

# REFORM

moderna<sup>®</sup>

## HEALTH SECURITY FROM THE GROUND UP

5 lessons for the future of the UKHSA

---

James Sweetland  
Hashmath Hassan

August 2023

## **ABOUT REFORM**

*Reform* is established as the leading Westminster think tank for public service reform. We believe that the State has a fundamental role to play in enabling individuals, families and communities to thrive. But our vision is one in which the State delivers only the services that it is best placed to deliver, within sound public finances, and that both decision-making and delivery is devolved to the most appropriate level. We are committed to driving systemic change that will deliver better outcomes for all.

We are determinedly independent and strictly non-party in our approach. This is reflected in our cross-party Advisory Board and our events programme which seeks to convene likeminded reformers from across the political spectrum.

*Reform* is a registered charity, the *Reform* Research Trust, charity no. 1103739.

## **ABOUT REFORM IDEAS**

These are short research papers which enable a high-level exploration of a key public service challenge. The papers examine the policy context, identify key opportunities for reform and set a vision for the future.

## **ACKNOWLEDGEMENTS**

*Reform* would like to thank Moderna for kindly supporting this paper.

## **REVIEWERS**

The authors would like to thank Professor Jim McManus, President of the Association of Directors of Public Health (ADPH) and Professor Sally Sheard, Executive Dean at the Institute of Population Health for helpful comments on an earlier draft of this paper.

## **INTERVIEWEES**

The authors would like to express their gratitude to the individuals and organisations who were interviewed as part of the research for this paper:

- Dr Paul Atkinson, Senior Research Fellow in Public Health, Policy and Systems, University of Liverpool
- Professor Ivan Browne, Director of Public Health, Leicester City Council
- Stuart Carroll, Director of Market Access and Policy Affairs for the UK and Ireland, Moderna
- Professor David Heymann CBE, Professor of Infectious Disease Epidemiology, London School of Hygiene and Tropical Medicine
- Darius Hughes, General Manager for the UK and Ireland, Moderna
- Professor Peter Littlejohns, Professor of Public Health, King's College London
- Professor Jim McManus, President, Association of Directors of Public Health (ADPH) and Director of Public Health, Hertfordshire County Council
- Professor Sally Sheard, Executive Dean of the Institute of Population Health, University of Liverpool

---

# Table of contents

<b>Table of contents</b> .....	<b>3</b>
<b>Ideas</b> .....	<b>4</b>
<b>Introduction</b> .....	<b>5</b>
<b>1. The COVID-19 pandemic response</b> .....	<b>8</b>
<b>1.1 Planning and resourcing</b> .....	<b>8</b>
1.1.1 Planning for crises.....	8
1.1.2 Resourcing for risk.....	9
<b>1.2 ‘Follow the science’</b> .....	<b>10</b>
1.2.1 Science as policy.....	11
1.2.2 Singular science.....	12
<b>1.3 Neglecting the local</b> .....	<b>13</b>
<b>1.4 Complex systems and data sharing</b> .....	<b>15</b>
1.4.1 Confused connections.....	15
1.4.2 Data hoarding.....	15
<b>1.5 Differential risks</b> .....	<b>16</b>
<b>2. Lessons for the UKHSA</b> .....	<b>20</b>
2.1 Predict and anticipate health threats.....	20
2.2 Create a more secure environment.....	22
2.3 Reduce and eliminate health threats.....	24
2.4 Act on the scientific evidence.....	27
2.5 Unlock the potential of the UK’s assets.....	29
<b>Conclusion</b> .....	<b>33</b>
<b>Bibliography</b> .....	<b>34</b>

---

# Ideas

**Idea 1:** UKHSA should run simulation exercises to test its new central data and analytics platform, modelling how trend data on nationwide and highly localised threats is captured by this system. This should examine both how local data is collected and integrated nationally as well as how information is accessible at the local level.

This should be underpinned by a wider commitment that the development of this data platform will involve regular engagement with, and testing by, selected local public health actors (such as DPHs) and Local Resilience Forums, with a transparent feedback loop.

**Idea 2:** UKHSA should adopt an iterative approach to the production of its national threat response planning documents (like the recently published 'Adverse Weather and Health Plan'), via a process of open scrutiny and challenge.

This process should include publication of draft versions of these documents, sufficient opportunity for feedback and challenge from interested external parties, and a commitment to revise accordingly before any final planning documents are agreed.

**Idea 3:** UKHSA should collaborate with OHID and local actors to strengthen the Community Champions network, by creating a new training and development hub accessible to all volunteers working in these roles.

This body should provide practical guidance on existing health risks, training resources for new volunteers, and channels for requesting additional development activities. In the medium-term, it should include engagement strategies for reaching marginalised communities which can be deployed rapidly in future health security crises.

**Idea 4:** UKHSA should expand the list of 'additional members' on its Science and Research Committee to include places for a leading behavioural science expert, a board member from the Association of Directors of Public Health, and a senior OHID leader.

This would ensure that UKHSA is more effective at embedding behavioural science into its work, learns more regularly from insights taken from the local level, and builds a closer collaboration with OHID in sharing knowledge and scientific expertise.

**Idea 5:** UKHSA should conduct an extensive evaluation of alternative models adopted by other countries (including the devolved administrations) to tackle health threats, with an emphasis on identifying best practice in local-national working.

Following this process, UKHSA should report on its findings and set out a practical roadmap for moving towards the less centralised model found in other countries.

---

# Introduction

A strong public health system is essential to safeguarding a nation's resilience. As former US Surgeon General C. Everett Koop said: "Health care is vital to all of us some of the time, but public health is vital to all of us all of the time."<sup>1</sup> And in times of crisis, public health becomes all the more important – something the COVID-19 pandemic showed starkly.

The UK's response is, rightly, subject to considerable scrutiny. However, with the public inquiry likely to last for some years, it is vital that other complementary mechanisms are also employed to ensure that practical lessons are learnt as quickly as possible. Nowhere is this more true than in health, as while the vaccine programme helped the UK emerge from the crisis more quickly than many of us expected, there were considerable shortcomings in the broader public health response.

In other words, to ensure the UK is better prepared for the next crisis, lessons about the set-up of our public health system must be addressed. This paper primarily focuses on improving the English model – health protection is generally a devolved responsibility, though the UK's national body for this function does hold a number of UK-wide duties.<sup>2</sup>

This is timely given that the public health architecture in England has changed in recent years: Public Health England (PHE) has been replaced with two separate bodies – UK Health Security Agency (UKHSA) and the Office for Health Improvement and Disparities (OHID). Learning from failures in the COVID-19 response is the first step to placing our public health agencies on the right path for the future.

