



Llywodraeth Cymru
Welsh Government

Health Protection System in Wales Review

Update April 2024

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Introduction

1. In Autumn 2022, Welsh Government commissioned an independent review to assess the strengths of the current Welsh Health Protection System (the System) against an established benchmark of a high performing system. The aim of the review was to provide reasonable and actionable recommendations on the ways in which the System could be further strengthened to meet or exceed the established benchmark¹.
2. [The Welsh Health Protection System Review](#) (“the Review”) involved interviews and questionnaires with partners and stakeholders from across the System in Wales. It was published on 7 February 2023 alongside an [Implementation Plan](#), which described plans to address the Review’s recommendations. The recommendations demonstrated the complexity, integration and interdependency of the different elements of the System in Wales.
3. A period of transition to new arrangements began during 23/24 across the Health Protection system, when resources established and maintained during the pandemic decreased in line with transition plans. Implementation of the recommendations from the Review is an ongoing process as we continue to learn lessons from the Covid-19 pandemic and develop a sustainable post pandemic system. This paper provides a summary update on progress as at April 2024. Annex A details the progress against each specific recommendation in the Review.
4. Separate arrangements existed for vaccination during Covid-19 and a separate lessons learned process was undertaken with multi-agency engagement, which resulted in the publication of the [National immunisation framework for Wales | GOV.WALES](#) (NIF) in Autumn 2022. Vaccination arrangements were therefore not within scope of the Review. However, delivery of the expectations for our vaccination system outlined in the NIF is a core aspect of our approach to health protection in Wales. This update therefore also reflects on progress with NIF implementation.

Structure & Workforce

5. The Review acknowledged the strength of the pandemic response in Wales, which built on existing local, regional and national structures. It recognised the need, post-pandemic, to continue bringing together wider system partners to maintain a sustainable, scalable and integrated public health response capacity. The Review also found that the decision to employ staff locally through the public sector during the pandemic allowed flexibility across the system and the ability to

¹ The benchmark was developed from the best practices outlined in the Framework for the Creation and Development of National Public Health Institutes by the International Association of National Public Health Institutes <https://www.ianphi.org/includes/documents/sections/tools-resources/all-frameworks/frameworkfornphi.pdf>

scale upwards and downwards as required. It recommended the retention of local resilience for all-hazard health protection with support from health protection specialists, public health laboratories and field epidemiologists.

6. 2023/24 was a transition year towards a more agile and sustainable model of all-hazard health protection. As resources developed and maintained to respond to the height of the pandemic were reduced, health boards worked with their local authority partners on a regional basis to establish an integrated service to support sustainable health protection measures on an 'all-hazards' approach. There continues to be a strong partnership working approach between health protection and environmental health (public protection) services in local authorities. In many areas of Wales, the regional integrated health protection function is comprised of staff from both the health board and the local authority.
7. Core Principles were developed to guide the regional health protection function including the need for teams to have preparedness plans to scale up in the event of a future threat; to respond to routine disease control; to deliver NIF implementation; and to deliver a sustained increase in the provision of prevention, testing and treatment to meet disease elimination targets for TB, Hepatitis B&C and HIV. In addition to Covid-19 related work, the local health protection service has pivoted to respond and support wider health protection measures in key areas such as implementing the NIF and response to communicable disease outbreaks.
8. The NIF identified the value and importance of developing a sustainable and mixed-skill workforce to facilitate agile and resilient vaccination teams within health boards, as part of the integrated health protection work. Activity is also underway with the other UK nations to scope the UK-wide legislative changes which will be required to maximise the opportunities presented by a mixed-skill workforce model, learning from and building on what worked well during the Covid-19 emergency.
9. In addition to addressing recommendations from the Review, recent outbreaks of communicable diseases such as Mpox, streptococcus and measles have underpinned the importance of having robust regional health protection and vaccination services with the ability to respond to new and emerging threats. From 2024/25, baselined recurrent funding is allocated to NHS Wales to continue to build and support a permanent and skilled health protection workforce. This is a significant step forward in our ambition to create a more agile and sustainable health protection service that can prevent, prepare and respond to current and future threats to public health. We are also continuing to invest in a small, highly skilled and experienced national contract tracing team to support on-going national work and has the ability to rapidly surge if circumstances require. This builds upon and complements Public Health Wales' (PHW) existing All Wales Acute Response Service known as AWARe, which receives all notifiable disease reports during normal working hours.

10. The Review recommended that the use of the voluntary sector and students is considered as part of workforce planning for future readiness. Work to determine the contributions the voluntary sector could make will be explored through all-hazard prevention, preparedness planning and exercises planned for 2024.
11. In addition to the work led by Welsh Government, PHW has led a Four Nations programme on the health protection workforce, which is tasked with 'developing an appropriate workplan to inform future strategic direction and priorities for strengthening the health protection workforce'. A mapping exercise and summary document has been produced for Wales outlining the skills, standards and resources already in place, areas of best practice, existing career pathways, gaps / opportunities, and information on workforce data. This work will be used to inform focussed discussions on the specific health protection workforce needs for Wales.

Health and Well-being

12. A strong public health approach is key to a healthy society; healthier people will be less vulnerable to infectious and non-infectious disease, including those which are vaccine preventable, such as measles. The Review commented on the need to ensure backlogs in health services and public protection services following the pandemic do not lead to deterioration in the public's health and wellbeing.
13. Welsh Government's strategy [A Healthier Wales \(AHW\)](#) supports this. It sets out Welsh Government's long-term vision of a 'whole system approach' to health and social care across Wales. In practice, this will mean an integrated health and social care system with seamless services that continue to focus on prevention and community-based care, going to a hospital only when needed. Last year the Welsh Government published the [Chief Scientific Adviser for Health report on the challenges the NHS in Wales](#) will face over the next ten years or so. The report highlights the importance of ensuring our health and care services continue to focus on prevention and community-based care. The Minister for Health & Social Services has commissioned a review of the actions within AHW to ensure it remains current and continues to address future challenges for health and care in Wales.
14. The [Planned Care Recovery Plan](#) was published April 2022, with a clear commitment to reduce long waits caused by the pandemic. The Planned Care Programme and the NHS Executive continue to work with services to support and challenge this agenda to facilitate the transformation needed to further reduce the backlog.
15. The Review stated the need to review how support is provided to registered care homes for healthcare related Infection Prevention and Control (IPC). Many local health protection services have worked proactively with care homes to provide

support for IPC. This includes establishing audits, monitoring of follow up actions / recommendations and providing updates on changes to guidance. This means issues can be identified and risks mitigated to prevent and manage infections to reduce transmission.

16. An important principle of the local health protection service is a requirement to work together locally and nationally to support and deliver work to address equity of access and opportunity. The Review recommended that population data should be captured so that inequalities can be routinely monitored, and actions can be designed to tackle them. This is supported by the NIF, which focuses on reducing inequities and improving health outcomes for those communities which are most affected by ill health and certain conditions. Health boards have either published, or are working towards publishing, a vaccine equity strategy, in line with expectations set out in the NIF.
17. The NHS Health Inequalities Group, established in 2022, continues its work to maximise the impact of the NHS in Wales by tackling health inequalities. The work of the group includes the review of data sets and taking action to respond to gaps, with the aim of strengthening the collection of inequalities data and ensuring richer data relating to the protected characteristics to inform policy action.
18. The Science Evidence Advice (SEA) division within the Health and Social Services Group has a programme of work to better understand inequalities to improve health and care policies across Welsh Government, including working with PHW on the joint Welsh Health Equity Status Report Initiative (WHESRI) project and the Cost of Health in Equality to the NHS in Wales (CHEW).

