilitated by shared office space and secondments of staff between the organisations.

Table 9. Commonwealth Games successes, new priorities and recommendations

Commonwealth games - successes	**Commonwealth games – priorities**	**Commonwealth games – recommendations *(for action by)***
Successes	**Priorities**	**Recommendations *(for action by)***
A. Development of legacy resources, including those focussing on psychological first aid and mental wellbeing B. The Commonwealth Games HP Planning group is operational and is identifying planning processes, risks and their mitigations	A. Multi-agency planning to respond to Covid-19 incidents and to mitigate risks from Covid-19 B. Multi-agency planning to respond to and mitigate risks from a range of health protection incidents (using learning from similar large-scale events)	A. Continuation of strong partnership working to ensure that health protection plans are developed and tested, and assurance is provided for a safe Commonwealth Games – (*UKHSA)*

5. Conclusion

Each area of Health Protection has been profoundly affected by the Covid-19 pandemic. Business as usual work has been paused to support a comprehensive and successful pandemic response, and the HPF adjusted its purpose to provide assurance to the DPH on the effectiveness of this response. The Covid-19 response had significant impacts on the other primary areas of health protection focus: most screening and immunisation programmes saw a significant decrease in activity; the incidence rates of many communicable diseases and infections were reduced due to lockdown and other hygiene and behavioural measures. However, non-Covid-19 health protection incidents did continue to require responses and the HPF was still routinely informed, and all health protection partners continued to respond and manage incidents as needed.

These areas have now begun to restart their work, which presents some challenges. There is a backlog of work to be tackled that needs to be addressed in a way that does not create or worsen health inequities. This needs to be balanced with an ongoing pandemic response as we learn to live with Covid-19.

However, a return to business as usual work also provides opportunities to improve and apply learning from the pandemic. Strong multi-agency links have been established that can now be maintained to ensure Health Protection work is truly collaborative across the public health system in Birmingham. Successful community engagement has also made clear what public health measures and interventions work well locally. This learning can be adopted into new ways of working, ensuring Health Protection work is designed for, and responds to the needs of Birmingham citizens.

6. Glossary

AAA: Abdominal Aortic Aneurysm
BCC: Birmingham City Council
BCHC: Birmingham Community Healthcare
BSI: Blood Stream Infection
BSol CCG: Birmingham and Solihull Clinical Commissioning Group
CAZ: Clean Air Zone
CCG: Clinical Commissioning Group
CWG: Commonwealth Games
DPH: Director of Public Health
DWEO: The Dog Warden/Enforcement Officers
EH: Environmental Health
EPU: Environmental Protection Unit
FSA: Food Standards Agency
GP: General Practitioners
GRT: Gypsy, Romany and Traveller
HCAI: Health Care Associated Infections
HP: Health Protection
HPF: Health Protection Forum
ICS: Integrated Care Systems
IPC: Infection Prevention and Control
MMR Vaccine: Measles, Mumps and Rubella
MRSA: Methicillin-Resistant Staphylococcus Aureus
NHS LTP: NHS Long Term Plan
NHS: National Health Service
NHSEI: NHS England and NHS Improvement
NICE: National Institute for Health and Care Excellence
NRPF: No Recourse to Public Funds
OHID: Office for Health Improvement and Disparities
PHE: Public Health England
RSPH: Royal Society of Public Health
RSV: Respiratory Syncytial Virus
SAIS: School Aged Immunisation Service
SI: Screening Immunisation
TB: Tuberculosis
UHB: University Hospitals Birmingham
UKHSA: UK Health Security Agency
WHO: World Health Organisation
WMP: West Midlands Police

7. References and additional documents

1. Public Health England. 2021. Birmingham Oral Health Profile of 5-year-old children 2019. Version 2.
2. Public Health England. 2021. Oral health survey of 3-year-old children 2020
3. Birmingham City Council. 2019. Birmingham Health Profiles.
4. Birmingham City Council. 2015. Constituency Economic and Employment Profiles.
5. West Midlands Strategic Migration Partnership. 2017. Understanding Migration: Building a cohesive strategy for the West Midlands. Stage one report: Review of trends and patterns of migration
6. UK Health Security Agency, NHS. 2021. TB Action Plan for England, 2021 to 2026. 2021. Available here.
7. Department of Health and Social Care. 2021.Health and Care Bill: water fluoridation. Available at https://www.gov.uk/government/publications/health-and-care-bill-factsheets/health-and-care-bill-water-fluoridation

7.1. Contributors

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- Integrated Care System/Birmingham and Solihull Clinical Commissioning Group (Infection Prevention and Control)
- Health Protection and Environmental Health, Birmingham City Council (Non-Communicable Diseases- Tobacco Control)
- Environmental Health, Regulation and Enforcement, Birmingham City Council (Non-Communicable Diseases - Environmental Health)
- NHS England and NHS Improvement / Public Health England (Oral Public Health)
- Public Health, Birmingham City Council (Oral Public Health)
- UK Health Security Agency/ Public Health England (Commonwealth Games)
- UK Health Security Agency/ Public Health England (Communicable diseases)