The focus of this *Reform Ideas* paper is the English national body responsible for health protection – UKHSA. Despite some early teething problems, including a highly critical report from the National Audit Office (NAO), this body is now looking towards its future.<sup>3</sup> With the recent publication of UKHSA's ten-year strategy, there is a valuable opportunity to use key lessons from COVID-19 to inform how this long-term vision is delivered.<sup>4</sup>

This paper seeks to seize that chance by putting forward ideas for how UKHSA can serve as a world-leading health protection agency – with a particular focus on building a more effective public health system from the ground up.

## The landscape

The public health system, especially in England, has undergone constant restructuring in recent years, with roles and functions repeatedly relocated to different bodies and levels.

PHE – established in August 2012 and fully operational in April 2013 – was previously the body responsible for health improvement and health security. In August 2020, the Government took the decision to abolish PHE and split its dual role between two new organisations: UKHSA and OHID. The former, formally established as an executive agency in April 2021 and fully operational in October 2021, took over the duties of NHS Test and Trace and the Joint Biosecurity Centre, two bodies formed during the pandemic, as well as

---

<sup>1</sup> 'C. Everett Koop', The Heinz Awards, 2023.

<sup>2</sup> Nathaniel Amos, 'UK Health Security Agency', Institute for Government, 12 June 2023.

<sup>3</sup> National Audit Office, 'Department of Health and Social Care Annual Report and Accounts 2021-22', Press Release, 26 January 2023.

<sup>4</sup> UK Health Security Agency, *UKHSA Science Strategy 2023 to 2033: Securing Health and Prosperity*, 2023.

the health security functions of PHE.<sup>5</sup> OHID, established in October 2021, sits within the Department for Health and Social Care (DHSC) and carries forward PHE's health promotion function.<sup>6</sup>

The decision to abolish PHE mid-pandemic has been criticised by some, including by several of our interviewees.<sup>7</sup> Some of the criticism has centred on the separation of the two functions, but most has been focused on the timing of this decision. This paper has not sought to assess the Government's decision to separate health security and health promotion. Instead, accepting that there is a new model in place, the aim is to identify pandemic lessons to inform the future of UKHSA.

---

## Figure 1: Key definitions

**Public health** – public health refers to measures to improve the health of individuals, their communities, and the population as a whole. Public health is often divided into two functions: health promotion (or improvement) and health security (or protection). At the national level, these functions were previously unified within a single organisation (PHE).

**Health promotion/improvement** – health promotion refers to activities to promote the health and wellbeing of individuals and the population. It involves interventions to improve health and quality of life for individuals, as well as efforts to empower individuals to take control of their health and make informed choices. This function is being taken forward by the Office for Health Improvement and Disparities (OHID) nationally, with Directors of Public Health (DPHs) holding some statutory duties at the local level.

**Health security/protection** – health security (or health protection) involves taking action to prevent the effects of future health hazards such as pandemics or extreme weather events like heatwaves. This function is the responsibility of the UKHSA nationally, with DPHs holding an important local role (as with health promotion).

Source: Penka D. Gatcheva and Mariana Argirova, 'Public Health: The Science of Promoting Health', *Journal of Public Health* 19 (30 March 2011).; NHS, 'What Is Public Health?', Webpage, 2023.; World Health Organization, 'Health Promotion', Webpage, 2023.; WHO, 'Health Security', Webpage, 2023.

## The paper

In the first chapter, five key pandemic failures are identified that must inform UKHSA's continued development. These include issues with planning and resourcing, the use of science, data sharing, and communication with those from marginalised communities. Above all else, the strongest lesson is that insufficient collaboration with the local level was a major failing of our pandemic response.

---

<sup>5</sup> Department of Health and Social Care and The Rt Hon Matt Hancock MP, 'The Future of Public Health', Speech, 18 August 2020; Department of Health and Social Care and The Rt Hon Matt Hancock MP, 'Plan, Prevent and Respond: Reforming Health Security', Speech, 24 March 2021.

<sup>6</sup> Department of Health and Social Care and Office for Health Improvement and Disparities, 'New Era of Public Health to Tackle Inequalities and Level up the UK', Press Release, 1 October 2021.

<sup>7</sup> Denis Campbell, 'Abolition of Public Health England Just "Passing of Blame for Coronavirus Mistakes"', *The Guardian*, 19 August 2020; George Parker et al., 'Inside Westminster's Coronavirus Blame Game', *Financial Times*, 16 July 2020.

The second chapter identifies five ideas for UKHSA to consider if it wants to avoid repeating the failures of the pandemic. While much has been written about learning from COVID-19 – including *Reform*'s 2021 paper 'A State of preparedness' and the more recent 'Boosted by the vaccine'<sup>8</sup> – there has been relatively little specific focus on how best to develop the UK's new public health infrastructure. With the launch of UKHSA's new strategy, there is a chance to embed these lessons at an early stage into the delivery of this long-term vision and set the right roles, both nationally and locally, in preparing for future emergencies

---

<sup>8</sup> James Sweetland, *Boosted by the Vaccine: Lessons from COVID-19 for the Future of the Life Sciences* (Reform, 2022); Aidan Shilson-Thomas, Sebastian Rees, and Charlotte Pickles, *A State of Preparedness: How Government Can Build Resilience to Civil Emergencies* (Reform, 2021).



---

# 1. The COVID-19 pandemic response

The public health response to the pandemic remains a contentious topic. With the UK COVID-19 Inquiry now in progress – and set to continue for a number of years – the official view on what went well and what did not is unlikely to emerge soon. Yet the task of identifying key findings cannot wait.

There have been several efforts to do exactly this. A joint report from the House of Commons' Health and Social Care and Science and Technology Committees, titled 'Coronavirus: lessons learned to date', was published as far back as September 2021.<sup>9</sup> Our own report, published in 2022, 'Boosted by the vaccine', identified key learnings for the life sciences industry.<sup>10</sup> Later that year, in September 2022, there was the publication of 'The *Lancet* Commission on lessons for the future from the COVID-19 pandemic', a much broader document that sets out international learnings from this global health crisis.<sup>11</sup>

As discussed above, the focus of this paper is more targeted: exploring public health lessons specifically for the UKHSA, with a particular focus on the idea of building from the ground up. Nonetheless, the research and interviews for this paper build on – and indeed align with – the wider evidence base produced by these different bodies.

## 1.1 Planning and resourcing

Prior to COVID-19, the UK was considered one of the best prepared countries in the world for a pandemic event. In October 2019, the Global Health Security Index (GHSI) ranked the UK second in the world (behind the US) for pandemic preparedness.<sup>12</sup> This idea also appeared to permeate government itself – as reported by those working within the machine. In his written evidence to the UK COVID-19 Inquiry, Matt Hancock MP acknowledged exactly this, saying that: "On coming into post as Health Secretary I was advised that the UK was a world leader in preparations for a pandemic."<sup>13</sup>

It quickly became clear, when faced with a pandemic, that there were in fact significant flaws in the UK's preparedness – the GHSI dropped the UK in its rankings from second to seventh towards the tail end of the pandemic.<sup>14</sup> As Professor Jim McManus, President, Association of Directors of Public Health (ADPH) and Director of Public Health, Hertfordshire County Council, put it: "The UK was not as prepared as it pretended it was and was not as prepared as it thought it was."