Governance arrangements

19. The Review emphasised the ongoing need for governance arrangements to help ensure relationships and collaboration remain protected for our preparedness and response to threats and risks in the system.

At UK level, post-pandemic governance arrangements include a new UK Health Security Agency / Devolved Government Board, which has been established to discuss strategic opportunities for improving four nations collaboration. This sits alongside the formal governance structure and arrangements established under the Common Framework on Public Health Protection and Health Security jointly developed and agreed between the UK governments and national public health agencies. It supports cooperation on issues which require UK-wide approaches, as well as on devolved issues where the sharing of knowledge and expertise is beneficial. The current shared work programme includes nine key priorities across the Four Nations; adopting a consistent and proportionate approach to the management of notifiable diseases, border health, health protection workforce, emergency preparedness, resilience and response, environmental public health, international data/surveillance platforms, four nations cooperation on whole

genome sequencing, four nations working groups and governance, and a census on all four nations Memorandums of Understanding (MoU).

20. The Covid-19 pandemic showed the challenge nations can experience in developing and procuring vaccines at speed in a crisis. Since Moderna's 10-year Strategic Partnership with UK Government was agreed in late 2022, engagement has included DGs and partners across the UK NHS's and academia. Moderna will invest in mRNA research and development in the UK and build a state-of-the-art vaccine manufacturing centre with the ability to produce up to 250 million vaccines a year. Vaccines will be available both in steady state and pandemic situations, with the UK Government committed to a minimum annual volume. Welsh Government is represented on the MSP programme board and engaged in various workstreams of the programme and a working group has been established to oversee and coordinate Wales' interests in the Partnership.
21. We are also closely engaged with UK Health Security Agency on the delivery of the 100 Days Mission, which is an initiative to better prepare the world for the next pandemic by pre-emptively and proactively driving the development of diagnostics, therapeutics and vaccines (DTVs) so that they can be rapidly made available within the first 100 days of a future pandemic threat being identified.
22. In Wales, following a governance review of the Chief Medical Officer's Health Protection Advisory Group (HPAG) in 2023 to identify opportunities to improve integration, planning and delivery, three strategic sub-groups now report to HPAG: Environmental Public Health; Communicable Disease; and One Health - recognising the strategic need for closer engagement across human, animal and plant health under our all-hazards approach. The revised arrangements ensure the Chief Medical Officer and members of HPAG have oversight of key activities and risks, together with relevant advice from key stakeholders in the system, and strong accountability mechanisms for assurance. In addition, quarterly monitoring and reporting of the delivery against the Core Principles is now embedded within our governance arrangements, which provides assurance of delivery at regional level by health boards and local authorities.
23. Appreciating the wide scope of responsibility and coordination required to prepare for a future pandemic threat, in Wales a cross-government Pandemic Preparedness Board has been established within Welsh Government to oversee the development of a pandemic preparedness framework. The Board will consider emerging lessons from the Covid-19 Public Inquiry, as well as lessons already identified and wider engagement with key partners.
24. Since the Review took place, the NHS Executive has been established. The core value statement of the Executive is to drive improvements in the quality and safety of care - resulting in better and more equitable outcomes, access and patient experience, reduced variation, and improvements in population health. The Vaccination Programme Wales (VPW) is now situated within NHS Executive to

support the planning and delivery of vaccination programmes, driving improvements in uptake and reducing vaccination equity gaps, and manage implementation of the NIF. From 1 April 2024 an emergency planning function within the Executive will provide a national focus for co-ordination of NHS Wales contingency arrangements, monitoring and assurance of emergency preparedness activities.

Preparedness and Response Plans

25. The Review acknowledged that individual and organisational roles were extended as part of the emergency Covid-19 response and recommended clarity around roles and responsibilities as the System emerged from the pandemic. It also identified the need to reassess existing plans for a public health emergency ensuring they are fit-for-purpose, appreciating the interdependencies between agencies.
26. The Communicable Disease Outbreak Control Plan for Wales (“the Outbreak Control Plan”) provides a framework for managing communicable disease outbreaks with public health implications. During 2023/24, Public Health Wales (PHW), in collaboration with key partners across the System, thoroughly reviewed and updated the plan, ensuring it clearly described roles and responsibilities. The Outbreak Control Plan aligns with the Pan-Wales Response Plan which sets out civil contingencies arrangements. The refreshed Outbreak Control Plan was published in January 2024 and an exercise to validate the plan took place on 19 March 2024. Learning from the exercise will be reviewed and actionable recommendations produced by Public Health Wales.
27. The [Wales Managing Public Health Risks from Environmental Incidents Guidance](#) was also reviewed and updated in December 2023. This document facilitates co-ordination of the response to protect public health for small scale environmental incidents. It sets out how to manage incidents that are minor or localised using an Incident Management Team (IMT) approach, which can also apply to the early stages of potentially major incidents. A multi-agency training event took place in March 2024 where system partners learned about the guidance and tested its application through a simulated chemical incident scenario.
28. At a UK level, all four UK nations are currently engaged in contingency planning and work on pandemic preparedness. Work is underway to refresh cross government pandemic preparedness strategies as well an update to the 2011 Pandemic Flu Response Plan, which will be broadened to a Respiratory Virus Response Plan. Planning also continues at a UK and Wales level to ensure we have the right countermeasures in place to respond to threats when they arise. Countermeasures include Personal Protective Equipment (PPE), pandemic specific vaccines, critical care medicines, and measures to respond to a Chemical, Biological, Nuclear or Radiological threat.

29. Officials and public health agencies from all four nations have worked to deliver the current five-year Antimicrobial Resistance (AMR) National Action Plan in line with the UK vision to control and contain AMR by 2040. This work continues and a new UK AMR National Action Plan (2024-29) is planned for publication in spring 2024. A new Wales AMR Delivery Oversight Group will be established to oversee the delivery of the plan and three smaller delivery groups will also be established for human health, animal health and environment, and research and surveillance.,
30. In recognition of the ongoing need for clarity in relation to roles and responsibilities, and for cohesion between the different strategies and plans, work on a National Health Protection Framework for Wales has commenced with partners. The Framework will set out our vision, key priorities and objectives for health protection.

Collaboration and communication

31. The Review highlighted the importance of open communication mechanisms that operate in all directions and can provide feedback and allow recipients to engage fully, regularly debrief and exchange best practice methods.
32. We continue to build on the experiences and relationships developed during the Covid-19 pandemic to ensure there are established multi-agency mechanisms for partners to come together to discuss emerging issues and provide updates and feedback in a timely way. As well as HPAG and its' subgroups, other fora for feedback and discussion include the Health Protection Operational and Readiness Group (HPORG) which comprises operational level representatives from health boards and local authorities and addresses key operational issues, and a Communicable Diseases Intelligence Sharing Group (CDISG) which was established to facilitate the sharing of local and regional intelligence from all 7 health board areas with Public Health Wales and Welsh Government.
33. The Public Vaccination Literacy theme of the NIF has a series of expectations aimed at driving an increase in public understanding of the importance of vaccination, which is essential if we are to recover recent dips in uptake of vaccinations in the post-pandemic environment. We are working closely with partners in PHW and NHS, informed by behavioural insights and using lessons from the pandemic regarding engagement with harder to reach communities, to support this work.