---

<sup>9</sup> House of Commons Health and Social Care and Science and Technology Committees, *Coronavirus: Lessons Learned to Date Sixth Report of the Health and Social Care Committee and Third Report of the Science and Technology Committee of Session 2021–22*, HC 92 (London: The Stationery Office, 2021).

<sup>10</sup> Sweetland, *Boosted by the Vaccine: Lessons from COVID-19 for the Future of the Life Sciences*.

<sup>11</sup> Professor Jeffrey D Sachs et al., 'The Lancet Commission on Lessons for the Future from the COVID-19 Pandemic', *THE LANCET COMMISSIONS* 400, no. 10359 (8 October 2022).

<sup>12</sup> John Hopkins Bloomberg School of Public Health and Nuclear Threat Initiative, *Global Health Security Index: Building Collective Action and Accountability*, 2019.

<sup>13</sup> Rt Hon Matt Hancock, 'Written Evidence: UK COVID-19 Inquiry' (INQ000181825, 12 May 2023).

<sup>14</sup> Anne Gulland, 'UK Falls off Second Spot in Global Ranking of Pandemic Preparedness', *The Telegraph*, 8 December 2021.

## 1.1.1 Planning for crises

A common criticism of our emergency planning is the argument that the UK prepared for the wrong type of pandemic – focusing on influenza exclusively and ignoring other risks.<sup>15</sup> A House of Commons report argued that, of the various flaws in our preparedness: “The most important was that much of our preparation was for an influenza-like pandemic – notably one that was not characterised by asymptomatic transmission (and for which testing was therefore not so important).”<sup>16</sup>

However, in his evidence to the COVID-19 inquiry, Sir Chris Whitty, the UK’s Chief Medical Officer, argued that the ‘influenza bias’ argument is flawed: “because every pandemic is very different and sometimes massively different from its predecessors, having plans and documents of this sort is actually not generally the most useful way to deal with it. What you need to have is capabilities and flexible capabilities which are backed up by resource sufficient to be able to scale them up.”<sup>17</sup> With many countries abandoning their pre-pandemic emergency plans altogether,<sup>18</sup> it is clear that adaptability is key – this is, after all, a core component of resilience.<sup>19</sup> What is needed is a model in which existing plans can be flexed to meet the demands and characteristics of the health security threat that actually emerges.

Another major flaw in our preparedness was the failure to learn from existing exercises and previous health security events. In 2016, PHE led Exercise Cygnus, a three-day effort to test how the UK would cope in the face of an influenza pandemic – a leaked copy found that the UK was not adequately prepared for a threat of this type.<sup>20</sup>

Even though this exercise resulted in the establishment of a Pandemic Flu Readiness Board and other actions such as a draft strategy for pandemic communications, the response was insufficient.<sup>21</sup> Four years on, in February 2020, a review of pandemic planning arrangements across government found 82 per cent of plans would not be able to meet the demands of an actual incident.<sup>22</sup> One interviewee raised a related concern, arguing that the UK had not learned the right lessons from prior health security threats such as the swine flu pandemic.

## 1.1.2 Resourcing for risk

A number of interviewees questioned whether the level of resource allocated to public health was sufficient in the lead-up to the pandemic. As Professor Peter Littlejohns, Professor of

---

<sup>15</sup> Shilson-Thomas, Rees, and Pickles, *A State of Preparedness: How Government Can Build Resilience to Civil Emergencies*, 2021; A C K Lee et al., ‘Where England’s Pandemic Response to COVID-19 Went Wrong’, *Public Health* 192 (21 November 2020).

<sup>16</sup> House of Commons Health and Social Care and Science and Technology Committees, *Coronavirus: Lessons Learned to Date Sixth Report of the Health and Social Care Committee and Third Report of the Science and Technology Committee of Session 2021–22*.

<sup>17</sup> Sir Chris Whitty, ‘Evidence to the COVID-19 Inquiry’ (Module 1 Day 8, 22 June 2023).

<sup>18</sup> Celia Blanco-Jimenez, ‘Why Didn’t Pandemic Planning Anticipate the Need for Lockdowns?’, *London School of Economics*, 17 March 2021.

<sup>19</sup> Aidan Shilson-Thomas, Sebastian Rees, and Charlotte Pickles, *A State of Preparedness: How Government Can Build Resilience to Civil Emergencies* (Reform, 2021). Page 9

<sup>20</sup> Paul Atkinson et al., ‘Understanding the Policy Dynamics of COVID-19 in the UK: Early Findings from Interviews with Policy Makers and Health Care Professionals’, *Social Science & Medicine* 266 (December 2020).

<sup>21</sup> National Audit Office, *The Government’s Preparedness for the COVID-19 Pandemic: Lessons for Government on Risk Management*, 2021.

<sup>22</sup> *Ibid.*

Public Health at King's College London told us: "When public health moved from the NHS to local authorities, there was ring-fenced funding. While the ring-fenced approach remained in place, the uncertainty of the level of funding beyond any one year, plus serious reductions in the overall level of funding made public health planning difficult."

PHE itself also had its budget cut, by 16 per cent between 2015 and 2020.<sup>23</sup> Indeed, one interviewee questioned whether PHE's role changed implicitly following this funding cut. To quote Darius Hughes, Moderna's General Manager for the UK and Ireland: "I just don't think PHE were resourced financially or [in terms of human capacity] to respond to a pandemic of this type or magnitude. That's not what they were there to do. Their job was to monitor it all and tell people it was coming."

Similarly, cuts to local government spending pre-pandemic were also significant – with budgets being reduced by 22 per cent between 2015 and 2020.<sup>24</sup> As Dame Jenny Harries explained when asked about the impact of cuts at the COVID-19 Inquiry: "I think it is fair to say, and I'm pretty confident it's evidenced, that some of the health protection skills were denuded from – particularly from the smaller local authorities, where you would perhaps have one DPH, one consultant and one other."<sup>25</sup>

Identifying the direct impact of funding cuts on health protection work and, more specifically, pandemic preparedness activities, is not clear cut. However, the lack of apparent consideration given to the impact these budget reductions might have on the State's ability to respond to future crises is worrying.

Emergency preparedness inevitably involves trade-offs around spending. As Darius Hughes put it: "Anything you put into planning for these things is ultimately wasted for the year that you plan it [and the threat doesn't arrive]. It only comes into fruition as an insurance policy when the house burns down." In other words, year-to-year expenditure may be lost if the crisis does not strike – but advanced spending may significantly reduce response costs when a crisis arrives. It is, as Stuart Carroll, Moderna's Director of Market Access and Policy Affairs for the UK and Ireland, put it, "buying insurance" for the next emergency.

Spending decisions therefore require a careful consideration of what level of risk politicians are willing to accept – this calculation did not appear to have taken place. According to the NAO: "we did not see evidence that, before the onset of COVID-19, the government had reached a consensus on its overall risk appetite in relation to a pandemic by explicitly accepting a specific level of residual risk."<sup>26</sup>

Whatever role funding played, there were other clear flaws in the pandemic planning – the UK failed to properly learn from exercises such as Cygnus and did not ensure that its emergency plans were adaptable to meet the needs of new threats. The sense of some complacency in government, perhaps unsurprising when the UK was ranked second in the world for preparedness, must be avoided as UKHSA seeks to prepare for future health security threats of all kinds.

## 1.2 'Follow the science'

---

<sup>23</sup> The Health Foundation, 'PHE Reorganisation Is Highly Risky and Justification for the Change Has Not Been Fully Set Out', Press Release, 18 August 2020.

<sup>24</sup> The Health Foundation.

<sup>25</sup> Dame Jenny Harries, 'Evidence to the COVID-19 Inquiry' (Module 1 Day 9, 26 June 2023).

<sup>26</sup> National Audit Office, *The Government's Preparedness for the COVID-19 Pandemic: Lessons for Government on Risk Management*.

In many ways, ‘the science’ was a major success of the UK’s pandemic response. Looking at the healthcare innovations the UK produced in response to the virus shows a creditable record alone, including the rapid development of COVID-19 vaccines,<sup>27</sup> and the success of the RECOVERY trial in identifying therapeutics to treat the disease.<sup>28</sup> These were highly significant achievements which strengthened our overall emergency response, enabled by strong public-private partnerships.

However, the wider role of science was also significant. During the pandemic, scientific leaders became as prominent as politicians, played a significant role in government decision-making, and were seen as trustworthy figures by the public. Extensive polling from King’s College London and the University of Bristol in late 2020 found that: “Aside from the leaders of Scotland and Wales... only Chris Whitty (62 per cent) and Patrick Vallance (60 per cent) are trusted by more than half the UK on the crisis and response.”<sup>29</sup> For Boris Johnson (38 per cent) and Keir Starmer (34 per cent), the figures were far lower. Even much later on, in April 2022, polling for More in Common reported trust in scientists (79 per cent) far exceeding that of these leaders (Starmer at 23 per cent and Johnson at 20 per cent).<sup>30</sup>

The SAGE group of leading scientists continued to play an essential role in the development of the COVID-19 response and guidance to the public. The Government’s constant refrain of ‘we’re following the science’ reflected this reality – science and scientific expertise were calculated to be trusted motivators of public behaviours and were embedded into the decision-making process.

## 1.2.1 Science as policy

Yet, the idea of ‘following the science’ is misleading. Indeed, the very concept of ‘the science’ is inherently flawed. While there are some areas of broad scientific consensus, there are more often competing views and theories, with an evolving evidence base which may not offer certainty in either direction, and may even offer contradictory sets of findings.

Science in the pandemic was no exception, it did not always offer certainty and direct conclusions. Instead, as Jim McManus put it: “the pandemic shattered commonly held assumptions, including commonly-held assumptions about science...this stuff was being presented as gospel rather than as science with uncertainty around it.”

The way the Government sought to use science, then, was problematic. As Dr Paul Atkinson, Senior Research Fellow in Public Health, Policy and Systems at the University of Liverpool argued, this approach: “blurred the difference between knowing about ‘what is’ and deciding about ‘what ought’ to be. Science will do its best to do the first one of those for you, but it’s just not set up to answer the second one — which is about policy choices and values”.

Too often, it appeared that policymakers viewed science as almost interchangeable with policy – the science was the policy, rather than a contributor to it. As one government

---

<sup>27</sup> Sweetland, *Boasted by the Vaccine: Lessons from COVID-19 for the Future of the Life Sciences*.

<sup>28</sup> Claire Kanja and Sarah Bunn, ‘Drug Therapies for COVID-19’, *Parliamentary Office of Science and Technology (POST)*, 19 April 2022.

<sup>29</sup> University of Bristol and King’s College London, ‘Coronavirus: Who the Public Trust on the Pandemic’.

<sup>30</sup> More in Common, ‘Written Evidence Submitted by More in Common: Misinformation and Trusted Voices’, 2022.

scientific adviser, quoted in a study on this issue, explained: "...policymakers would say, 'what should we do?' And [scientists] say 'well what do you want to achieve?' And we just go round and round in circles".<sup>31</sup>

A later study by the same authors finds a similar view: "many scientists did not want to offer policy advice, which suggests that (for them) policy could never simply be 'evidence based'. What they wished to provide was evidence to inform value-based policy choices."<sup>32</sup> While science was rightly respected and valued, there was too much blurring of the lines between policy and science.

## 1.2.2 Singular science

A separate concern raised by interviewees for this paper was that, even though science was closely embedded into the policy process, this was extremely uneven across fields. While some disciplines were prized, others were neglected. Data modelling in particular was central to the UK's scientific response to the pandemic, regularly being cited by politicians in their public appearances and clearly informing decisions.<sup>33</sup>

However, as Dr Richard Horton, Editor-in-Chief of *The Lancet*, told the House of Commons' Science and Technology Committee in 2020: "Given the public health dimensions, I hope we have some of our best public health scientists and not just modellers. Important as mathematical modellers are, it is very important to have the public health dimension."<sup>34</sup> Several of the interviewees for this paper raised the same concern, highlighting that modelling likely had too prominent a role, without sufficient triangulation and challenge from other disciplines – including behavioural science and health economics.

Just as public health expertise is crucial, behavioural science is especially important in shaping the response to a pandemic. Jim McManus (who is also a Chartered Psychologist and co-authored the national strategy on behavioural science in public health<sup>35</sup>) provided some key examples on how this discipline could have added value, such as supporting efforts "to recruit and train people from local communities to act as community champions", ensuring "communications with the public were consistent with the best evidence from the social and behavioural sciences", and using "social psychology, in terms of group identity, with populations that were hesitant" during the pandemic.

Though behavioural science did have a formalised role in the SAGE structures via SPI-B (the Independent Scientific Pandemic Insights Group on Behaviours), it lacked the influence on decision-making that mathematical modelling was able to consistently exert. To quote an article from three health academics: "...it is remarkable that in the UK we have produced some of the most sophisticated research about health-related behaviour-change in the

---

<sup>31</sup> Atkinson et al., 'Understanding the Policy Dynamics of COVID-19 in the UK: Early Findings from Interviews with Policy Makers and Health Care Professionals'.

<sup>32</sup> Paul Atkinson et al., 'How Did UK Policy Making in the Covid-19 Response Use Science? Evidence from Scientific Advisers - Manuscript Draft', *Evidence & Policy: A Journal of Research, Debate and Practice*, 2022.