Data

34. The Review recommended that data systems should be reviewed to explore how they can operate to agreed, shared standards to aid data capture and to increase their value in national and local surveillance, also supporting local as well as central functions. The Review stated that technical preparedness for robust and

resilient monitoring systems, surveillance and risk assessment of emerging viral threats needs to be put in place and that surveillance systems should be digitalised wherever possible, using the most up to date technologies.

35. Public Health Wales (PHW) is implementing an integrated respiratory surveillance plan, which considers the pandemic virus SARS-CoV-2 alongside other respiratory pathogens and assesses the impact of these pathogens at different levels from asymptomatic to severe hospitalised cases. This surveillance involves multiple systems and routes of reporting, coupled with specialist and other data such as microbiology and vaccinations and hospital admissions.
36. Work has been undertaken to integrate separate surveillance reports for COVID-19 and influenza into an integrated suite of outputs covering each level of disease severity and surveillance type. PHW has also begun to develop collections of reports focusing on specific populations groups and a weekly interpretive summary, covering key points from each surveillance system is provided to Welsh Government. PHW are currently conducting a review of the surveillance outputs that they produce, including some related to COVID-19 that are no longer going to be produced, such as COVID-19 mortality statistics. We are working with PHW to ensure that on-going surveillance meets requirements going forward.
37. We continue to have in place monitoring and oversight arrangements to review the surveillance data and intelligence on respiratory viruses. This builds on the approach adopted throughout the pandemic to combining a wider range of scientific evidence and analysis from different disciplines alongside local intelligence and surveillance.
38. A discovery project has recently concluded to explore how we can build on the digital systems set up to support the pandemic response. The ambition is to develop a future digital system for Wales that can operate as a day-to-day case management system for health protection, and that can scale up where necessary to work in a significant outbreak or pandemic situation. An integrated system that can be accessed by partners across the system including Welsh Government, PHW and Health Boards would be able to facilitate surveillance, research and advanced analytics and modelling drawing on the wide range of expertise that exists across these organisations. A case management system with access to core data will strengthen our understanding of patterns of communicable disease and other health protection threats and will allow for analysis of a complete picture.
39. A core aim of the NIF is to develop the digital infrastructure needed to deliver an effective and efficient vaccination system, which works seamlessly for practitioners and patients alike. A digital discovery process is currently being undertaken by DHCW has recently concluded. The discovery assessed options for realising the digital vaccination transformation outlined in the NIF. Funding is in place to enable DHCW to move from discovery into delivery and begin to

achieve the essential vaccination digital improvements to support services that are fit for the future.

40. Work is also ongoing to scope the development of a Wales-wide Vaccination Performance Management Data Set. As part of the wider data and performance management ambitions set out in the NIF there is an intention to bring vaccination activity, financial monitoring, quality and safety monitoring and NHS staff immunisation information together to better support the strategic and operational requirements of vaccination programmes in Wales.
41. The Review recognised the progress of Genomics research and new techniques in modelling, however highlighted that sometimes there were barriers in sharing data between agencies and other UK nations. A new facility at Cardiff Edge Life Sciences Park - Canolfan Iechyd Genomig Cymru (CIGC) – has been built, which co-locates Genomics Partnership Wales partner organisations delivering services and research and creates an environment which promotes the sharing of knowledge and expertise between the NHS, academia and industrial partners. PHW are also currently in the process of developing a Pathogen Genomics Strategy and we are investing in the sequencing of Covid-19 related pathogen genomics.
42. At a Four Nations level, a new Data Sharing Agreement has been agreed between the four Public Health Agencies in the UK in relation to sharing personal data.

Surveillance and horizon scanning

43. The Review noted that the key for being prepared for the next hazard with national impact, whatever its nature, and for better and more equitable control activities of endemic infectious diseases, is to be alert to the early signs of outbreaks or failures in routine control. It recommended we continue and strengthen four nation and international links and use academia, for stronger horizon scanning, anticipation of emergency events, and identification of needs for better routine control.
44. We have acted on this through continued investment in effective and routine respiratory disease surveillance. PHW produces several reports on a regular basis including epidemiology, hospital admissions, mortality surveillance, respiratory virus testing trends, variant surveillance and syndromic surveillance. PHW also reports a summary of vaccination data.
45. We are developing a long-term approach to wastewater surveillance to integrate the technology into the integrated public health surveillance system; this includes working productively with our academic partners from the Wastewater Research Centre Wales and our partners across the four nations. Wastewater monitoring provides early signals for potential increases in the incidence of pathogens such

as Covid-19, Norovirus, Influenza and many others. PHW is also continuing to implement its' integrated respiratory surveillance plan, in line with principles of surveillance recommended by the World Health Organisation and the European Centre for Disease Prevention and Control. This considers the pandemic virus SARS-CoV-2 alongside other respiratory pathogens and assesses the impact of these pathogens at different levels from asymptomatic to severe hospitalised cases. It involves multiple systems and routes of reporting, coupled with specialist microbiology and genomics and linked to other data such as vaccinations and hospital admissions. Where possible existing data, enhanced by linkage and data science methods is used. This surveillance includes community sentinel surveillance in GPs and community pharmacies and Severe Acute Respiratory Infection (SARI) surveillance in hospitals. We are also maintaining a significant level of respiratory (including COVID-19) laboratory testing capacity and infrastructure, and have invested in multiplex testing that supports diagnosis and monitoring of respiratory viruses. The ability to test for novel pathogens supports our preparedness for future hazards and strengthens our surveillance.

46. Swansea University are commissioned by Welsh Government to undertake Medium and Long Term Projections for Covid-19 and other pathogens, such as Avian Flu. These projections feed into NHS planning and preparedness particularly during the Winter period.
47. Given the proportion of emerging infectious disease threats that are of zoonotic origin, we continue to work with PHW and the Animal and Plant Health Agency (APHA) to strengthen our surveillance capability and early warning systems across the One Health spectrum of human, animal and plant health.
48. This also has a focus at UK level, where we are working with counterparts in the other UK nations to contribute our part to the refreshed UK Biological Security Strategy (BSS) and National Biosurveillance Network (NBN). The NBN is one of the outcomes in the BSS which aims to connect existing diverse and disparate surveillance capabilities and data sources to provide comprehensive monitoring of known and nascent threats to our national biological security.
49. We seek to maximise the role of science and evidence in horizon scanning. Through Wales' observers and co-opted membership of the JCVI, we continue to be sighted on new and emerging vaccinations against infectious diseases. The role of the Technical Advisory Group (TAG) is being reviewed alongside understanding the role of the professional advisory committees on the theme of science and evidence in health policy. The TAG model was an effective means of supporting analysis of the impacts of the pandemic in Wales through knowledge and expertise transfer. Having advisory committees related to health science and evidence would help to provide a similar function to inform health policy going forward. A knowledge sharing relationship with the Chief Scientific Advisor in the Government of New Zealand has been established to learn from their use of science, research, and evidence during the Covid-19 pandemic. We

are also exploring options to use Secure Anonymised Information Linkage (SAIL) data and developing research proposals in liaison with Administrative Data Research (ADR) Wales. The Welsh Government's Strategic Evidence Board (SEB) has been established to improve the use of science and evidence in policy making across Welsh Government.