<sup>33</sup> Michael Simmons, 'Sage Scenarios vs Actual: An Update', *The Spectator*, 16 January 2022.

<sup>34</sup> House of Commons Science and Technology Committee, 'Oral Evidence: UK Science, Research and Technology Capability and Influence in Global Disease Outbreaks', HC 136 (London: The Stationery Office, 2020).

<sup>35</sup> *Improving People's Health: Applying Behavioural and Social Sciences to Improve Population Health and Wellbeing in England* (Public Health England, 2018).

world. This would have been the obvious place to start...But this was not the evidence used.”<sup>36</sup>

Even in day-to-day policymaking, an understanding of behavioural science can be invaluable – how people will react to decisions made by government or any agency will determine its success. In a pandemic, where predicting behaviour is complex, and that behaviour will directly impact the transmission (and resulting loss of life) from a virus, it is absolutely essential.

### 1.3 Neglecting the local

A crucial flaw in the response to the pandemic was the underutilisation of local public health capacity and expertise, with an excessively centralised approach adopted by government. This issue – highlighted in existing research and by many of the interviewees for this paper – was perhaps the clearest problem in the pandemic response, with the approach to tracking and tracing a particular telling example.

Working with local systems is essential to effective public health work. As ‘The Lancet Commission on lessons for the future from the COVID-19 pandemic’ noted: “strong public health systems... should include strong relationships with local communities and community organisations...”<sup>37</sup> Indeed, as *Reform* noted in a previous paper on crisis preparedness, local actors have an essential (and statutory role) in responding to national emergencies too – especially ‘Local Resilience Forums’, bodies which “have a legal duty to plan, prepare, and respond under the Civil Contingencies Act...”<sup>38</sup> These forums play an important part in ensuring a joined-up and connected response, especially between ‘Category 1 responders’ designated in the aforementioned act, which include blue light services, healthcare bodies and local authorities.<sup>39</sup>

Yet, the English model of responding to COVID-19 (distinct from the less centralised approaches taken by devolved governments) did not involve local public health resources to a sufficient extent. A report from a House of Commons select committee expressed this succinctly in the context of testing and tracing, finding that: “the Government pursued a strategy of central first, local later...”, with “evidence to suggest that local public health experts were not sufficiently involved in the design and implementation of tracing activities and capacity.”<sup>40</sup>

This national model of contact tracing was run by an organisation termed NHS Test and Trace.<sup>41</sup> This appears to have been a mistake. Despite the scale of infection, those working

---

<sup>36</sup> Professor Michael Kelly, Professor Peter Littlejohns, and Dr Sarah Markham, ‘Evidence – Was It Really Used in the Covid-19 Pandemic? A Key Issue for the Covid-19 Inquiry to Address’, *NIHR: National Institute for Health and Care Research*, 22 April 2022.

<sup>37</sup> Sachs et al., ‘The Lancet Commission on Lessons for the Future from the COVID-19 Pandemic’.

<sup>38</sup> Shilson-Thomas, Rees, and Pickles, *A State of Preparedness: How Government Can Build Resilience to Civil Emergencies*, 2021.

<sup>39</sup> Cabinet Office, *The Role of Local Resilience Forums: A Reference Document*, 2013.

<sup>40</sup> House of Commons Health and Social Care and Science and Technology Committees, *Coronavirus: Lessons Learned to Date Sixth Report of the Health and Social Care Committee and Third Report of the Science and Technology Committee of Session 2021–22*.

<sup>41</sup>To note: the combined cost of both testing and tracing was £37 billion over two years. However, most of this funding was allocated to testing which was essential with relative less on tracing. According to the NAO: “By the end of March 2021, NHST&T had spent £13.5 billion... Of this, NHST&T spent £10.4 billion on testing (77% of

as contract tracers were not employed to their full capacity. As the NAO reported in June 2021, Test and Trace contact centre staff were underworked, with “utilisation rates [which] have remained well below the target rate of 50% between November 2020 and May 2021.”<sup>42</sup> Crucially, this national tracing approach proved much less effective than alternatives closer to communities. This same report cites comments from the Executive Chair of Test and Trace, accepting “that local [contact tracing] teams were consistently reaching a higher proportion of people than the national service.”<sup>43</sup>

Several of our interviewees concurred with this assessment, suggesting that the ‘trace’ part of Test and Trace was unsuccessful precisely because it ignored the local. There are some logical reasons why local services can be more effective than national ones. As Professor Sally Sheard, Executive Dean of the Institute of Population Health, University of Liverpool pointed out, “local test and trace [in Liverpool] was very effective because...you could see it was a [local] 0151 number on the phone and when you picked up the call you heard somebody with a local accent.”

There are also, though, structural reasons: local test and trace services already existed. As Professor Ivan Browne explained: “we are already experts in local contact tracing: we contact trace sexual health; we contact trace food poisoning...This is not something that is new to us.” He added that this local connection also helped improve self-isolation rates: “If Joe Bloggs from Chaucer Street is saying – ‘I have to go out. I’ve got no food in the house. I’m positive. The whole family is positive.’ We could go to Joe Bloggs in Chaucer Street and provide him with food. We could make deliveries...We could do it locally. You can’t do that nationally...”

Some of the failure to make the most of local capabilities might reflect the relatively limited understanding the centre had of local public health systems. Strikingly, Jim McManus stated that this even extended to having no clear mechanism for reaching all local directors of public health (DPHs): “Most government departments didn’t know what a DPH was, or if they knew what it was, they didn’t have contact details for us. The department that appointed us, didn’t have a list of who we were, didn’t have an email list for us.”

Paul Atkinson concurred, saying: “It could have been so much better if central government had just understood more about what some of the local structures were there for and were capable of doing.” The key insight, as Dr Atkinson notes, is that national agencies must understand that “command and control is probably not the same as do it all yourself”.

Furthermore, communication from the national to the local was remarkably poor. Ivan Browne described his experience as a DPH, receiving no advance warning about new national guidance: “all too often we were getting information very, very late, if at all. So often we’d get our information around the guidance that’s changed from the BBC...and then we’d have to go find that guidance.” This problem was not exclusive to Leicester. Jim McManus, who serves as the DPH in Hertfordshire alongside his role at the ADPH, described the very same experience in his public evidence to the COVID-19 inquiry: “Sometimes, we had no

---

total spending), £1.8 billion on ‘contain’ activities (to identify local COVID-19 outbreaks and support local responses to the pandemic (13% of total spending), and £0.9 billion on tracing activities (7% of total spending).” National Audit Office, *Test and Trace in England – Progress Update Department of Health & Social Care*, 2021.

<sup>42</sup> Ibid.