Next steps

50. The work to address the recommendations in the Review has taken place against a backdrop of the challenging context of public finances and increasing demand on the health and care system. Partnership work has continued across the health protection system in Wales - at a local, regional and national level – to progress our strategic priorities and take forward actions to deliver on the recommendations of the review.
51. There are key areas where we plan to prioritise our efforts and progress with our partners and stakeholders going forward. This includes building on our work around pandemic preparedness, including considering the use of volunteers and non-specialist staff, as well as partnerships and collaboration with universities and tertiary education providers. We will continue to support PHW and our regional health protection functions, through the provision of recurrent funding and develop national and local actions that are aligned and deliver a whole system approach. Quarterly monitoring and reporting of the delivery against core principles is now embedded within our governance arrangements, and the publication of the forthcoming National Framework for Health Protection will provide a strategic overview.
52. Progress against delivery of the actions to address the recommendations in the Review continue to be monitored by the Chief Medical Officer's Health Protection Advisory Group.
53. We are grateful to our partners and stakeholders for their continued positive engagement, and we commit to continued collaboration to build on our achievements to date to strengthen our Welsh Health Protection system for the future.

Annex A - Delivery and Implementation Plan Update

Thematic area	No	Recommendation	Action(s) to implement	Status Update
System Design	1	<p>Maintain large-scale sustainable integrated public health response capacity as seen during Covid by:</p> <p>Ensuring that backlogs in health services and public protection services are cleared and remain manageable, and do not lead to deterioration in the public's health and wellbeing, so ensuring more healthy people who are less vulnerable to infectious disease (ID) and non-ID threats.</p>	<p>Continue to focus on population health and prevention as the route to better health and wellbeing and to improved health security in the longer term.</p> <p>Continue to deliver strong immunisation and public health programmes, and promote a better understanding of health, infection, and environmental hazards.</p> <p>Build on the skills, experience and learning developed during the response to the Covid-19 pandemic, with health boards and local authorities working in partnership with Public Health Wales and Welsh Government to deliver a local approach under national frameworks and guidance.</p> <p>Link together relevant existing workstreams and recovery plans to ensure a joined-up system response and promote wider partnership working and community involvement. Including delivery of well-being plans and engagement with Public Services Boards and other multi-agency groups.</p> <p>Use the levers of environmental public health to contribute to improving public health, for example in areas such as air quality, water and land contamination, housing and climate change</p>	<p>A Healthier Wales - review of the actions within AHW to ensure AHW remains current and continues to address the challenges Wales will need to address including a focus on prevention and improving the health of the population to increase our health security. NIF Implementation</p> <p>All screening programmes expected to be recovered by Q2 2024. The exception is Diabetic Eye Screening Wales (DESW) which is undergoing work to transform the programme to address increasing demand. All improvement works are aiming to increase and sustain capacity so that DESW can provide high quality services for participants.</p> <p>Communication campaigns e.g. PHW's winter campaign 2023, vaccination campaign</p> <p>Development of new National Health Protection Framework underway. Completion planned for Summer 2024. Framework intended to build on the core principles which included: the need for teams to have preparedness plans to scale up in the event of a threat and future pandemic scenario, to deliver NIF implementation, and to deliver a sustained increase in the provision of prevention, testing and treatment to meet disease elimination targets for TB, Hepatitis B&C and HIV.</p>

			<p>mitigation. Work with our colleagues in Animal Health and Welfare to strengthen partnerships in a One Health approach as recommended in the Chief Medical Officer for Wales Special Report which was published in January 2021.</p> <p>Continue to focus efforts to eradicate TB and Hepatitis. The All Wales TB Expert Group to review and update the drafted National Framework for Wales to be presented for review and endorsement by the Welsh Government Oversight Group. Framework to be reviewed and endorsed in the next six months.</p> <p>Provide a renewed strategic focus on the elimination agenda, and specifically the WHO 2030 elimination targets through the Hepatitis B and C Elimination Programme Oversight Group. Progress the 13 key actions outlined in the Welsh Health Circular to ensure that frontline services are provided with the support required to both recover services to pre-pandemic levels and drive the elimination agenda.</p> <p>Planned Care and Recovery to address backlogs in health services is being led by the National Recovery Programme which will set specific requirements for local health boards. Meeting these requirements is a Ministerial priority for health boards. Ensure the continuation of a relentless focus on screening which will include the recovery of Breast Test Wales, Diabetic Eye Screening Wales and Wales Abdominal Aortic Aneurysm Screening Programme to pre-pandemic levels.</p>	<p>We continue to work with our partners through the One Health sub-group of HPAG in focussing our efforts on three key priority areas (AMR; Prevention, Preparedness and Response; Surveillance) and undertaking a situation analysis of One Health in Wales to inform next steps.</p> <p>An initial plan, which sets out our early steps towards elimination of TB by 2030, has been drafted by the All-Wales TB Group and will be published in Spring 2024. A Welsh Health Circular setting out the 13 key actions on our road to Hepatitis B and C elimination was published in January 2023 and health boards and substance misuse Area Planning Boards have set out their plans to increase service provision across a range of actions from prevention and diagnosis, to treatment.</p> <p>The Planned Care Recovery Plan - Planned Care Programme and the NHS Executive continue to work with services.</p> <p>Breast Test Wales is expected to be recovered by Q2 2024. Wales Abdominal Aortic Aneurysm Screening Programme was recovered in March 2023. Diabetic Eye Screening Wales (DESW) is undergoing work to transform the programme and, therefore, will take longer to recover.</p> <p>The NHS Health Inequalities Group work includes a focus on:</p>
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2	Continuing to bring the wider system, from the local to the regional and national levels, together in routine disease control activities, and in exercising and training for emergencies so that it works as one and does not become fragmented.	<p>Clarify roles and responsibilities, review plans and use exercises to test and support a learning culture of continuous improvement.</p> <p>Develop a schedule of relevant training and exercises involving people and organisations across the health protection system including communicable disease and environmental incidents. Refresh the Communicable Disease Outbreak Plan for Wales and Winter preparedness, taking the learning and experience from Winter 2022/23 into Winter 23/24.</p> <p>Alongside tests and exercises, undertake a governance review of the Health Protection Advisory Group.</p>	<p>The Communicable Disease Outbreak Plan for Wales (“the Outbreak Control Plan”) has been comprehensively reviewed to ensure it remains fit for purpose. The revised plan reflects the Health and Social Care Act, changes to EU regulations, and outputs from the Health Protection System Review and the Llwynhendy Tuberculosis Outbreak Review. A requirement for regular testing and exercising of the plan has been retained in the latest version - the plan commits to a formal review every 3 years or sooner, including all appendices and additional supporting information. Appropriate multi-agency exercises to test the efficiency and effectiveness of the ‘Communicable Disease Outbreak Plan for Wales’ will be held at least every two years and an</p>

				<p>exercise to test the update planned for March 2024.</p> <p>Lessons learned from Winter 2022/23 used to develop Winter Respiratory Framework which was published on 26 September. Infection Prevention and Control (IP&C) measures remain a key component of practice to reduce transmission in health and care settings of COVID-19 and other infections, such as influenza, Respiratory syncytial virus (RSV), and norovirus. The Framework also has key sections addressing modelling, surveillance, vaccination, testing, anti-viral treatment, and communication. The communication section addressed messaging to individuals and key settings or sectors, including health and social care, education and prisons. It was subsequently updated in the context of BA.2.86 and commits to an annual review cycle, embedding the learning from the latest Winter season.</p> <p>Other key plans and guidance have been reviewed and updated or developed:</p> <ul style="list-style-type: none"> • The Public Health Respiratory Framework 23/24 • Wales Managing Public Health Risks from Environmental Incidents Guidance • National Framework guidance developed for care home support beyond Covid-19. <p>Governance review of the Chief Medical Officer's Health Protection Advisory Group (HPAG) was undertaken in 2023 Three strategic sub-groups</p>
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				now report to HPAG: Environmental Public Health; Communicable Disease; and One Health.
3	Ensuring that health board Public Health teams and local government Environmental Health teams continue to be strengthened by clarifying their respective core roles and responsibilities, including behaviour science, risk communication and infection prevention and control.	<p>Establish a task and finish group with partners to clarify and define roles, responsibilities and expectations across the system at local, regional and national level (including specialist health protection resource and leadership). Including describing where there are opportunities for, and expectations of, collaboration and integration.</p> <p>Build on the work that has already been done and map this work to the original scope of the Review to capture the main areas of health protection, and align with civil contingencies plans. The scope of the review was:</p> <ul style="list-style-type: none"> • Health Emergency preparedness, resilience and response (including CBRN) • Communicable disease control, including microbiology services • Environmental hazards, climate risks and public health risk management • Risk communication, risk assessment, and risk management, including behavioural informed approaches. • Monitoring and surveillance of communicable and environmental and climate related threats • Infection prevention and control 	<p>Roles and responsibilities have been strengthened through the review and update of various plans e.g. Outbreak Control Plan. Work on a National Health Protection Framework for Wales has commenced with partners and defining 'roles and responsibilities' and opportunities for collaboration will be a key focus of the work to develop the HP framework with input from partners across the system.</p> <p>The themes from the review as noted will be captured as part of the forthcoming Framework.</p> <p>A cross-government Pandemic Preparedness Board has been established to oversee the development of a pandemic preparedness framework, ensuring we take on board lessons learned from Covid. The framework will address capabilities under 5 key themes:</p> <ul style="list-style-type: none"> • Surveillance and early warning • Reducing transmission and minimising harm • Reducing and responding to NHS, social care and wider service pressures • Equalities/protecting the vulnerable • Strengthening governance arrangements <p>A review of wider MoUs, particularly those with the UK Health Security Agency are actively under review, with a view to strengthen the agreements with other UK nations for health protection</p>	

				emergency response. This also includes arrangements relating to chemicals, poisons, radiation and environmental hazards.
Governance and accountability	4	All health protection and civil contingency plans, as well as those for the control of endemic diseases, need to be reviewed collaboratively now and in the future, following the cycle of plan, train, educate, exercise, review, plan, to ensure they are fully developed, that they align with other co-dependent plans, including local and national civil contingency plans, and that they include clear lines of communication and support.	<p>This is linked to recommendations 2 and 3.</p> <p>We will identify and map all health protection and civil contingency plans and develop a forward plan of when key plans will be refreshed. We will identify where there is duplication and overlap and seek to rationalise plans to improve efficiency. We will be clear where there are interdependencies with wider UK level plans.</p> <p>In parallel with this exercise, we will select one core plan to test and review, ensuring we develop a strong process of evaluation so that lessons can be applied to all plans.</p>	<p>Key plans and guidance have been reviewed and updated or developed as described above and continuous review and exercising cycles have been built into the refresh of the plans. The Outbreak Control Plan is the single, all communicable disease plan for managing outbreaks in Wales and after an extensive review by PHW in collaboration with key partners across the system, it was agreed that this remains as one plan to cover all incidents and outbreaks. At a UK level, all four UK nations are currently engaged in an update to the 2011 Pandemic Flu Response Plan with a Respiratory Virus Response Plan. Countermeasures stockpiles are currently being reviewed to build on lessons from the pandemic.</p> <p>The national Pan Wales Response Plan produced and developed by the Welsh Governments National Security & Resilience Division has also been subject to review and updated during 2023. The refreshed plan provides a framework for the management of an emergency affecting several or all areas of Wales. The PWRP compliments local arrangements together with the existing joint agency procedures - while providing coherent communication structures. A further in-depth review is now underway to ensure the pan Wales plan continues to consider and reflect emerging priorities and risks.</p> <p>The National Security & Resilience Division has also commissioned a detailed 5 Case Business</p>

				<p>Plan to identify options for a new central learning delivery function. Due in late 2024, the information will inform future planning to improve our understanding of national resilience, identify potential areas for improvement, deliver appropriate learning and evaluate impact on national resilience.</p> <p>The Welsh Government will continue to support the delivery of the Exercise Wales Gold Course (EWGC). The EWGC is formally aligned to the Multi Agency Gold Incident Command Course – preparing strategic leaders to work effectively as part of Strategic Co-ordination Groups or Recovery Co-ordination Groups established following a major incident or emergency, as defined by the Civil Contingencies Act 2004. The course comprises of a total of 27 hours study. During the last 12 months 110 delegates have attended the course, with 91% successfully completing all elements.</p> <p>We are also closely engaged with UK Health Security Agency on the delivery of the 100 Days Mission, which is an initiative to better prepare the world for the next pandemic by pre-emptively and proactively driving the development of diagnostics, therapeutics and vaccines (DTVs) so that they can be rapidly made available within the first 100 days of a future pandemic threat being identified.</p>
5	Plans should be tested through multiagency exercises and workshops, with staff from all levels of the organisations taking part. Where feasible, voluntary organisations should be involved in	See recommendations 1, 2 and 4.	We will develop exercises to test plans and our work around roles and responsibilities, using a range of staff across those organisations taking part and where possible involving third sector organisations.	Initial exercises for testing both the refreshed Outbreak Control Plan and Managing Public Health Risks from Environmental Incidents are scheduled for March 2024. Continuous review cycles for testing the efficiency and effectiveness of the plans and learning with our partners and stakeholders takes place regularly and has been explicitly built into the Outbreak Control Plan and will be held at least every two years.