<sup>43</sup> Ibid.

response or communication, and we found out at the same time as the rest of the population on the 5pm [televised press conference] bulletin about the new guidance.”<sup>44</sup>

This failure must not be repeated in the next crisis. Functioning public health systems demand local relationships, effective collaboration and the ability to make the most of capabilities nearest to communities. This means being transparent across all key actors within the wider health system – communicating with local public health authorities as partners, rather than end customers of the latest guidance. The sharing of information from national to local (and vice-versa) must be embedded into UKHSA’s everyday practices, as well as those of all central bodies involved in crisis response.

## 1.4 Complex systems and data sharing

A related observation made by interviewees was that the UK’s emergency response system, brought into operation during the pandemic, was exceptionally complicated. We had (and still have) a complex web of national functions, regional tiers and local models. The changes to public health structures, introduced by then Secretary of State for Health and Social Care Matt Hancock, mean England also now has separate national health security and health promotion bodies in UKHSA and OHID.

This complexity was captured by the chaotic organogram presented by the lead counsel of the COVID-19 Inquiry during its opening session (see Figure 2 below). The diagram demonstrates the astonishing range of interdependencies within the emergency response structure, with myriad connections across the dozens of agencies and bodies involved – even without international links, which do not feature in the diagram. However, complexity is not by itself evidence of failure. A national pandemic is a vast, multi-faceted and far-reaching crisis, demanding a national response which is equally diverse and interconnected across government agencies.

### 1.4.1 Confused connections

Complexity becomes a problem when it creates confusion and uncertainty among those working under pressure – a national emergency is exactly such a scenario. The organogram presented at the inquiry, memorably described by one witness as “more like a bowl of spaghetti than a clear and co-ordinated framework for a cogent national response”, is evidence of confused connections across the system.<sup>45</sup>

This is even more problematic when there is an unclear division of responsibilities, which was unfortunately a feature during the pandemic. When it came to testing, PHE, NHS Test and Trace and local authorities all had some overlapping responsibility, yet the connections between these different agencies was frequently deficient.<sup>46</sup> One interviewee suggested that some of this complexity was due to historically poor national direction – including 2013

---

<sup>44</sup> Robert Booth, ‘UK Covid Inquiry: Public Health Bosses Relied on Media for Information’, *The Guardian*, 5 July 2023.

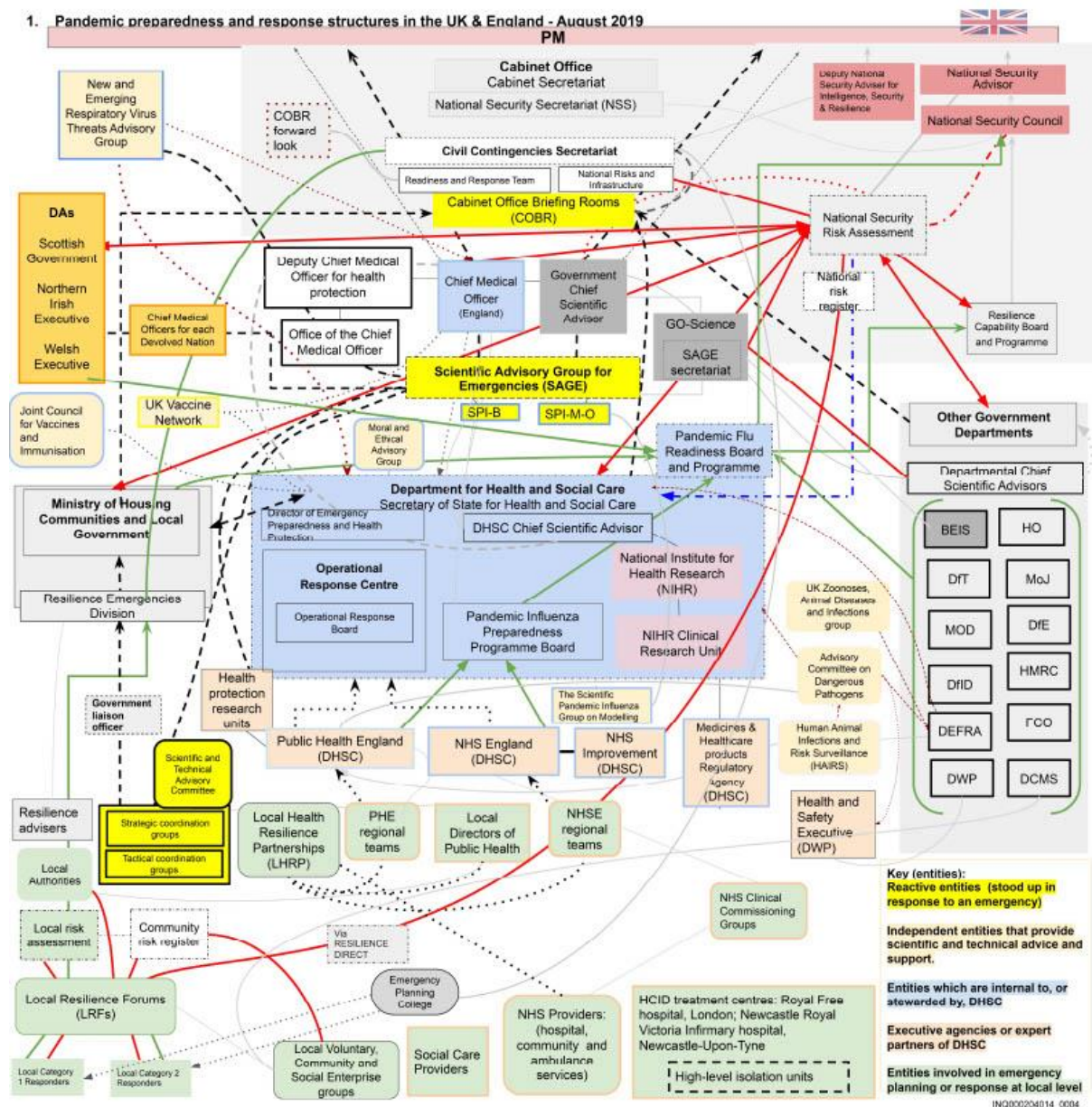
<sup>45</sup> ‘UK Covid-19 Inquiry’ (Module 1 Day 1, 13 June 2023).

<sup>46</sup> House of Commons Health and Social Care and Science and Technology Committees, *Coronavirus: Lessons Learned to Date Sixth Report of the Health and Social Care Committee and Third Report of the Science and Technology Committee of Session 2021–22*.



guidance to DPHs which offered unclear definitions of local responsibilities and little engagement to help set these terms.

**Figure 2: The UK's emergency response system leading into COVID-19**



Source: UK COVID-19 Inquiry, *Extract of Pandemic Preparedness Organograms Covering 2009-2020*, INQ000204014\_0004, 2023.