	these developmental processes.	We will link to opportunities in the wider civil contingencies arena, to ensure we share learning and benefit from multi-agency multidisciplinary experiences.	<p>All four UK nations are engaged in contingency planning and work on pandemic preparedness. This includes all four nations participating in testing and exercising UK-wide plans and situations, such as Astral Bend and Mighty Oak exercises, which both has health protection elements to test.</p> <p>Voluntary sector contributions will be explored through all-hazard exercises and responses planned for 2024 and be informed by the outputs from the Workforce workstream of the Public Health Protection and Health Security Provisional Common Framework. We will also build on our on our work around pandemic preparedness, and in doing so considering the use of volunteers and non-specialist staff, as well as partnerships and collaboration with universities and tertiary education providers.</p>
6	Accountability frameworks should be developed so that for any population data, inequalities can be routinely monitored and actions can be designed to tackle them.	<p>We will review the data available to identify any gaps and consider the processes though which any data is routinely monitored.</p> <p>The Welsh Government's Science Evidence Advice (SEA) division has a programme of work to better understand inequalities and the impact they have on health and care policies.</p> <p>SEA will work closely with policy leads to prioritise those policies where gaps have been identified. SEA will provide policy leads with evidence and advice related to addressing specific inequalities.</p> <p>The division works with Public Health Wales on the joint Welsh Health Equity Status Report initiative (WHESRI) project and will be working closer with the Health and Inequalities Group. In addition to</p>	<p>We will also focus on improving data quality from the point of collection to ensure data sets are as accurate and complete as possible to will allow for analysis of a complete picture and help identify and remedy inequality.</p> <p>Memorandums of Understanding are being reviewed. A new Data Sharing Agreement has been agreed and signed between the four Public Health Agencies in the UK in relation to sharing personal data pursuant to the Health Security (EU Exit) Regulations 2021.</p> <p>SEA continues work with PHW on the joint Welsh Health Equity Status Report Initiative (WHESRI), project, working in partnership with the WHO, which has enabled the development of the Welsh Health Equity Solutions Platform. The Solutions</p>

			<p>this, SEA has also published two papers on the impact on health inequalities by the COVID-19 pandemic, hospital admissions and deaths.</p> <p>The Health and Equalities Group is undertaking work to ensure matters of equity are considered in the delivery of the planned care programme. We will ensure the group is aware of this recommendation for consideration in their work.</p> <p>A focus on vaccine equity will also continue, including through the National Immunisation Framework expectation on health boards to have a Vaccine Equity Strategy and programme of work. We will work with health boards during 2023 to have these strategies in place and implemented.</p>	<p>Platform aims to enable and facilitate evidence-informed solutions, policy action and sustainable investment across sectors towards closing the health gap in Wales and beyond, including addressing mental health inequalities. The Solutions Platform will also help monitor progress towards achieving healthy prosperous lives for all and will reflect Covid-19 implications to help place health equity at the heart of the Covid-19 sustainable response and recovery.</p> <p>SEA has also supported The Policy and International Health, World Health Organization Collaborating Centre (WHO CC) at PHW on a programme called the Cost of Health in Equality to the NHS in Wales (CHEW), providing feedback and guidance on reports, and key messages from the work. SEA continues work with PHW on the joint Welsh Health Equity Status Report Initiative (WHESRI), project and Health boards have either published, or are working towards publishing, a vaccine equity strategy, in line with expectations set out in the NIF.</p>
Workforce	7	<p>Local resilience for all-hazard health protection needs to be retained following recovery from the Covid pandemic. For a local disease control or response team to be effective it needs support from both health protection specialists, public health laboratories and field epidemiologists. This multiagency relationship can be</p>	<p>This links and will build upon the work described in response to recommendation 3 on roles and responsibilities.</p> <p>Transitional funding has been secured for 2023-24 to support the development of local health protection multi-disciplinary teams on a health board footprint with health boards and local government working in partnership to deliver a local response to health protection measures and threats. National frameworks and guidance will ensure there is consistency across Wales. The agility and resilience of these local teams is fundamental and Welsh Government will outline</p>	<p>The Review was undertaken at a point in time where many of the resources established and maintained during the pandemic remained in existence. Since that time we have transitioned away from the emergency pandemic response. There continues to be a strong partnership working approach between health protection and environmental health (public protection) services in local authorities. There are formal designations and joint working between specialist public health and environmental health for all public protection. The designation of a named Lead Officer from local government forms part of the Outbreak</p>

	strengthened through joint training.	<p>core principles to help regions to develop a sustainable model going forward.</p> <p>We will work with HEIW and others to consider the more detailed recommendations in the report about training programmes and competency frameworks.</p>	<p>Control Plan. This partnership allows learning across organisations and a strong response.</p> <p>Core principles were developed to guide the work of regional health protection functions including the need for teams to have preparedness plans to scale up in the event of a threat and future pandemic scenario. Health Boards continue to work with their Local Authority partners on a regional basis to establish an integrated service which works on a health board footprint, to support health protection measures including response to future threats using an 'all-hazards' approach.</p> <p>In many areas of Wales, the local integrated Health Protection service are currently comprised of staff employed by both the health board and the local authority. In addition to Covid-19 related work, they have pivoted to respond and support wider health protection measures in key areas such as providing capacity to support our delivery of our vaccination programmes, supporting the response to, for example, Mpox, Avian Flu, Meningitis, Strep A and Measles, as well as health screening for those arriving from Ukraine and support for asylum seekers.</p> <p>An assessment of standing capabilities across the Health Protection Directorate was undertaken in late 2023 and there are now plans in place to expand this across Welsh Government to assess readiness across various metrics.</p>
8	The voluntary sector should be engaged nationally and locally to explore what contribution volunteers	As part of the work of the task and finish group on roles and responsibilities, we will work with partners to develop agreed structures, competencies and specialisms, to determine where there are gaps which could be filled using	The Review recommended that the use of volunteers and students is considered as part of workforce planning for future readiness. Work to determine the contributions the voluntary sector could make will be explored during 2024.

		<p>may make in endemic disease control and future significant events.</p>	<p>volunteers and those who are not health protection specialists.</p> <p>We will actively consider the role of the voluntary sector in health protection. We will test the inclusion of volunteers in exercises where appropriate. We will engage with WCVA to test the potential of working with charities, for example Red Cross, and we will engage with universities as outlined in response to recommendation 10.</p> <p>This will require further work and development and will link to thinking about the role of volunteers in wider health services. We will work with colleagues across civil contingencies to share learning and development opportunities.</p> <p>This is also linked to wider 4 Nations work on the health protection workforce, being led by Public Health Wales on behalf of the 4 Nations Health Protection Oversight Group.</p>	<p>Public Health Wales has led a Four Nation work programme priority on the health protection workforce and has undertaken a mapping exercise, which outlines the skills, standards and resources already in place, areas of best practice, existing career pathways, gaps / opportunities, and information on workforce data. This work will be used to inform focussed discussions on the specific health protection workforce needs for Wales.</p> <p>The mapping exercise found there has been an expansion of workforce and introduction of career progression particularly in Microbiology and vaccine preventable disease. Roles in the acute end of health protection have been expanded to staff at lower grades, allowing earlier acute exposure and ongoing career progression. It also found that attracting students into a defined career pathway (degree level into environmental health) is better, post Covid-19 pandemic. The regulatory apprenticeship is also a productive pathway for younger students who want to pursue related degree courses.</p>
9		<p>Maintain rosters of volunteers and members of the public who provided support during the pandemic and determine whether feasible to keep them engaged in activities on a voluntary basis.</p>	<p>This is linked to the work on roles and responsibilities (recommendation 3), the review of plans (recommendation 4), and to exercising (recommendation 2).</p> <p>Local teams have been asked to maintain a register of individuals who assisted during the pandemic, for example by undertaking contact tracing calls, who consent to being contacted to assist again in future should the need arise. However, it should be noted the context within which individuals were re-deployed towards health protection during the pandemic (for</p>	<p>Work to determine the contributions the voluntary sector is planned for 2024.</p>

			<p>example to Test, Trace, Protect (TTP) or mass vaccination centres) was exceptional as national lockdown meant staff were freed from their usual roles. It is unlikely those individuals would be easily released in future, and there are challenges to keeping a register wholly up-to-date.</p> <p>Nevertheless, there is much to be learned from the mechanisms and processes developed during this time to deploy large numbers of additional staff. We will consider the best way to capture this learning to prepare for future threats that require planning in order to scale up resources and allow for rapid deployment. This may include training, development and mobilisation plans.</p>	
10	Discussions should be initiated with universities and other tertiary education providers to explore mechanisms to engage students on health-related courses to support health protection and participate in present and future all-hazard exercises and responses.	<p>Using outbreak scenarios for training purposes would provide an engaging introduction to health protection as a specialty and possible future career. We will start discussions with academic institutions at a national level to determine the feasibility of including students as support. Should this be viable, we will include this in the testing and exercising referenced above.</p> <p>In parallel we will explore opportunities for further developing curriculums to provide students with health protection competency and experience, as this may serve as a pool for a future specialist workforce.</p>	Work planned for 2024.	