In this context, it may not be that a less complex system is the answer. Another solution – and something absent in our pandemic response – is a concerted effort to make a complex system easier to navigate and to use the capabilities that exist at each level effectively. With a complex national, regional and local response, this means effective coordination – something which was lacking. When national government hoards power at the centre and

fails to communicate with distributed public health functions (as discussed in the previous chapter), this problem becomes even more entrenched.

## 1.4.2 Data hoarding

This connects with a related issue: data sharing between national and local public health structures. In select committee evidence regarding pandemic data sharing, Jeanelle de Gruchy (then President of the Association of Directors of Public Health) explained: "...there was definitely a sense [from the national level] of, 'You do not really need that data at a local level'...You had to make a case for why you needed the data. There was a lot of energy going into why we needed that data and having to make a case for it, when in the middle of an epidemic that should have been clear."<sup>47</sup>

Similarly, Paul Atkinson and Sally Sheard report the same problem in a paper exploring Liverpool's COVID-19 response: "Central information governance officials did not recognize a need for public health officers to have the real-time access to individual data which the latter wanted for local contact-tracing, and to plan for surges in demand for health and social care services."<sup>48</sup> Interviewees for this paper made exactly the same argument – with Ivan Browne summing things up in straightforward terms: "If you are going to manage an incident locally, you have to have data made available to you locally."

When dealing with a health security threat – whether tracking the spread of an infectious disease or measuring the impact of extreme weather on vulnerable populations – sharing data between all tiers of the public health system is essential. The failure to share information (mirroring the problems identified around communication from local-national) is a major lesson from COVID-19.

## 1.5 Differential risks

Much of the national response to COVID-19 was predicated on two contrasting narratives. The first, the idea that everyone was 'in it together', was partially true: lockdown was applied to everyone in the country and everyone's lives were disrupted. However, the second, more nuanced narrative, was more accurate. The language of 'shielding', 'co-morbidities' and the 'clinically vulnerable' recognised COVID-19 posed especially acute risks to some people.

As Ivan Browne put it during our interview: "there was a lot of narrative at the beginning of the pandemic that called it 'the great leveller', you know, everybody is affected. Anybody who understood health in any meaningful way knew that that was not going to be the case."

While impacts inevitably vary across groups, certain segments of the population were disproportionately more likely to contract the virus and die from COVID than other groups. Black African men were 3.7 times more likely to suffer COVID-related death than White men in England, and Bangladeshi, Black Caribbean and Pakistani men were 3, 2.7 and 2.2 times more likely.<sup>49</sup> Women from these ethnic minority groups were also more vulnerable to the

---

<sup>47</sup> Ibid.

<sup>48</sup> Paul Atkinson and Sally Sheard, 'Designing Effective Central-Local Co-Operation: Lessons from Liverpool's Covid-19 Response', *Policy Design and Practice* 5, no. 3 (3 May 2022).

<sup>49</sup> House of Commons Health and Social Care and Science and Technology Committees, *Coronavirus: Lessons Learned to Date Sixth Report of the Health and Social Care Committee and Third Report of the Science and Technology Committee of Session 2021–22*.

virus than their white peers, though to a lesser extent. In addition, a report found that “COVID-19 mortality in the most deprived areas of England is more than double that in the least deprived areas.”<sup>50</sup>

Those with pre-existing conditions, including non-communicable diseases like diabetes and high-blood pressure were also particularly at risk of COVID-19.<sup>51</sup> This emerged in the language of much of the COVID-19 response – the idea of ‘comorbidities’ and the ‘extremely clinically vulnerable’ reflected this basic reality. The approach to shielding was also based on this straightforward acknowledgment of differential risks.

Social factors also contributed to differential impacts. For example, one reason for the increased risk amongst ethnic minority communities was household size. A select committee report into COVID-19 cites evidence from Professor Bell at the Office for National Statistics showing that: “people from Black, Asian and minority ethnic backgrounds were much more likely to live in multi-generational households with higher occupancy than their white counterparts.”<sup>52</sup>

This increased the risk of the virus spreading rapidly across different age groups and meant shielding or short-term isolation were harder. Employment also played a part, with those from ethnic minority communities more “heavily represented in ‘frontline’ roles — including health settings, retail, and transport — than the population as a whole.”<sup>53</sup>

Differential risk profiles are to be expected across the population – and thus should be carefully planned for. Not accounting for heightened risks among more vulnerable people ultimately reduces the resilience of a public health response. There is evidence that this was a failing in the UK’s pandemic preparedness. As an expert report produced by Professors Clare Bambra and Michael Marmot for the UK COVID-19 inquiry states: “Pre-existing health inequalities were only considered in a minimal way in the UK’s and devolved administrations’ pandemic planning and then largely in relation only to age and clinical risk factors. Wider issues of vulnerability (such as socio-economic status or ethnicity) were seldom considered in the... planning documents that we reviewed”.<sup>54</sup>

Given the increased virus risk to these groups, ensuring effective communication and regular engagement with these communities was essential. However, groups such as the Local Government Association criticised the Government’s communication efforts with people from minority groups.<sup>55</sup> That the majority of the Government’s COVID-19 messaging was delivered in English, for example, may have been a barrier to reaching those whose first language is not English.<sup>56</sup>

Indeed, as SAGE sub-group SPI-B points out, effective communication means more than just translating specific pieces of COVID-19 guidance into other languages – it means

---

<sup>50</sup> Veena S. Raleigh, ‘Ethnic Differences in Covid-19 Death Rates’, *The BMJ* 376 (23 February 2022).

<sup>51</sup> House of Commons Health and Social Care and Science and Technology Committees, *Coronavirus: Lessons Learned to Date Sixth Report of the Health and Social Care Committee and Third Report of the Science and Technology Committee of Session 2021–22*.

<sup>52</sup> Ibid.

<sup>53</sup> Ibid.

<sup>54</sup> Professor Clare Bambra and Professor Sir Michael Marmot, *Expert Report for the UK Covid-19 Public Inquiry*, INQ000195843\_0001, 2023.

<sup>55</sup> House of Commons Health and Social Care and Science and Technology Committees, *Coronavirus: Lessons Learned to Date Sixth Report of the Health and Social Care Committee and Third Report of the Science and Technology Committee of Session 2021–22*.

<sup>56</sup> Ibid.

refracting messaging through the lenses of different cultural and societal norms.<sup>57</sup> Communicating with different groups simply can't be done with a top-down, one-size-fits-all approach, as Ivan Browne puts it: "this is not blanket bombing, it's trench warfare."

Part of this failure may reflect the issues laid out in section 1.3. With local public health capacity underutilised at the expense of national approaches, the targeted interventions needed to communicate with marginalised groups at the local level had less influence than they might otherwise. Ivan Browne explained the challenges in securing stable funding for some of this additional local work: "We were trying to get funding for 'Community Champions'. We were promised [funding] and then it would disappear and then we were promised it again and it would disappear."