Leadership, collaboration and communication	11	Aim to build on existing good relationships while opening up some of the routine communication mechanisms to civil contingency partners.	<p>We will continue to build on the experiences and relationships developed during the Covid pandemic to ensure there are established multi-agency mechanisms for partners to come together to discuss emerging issues and hazards in a timely way.</p> <p>We will build upon the engagement with specific sectors (e.g. care homes; education) which developed during the pandemic, to ensure two-way communication which is timely, relevant and effective.</p> <p>We will ensure these mechanisms are reflected in plans (such as the Communicable Disease Outbreak Plan for Wales) as they are reviewed, so that these mechanisms are explicit and tested.</p> <p>We will develop a post-pandemic system map which will sit alongside the roles and responsibilities work described in response to recommendation 3.</p>	<p>HPAG and its' subgroups Health Protection Operational and Readiness Group (HPORG) Communicable Diseases Intelligence Sharing Group (CDISG) Engagement with specific sectors (care sector, education professionals)</p> <p>Many of the local health protection services work proactively with care homes to provide support for IPC. Guidance to the care sector has also been reviewed for healthcare related IPC and wider public health measures in relation to personal protective equipment (PPE), testing, isolation and visiting guidelines in relation to a range of Acute Respiratory Infections, such as Covid-19, influenza, and respiratory syncytial virus (RSV), for staff, residents and visitors.</p> <p>We are working closely with partners in PHW and the NHS to identify opportunities to enhance public understanding and tackle vaccine hesitancy and misinformation to maximise vaccination uptake and reduce vaccination equity gaps. Behavioural insights will help inform this work and its impact will be closely monitored, with lessons learnt informing the evolving approach. Progress will be measured and monitored via PHW surveillance reports and through the quarterly health protection monitoring meetings with organisations.</p> <p>At UK level, post-pandemic governance arrangements include a new UK Health Security Agency and Devolved Governments Board has been established. The Common Framework governance continues to be embedded in statute and a recent operational review of the Public Health Protection and Health Security Provisional</p>
	12	Ensure communication systems can operate in all directions, not just one way, to provide feedback and allow recipients to engage fully.		

				Common Framework was undertaken and recommendations to further strengthen its governance, work programme and visibility are underway. It is the overarching governance that brings together DHSC, UKHSA, the Devolved Governments (DGs) and their three public health agencies (PHAs) to provide oversight of the agreed Common Framework work programme, to deliver key priorities in supporting the implementation of the Health Security (EU Exit) Regulations 2021, as well as, for discharging the UK's international obligations and commitments on the sharing of surveillance data.
Intelligence	13	Review all data systems currently operating and explore how they can operate to agreed, shared standards and be combined, within the confines of Data Protection safeguards, to aid data capture and to increase their value in national and local surveillance.	<p>We will work with organisations such as Public Health Wales and Digital Health and Care Wales, alongside Welsh Government's Knowledge and Analytical Services to review current digital systems and identify improvements, including any gaps in intelligence / surveillance that could be filled and any duplication in the current system. The review will also need to consider barriers to data sharing and how these could be overcome to ensure smooth and efficient partnership working.</p> <p>Funding has been allocated from the Covid response budget in 2023/24 to explore how data systems such as the CRM developed for contact tracing Covid-19 cases may be adapted to aid our response to future threats in a 'once for Wales' approach.</p>	<p>A discovery project has concluded to explore how we can build on the digital systems set up to support the pandemic response to ensure they are fit for the future.</p> <p>A digital discovery process undertaken by DHCW has recently concluded. The discovery assessed options for realising the digital vaccination transformation outlined in the NIF and funding is in place to move from discovery into delivery of an effective and efficient vaccination system, which works seamlessly for practitioners and patients alike.</p> <p>PHW is implementing an integrated respiratory surveillance plan, in line with principles of surveillance recommended by the World Health Organisation and the European Centre for Disease Prevention and Control. This considers the pandemic virus SARS-CoV-2 alongside other respiratory pathogens and assesses the impact of these pathogens at different levels from asymptomatic to severe hospitalised cases.</p>

				<p>This surveillance involves multiple systems and routes of reporting, coupled with specialist microbiology and genomics and linked to other data such as vaccinations and hospital admissions. Where possible existing data, enhanced by linkage and data science methods are used.</p> <p>Work has been undertaken to integrate separate surveillance reports for COVID-19 and influenza into an integrated suite of outputs covering each level of disease severity and surveillance type. PHW has begun to develop collections of reports focusing on specific populations groups, the first being a focus on children.</p> <p>A weekly interpretive summary (including a highlights of available international surveillance), covering key points from each surveillance system is provided to Welsh Government. This includes:</p> <ul style="list-style-type: none"> • Community sentinel surveillance in GPs and community pharmacies. • Severe Acute Respiratory Infection (SARI) surveillance in hospitals covering admissions and ICU beds taken up due to acute respiratory infections. • Cause specific and seasonal all cause mortality data. • Sequencing/genomics reports on SARS-CoV-2 variants and influenza clades. • Vaccine uptake for COVID-19 and influenza. • Vaccine equity reports relating to the COVID-19 autumn booster programme • Data on other causes of acute respiratory infections, such as Group A streptococcus, mumps and pertussis.
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				<ul style="list-style-type: none"> • In addition to the above, enhanced surveillance/evaluation will be undertaken on vaccine effectiveness, RSV and the burden of respiratory diseases. <p>PHW are currently conducting a review of the surveillance outputs that they produce, including some related to COVID-19 that are no longer going to be produced, such as COVID-19 mortality statistics. We are working with PHW to ensure that on-going surveillance meets policy requirements going forward.</p> <p>To assure timely and accurate interpretation of our surveillance data PHW continue to utilise local intelligence collected from our established professional networks. A number of national multi-disciplinary health and public protection groups will continue to meet regularly to consider local and regional intelligence.</p> <p>We continue to have in place monitoring and oversight arrangements to review the surveillance data and intelligence on respiratory viruses. This builds on the approach adopted throughout the pandemic to combining a wider range of scientific evidence and analysis from different disciplines alongside local intelligence and surveillance.</p> <p>On a four nations basis, PHW continue to engage and collaborate with research as part of the CLIMB COVID system, and are developing collaborations in relation to metagenomics (mScape) and RSV and are members of the Health Protection Oversight subgroup on Genomics.</p>
	14	Continue and strengthen four nation and international links	This links to recommendation 10.	Through our partners, particularly PHW, we continue to review possible new events in Wales and combine with intelligence from UKHSA to

<p>Horizon scanning and anticipation</p>		<p>and academia, for stronger horizon scanning, anticipation of emergency events, and identification of needs for better routine control.</p>	<p>The Chief Scientific Advisor for Health, through the Science Evidence Advice (SEA) division, will build upon their relationship with Health and Care Research Wales and the Covid-19 Evidence Centre to strengthen links with academia and research partners. In particular, SEA will work closely with Public Health Wales (PHW) to develop an aligned scientific research strategy that meets the needs of the programme for government and supports work to address future threats and issues.</p> <p>SEA already has a strong academic relationship with Bangor and Cardiff Universities though the wastewater monitoring programme. Cutting edge academic collaboration and research has helped inform the work and direction of the programme. In addition, the programme has led the development of new and novel methods for wastewater monitoring, producing a number of academic papers and publications.</p> <p>In addition to this, SEA continues to work in partnership with Swansea University to deliver modelling of Covid-19 and other respiratory infections whilst also building a specification for longer term modelling and computational requirements for pandemics and other health related emergencies.</p> <p>The Chief Medical Officers of the four nations regularly come together to discuss emerging events and horizon scanning, and relevant data and information is shared.</p>	<p>inform our horizon scanning. This is supported by dedicated weekly meetings between PHW and APHA and the Office of the Chief Veterinary Officer on zoonoses, bi-weekly horizon scanning reports on Gastro / emerging / zoonotic infections, as well as monthly horizon scanning for new variants and novel pathogens.</p> <p>With UKHSA, PHW participate in regular technical groups where an incident is taking or took place, for example the recent avian and swine flu incidents. They are also members of HAIRS for zoonotic threats, developing close working relationships with the TARZAT team to contribute to genomic analysis and are working with UKHSA on the revision of 2011 pandemic response plan and Mosaic (WHO recommendation) meetings in April.</p> <p>Internationally PHW contributes to WHO respiratory surveillance with surveillance data and expertise from the Specialist virology unit and also WHO work on vaccine equity. The laboratory in Cardiff is also formally part of the GISRS network for the global surveillance of respiratory infections. PHW have biweekly meetings of the global network during flu season, and then monthly out of season. Furthermore, PHW actively contribute to the Public Health Alliance for Genomic Epidemiology, which focusses on developing best practice around genomic epidemiology and work is beginning with the WHO International Pathogen Surveillance Network – a genomics/bioinformatics network that has been setup as part of the WHO Pandemic Hub.</p> <p>We are developing a long-term approach to wastewater surveillance to integrate the technology into the integrated public health</p>
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				<p>surveillance system; this includes working productively with our academic partners from the Wastewater Research Centre Wales and our partners across the four nations. Our current partnership approach has already yielded a new centre for doctoral training (CDT), established to specifically train and build an academic platform for the use of wastewater monitoring, building the academic skills needed to answer the scientific challenges for using this technology in a public health setting. The CDT will be run initially across Bangor University, Cardiff University and Bath University and will support around 12 PhD studentships in Wales.</p> <p>Swansea University are commissioned by Welsh Government to undertake Medium and Long Term Projections for Covid-19 and other pathogens, such as Avian Flu and SEA have developed short-term projections. These projections feed into NHS planning and preparedness particularly during the Winter period.</p> <p>We are exploring options to use Secure Anonymised Information Linkage (SAIL) data for specific pieces of analysis and have secured registration to the resource for our SEA analysts. We are liaising closely with colleagues in Administrative Data Research (ADR) Wales and Knowledge and Analytical Services (KAS) in developing research proposals that can be undertaken within SAIL. Note that SAIL is not geared towards surveillance and monitoring due to the time taken to ingest data into the facility.</p> <p>The role of the Technical Advisory Group (TAG) in facilitating contact and engagement between academia and policy officials continues to be examined; this includes ongoing work to develop</p>
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				<p>a new TAG that aligns with the UK Government Codes of practice for Science Advisory Committees and Councils.</p> <p>Work has also progressed to better understand the role of the professional advisory committees on the theme of science and evidence in health policy, this includes the role of Welsh Scientific Advisory Committee (WSAC) and National Joint Professional Advisory Committee (NJPAC). These professional advisory committees are established under the NHS (Wales) Act and differ from committees of academics whose role is to provide more general scientific and research advice, however, both play a critical role in improving the use of horizon scanning.</p> <p>In terms of improving international links, a knowledge sharing relationship with the Chief Scientific Advisor in the Government of New Zealand has been established. There is evidence that New Zealand was successful in its use of science, research, and evidence during the Covid-19 pandemic so this relationship could be critical in improving the use of such approaches in Wales.</p> <p>Through Wales' observers and co-opted membership of the JCVI, we continue to be sighted on new and emerging vaccinations against infectious diseases; important in terms of planning and preparedness for the future.</p> <p>The SEA division continues to produce and contribute to academic journals, as well as working closely with HEFCW/CTER on how research and evidence used in Welsh Government can be better credited back to the</p>
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				<p>academic community for use in impact studies, etc.</p> <p>Academia have taken a proactive role through instigating workshops on One Health involving members from different stakeholders: Academia, Public Sector, Charity Sector, NHS & Healthcare, Politicians and Environmental organisations with a view to understanding the connections between human health, animal health and environmental health. Workshops explored barriers to One Health: communication, building trust, tackling systems and bureaucracy, competition, imbalances in data collection and sharing, power dynamics, uncomfortable conversations and thinking through measuring sustainable individual organisational and system change. Links were also made to the work of the new Veterinary Science Centre.</p> <p>To strengthen our surveillance capability and early warning systems across the One Health spectrum of human, animal and plant health, we continue to work with our partners through the One Health sub-group of HPAG and contribute our part to the refreshed UK Biological Security Strategy (BSS), including contributing to the UK Microbial Forensics Consortium via PHW and National Biosurveillance Network (NBN).</p> <p>There is also increasing collaboration with academia on causes of spillover events and impact in relation to 'one world' space. PHW also continues to screen otters for the otter project for both influenza and SARS-CoV-2, which is work that is quite unique in the UK.</p>
	15	Maximise the health and therefore resilience of the population	See response to recommendation 1	Recovery funding has been provided to Public Health Wales which has enabled the recovery of all of the screening programmes by Q2 2024. The

		<p>through health and wellbeing initiatives and the recovery of NHS and Public Protection services which have been impacted by Covid.</p>	<p>Additional investment has been made to support the recovery of key health protection services, such as screening, and recovery plans continue to be delivered.</p> <p>Momentum will be maintained key proximal determinants of health, particularly smoking and obesity, with delivery plans and associated investment in place for both. More broadly, the Programme for Government sets out cross government action to support health and wellbeing, with progress to be monitored through national indicators on healthy life expectancy.</p>	<p>exception is Diabetic Eye Screening Wales (DESW) which is undergoing work to transform the programme to address increasing demand. All improvement works are aiming to increase and sustain capacity so that DESW can provide high quality services for participants.</p> <p>Progress is being made in terms of reducing tobacco consumption, with the most recent data available from 2022 showing 13% of Welsh adults smoke, down from 19% in 2015. Obesity levels are not falling, but the latest data from the Child Measurement Programme shows there are signs of a flattening of the significant increases in childhood obesity recorded during the pandemic.</p>
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