Where these programmes were properly resourced however, they did have significant and positive impacts. In particular, funded examples of the local Community Champions programme cited by Ivan Browne (covered in more detail in Chapter 2) were able to reach marginalised communities more effectively than national models – with positive findings reported in a recent LSE review.<sup>58</sup>

Indeed, a related programme also funded by central government – providing Community Vaccine Champions (CVCs) targeted at minority communities (modelled on the original Community Champions approach) – also saw success, with an evaluation finding it was "responsible for around 562 million additional COVID-19 booster vaccine doses", delivered £5.7 million in net social value (against £4 million cost), and provided a "proof of concept" for working with community groups.<sup>59</sup> These approaches might offer further utility in the face of future health security crises.

---

<sup>57</sup> House of Commons Health and Social Care Committee Science and Technology Committee, 'Oral Evidence: Coronavirus: Lessons Learnt', 1 December 2020, HC 877.

<sup>58</sup> Dr Atiya Kamal and Professor Laura Bear, *Community Champions Policy: Key Principles and Strategic Implications for Recovery from Covid-19* (London School of Economics and Political Science, 2023).

<sup>59</sup> Department for Levelling Up, Housing & Communities and IFF Research, *Community Vaccine Champions Evaluation Report*, 2023.

---

## 2 Lessons for UKHSA

The goal in identifying these pandemic-era shortcomings is to ensure that the UKHSA, as it consolidates itself further in the public health system, can avoid repeating them. Embedding the right lessons in the right way can put this important agency on the best possible footing for the long-term.

In this chapter, the issues identified in the first half of the paper are translated into five key lessons for UKHSA. These lessons are applied to UKHSA's recently announced long-term plan, its 'Science Strategy 2023 to 2033: Securing health and prosperity'.<sup>60</sup> The intention here is to provide practical insights which the agency itself can adopt and pursue, with a particular focus on developing a more effective public health system that works from the ground up.

This paper therefore seeks to provide policy ideas which can support the delivery of the three key pillars under UKHSA's strategy: 'prepare', 'respond', and 'build'. By adopting these ideas, UKHSA can avoid repeating the mistakes of COVID-19 *and* deliver on its strategic goals in a way that makes the country, its health service, and its citizens far more resilient.

### 2.1 Predict and anticipate health threats

The first pillar of UKHSA's strategy is to "prepare for future health security hazards" – which includes focusing on how science can be used to identify and map threats rapidly to inform control measures.<sup>61</sup> More specifically, the first sub-theme under this pillar (one of five across the strategy) is to "predict and anticipate health threats."<sup>62</sup> Achieving this requires effective data sharing across the public health system and related bodies, including national to international, local to national, and between Whitehall's often siloed structures.

In predicting health threats, surveillance and data sharing play a crucial role. As the World Health Organization explains, "disease surveillance data... serves as an early warning system for impending outbreaks that could become public health emergencies."<sup>63</sup> UKHSA's strategy recognises this, as does the Government. The recently published 'UK Biological Security Strategy' has already committed to a higher level of ambition in this space – promising to develop a new "networked biosurveillance capability across the UK, linked to the International Pathogen Surveillance Network (IPSN)."<sup>64</sup> This would complement existing measures. For example, UKHSA already operates a real-time syndromic surveillance team (ReSST), which publishes weekly summaries of changing patterns of particular illnesses.<sup>65</sup>

However, for surveillance to be effective, data flows must be diverse *and* integrated. When it comes to predicting threats, linking national systems to international networks (as noted in the biosecurity strategy) can enable the detection of diseases which are spreading across borders.

---

<sup>60</sup> UK Health Security Agency, *UKHSA Science Strategy 2023 to 2033: Securing Health and Prosperity*.

<sup>61</sup> *Ibid.*

<sup>62</sup> *Ibid.*

<sup>63</sup> World Health Organization, 'Surveillance in Emergencies', Webpage, 2023.

<sup>64</sup> HM Government, *UK Biological Security Strategy*, 2023.

<sup>65</sup> UK Health Security Agency, *Syndromic Surveillance: Systems and Analyses*, 2023.

Surveillance must also transcend the boundaries of Whitehall departments. The Human Animal Infections and Risk Surveillance (HAIRS) group, which identifies potential zoonotic infections, is a good example of this. As Professor David Heymann CBE, Professor of Infectious Disease Epidemiology, London School of Hygiene and Tropical Medicine, argued in an interview, “continued strengthening of the HAIRS Group and other groups at the human-animal interface” is essential – and its cross-government membership and information sharing, including not just DHSC and UKHSA, but the Food Standards Agency, Department for Environment Food & Rural Affairs (Defra) and the devolved administrations, is key to that work.<sup>66</sup>

This connects with the wider point identified in the first chapter about the complexity of the public health system. In the context of surveillance, it is quite natural that different agencies with different functions at different scales will engage in overlapping work – just as with intelligence work or counter terrorism, pulling together disparate pieces of the jigsaw puzzle is essential to mapping threats.

Indeed, for UKHSA more generally, much of its success will be dictated by the effective relationships it builds with other parts of Whitehall. This includes, for example, working closely with DSIT on vaccines and integrating with the department in areas of shared priorities, to support the Government’s science superpower ambition. Early and frequent collaboration with the MHRA to ensure new innovations can be developed and applied effectively should also be part of this. And, as discussed below, partnership with OHID is essential to building a cohesive approach to health security and health protection.

The same approach must also apply to the relationship and data sharing between national and local – a two-way flow of information is essential to map emerging threats. Though the Government has the right ambition on networked surveillance, interviewees for this paper expressed serious concerns about how data is shared with and received from the local level – a point set out in detail in section 1.5. This is all the more important in an emergency situation. Yet, as May 2020 reporting on a leaked operational review from the Covid-19 national foresight group noted: “central government did not trust Local Resilience Forums (LRF) enough to share key data on expected coronavirus deaths.”<sup>67</sup> Such data would, of course, have aided efforts to prepare for worst-case scenarios and to allocate preventative resources effectively.

Data sharing has particular relevance to the UKHSA strategy, given its promise of “creating a powerful central data and analytics platform” which can support the identification of “threat trends in collaboration with other government departments and other partners.”<sup>68</sup> Collaboration – or more specifically data sharing and integration – is key to properly tracking public health threats. As was the case in places like Leicester during the pandemic, this is especially important where these threats have disproportionate impacts on particular communities: where one area may have limited exposure, another can be suffering from a far higher caseload which requires different management and control strategies.

Local public health authorities, as well as Local Resilience Forums, must therefore be close partners in UKHSA’s efforts to develop this new data platform, just as government departments appear set to be. During the pandemic, as the Greater London Authority argued,

---

<sup>66</sup> GOV.UK, ‘Human Animal Infections and Risk Surveillance Group’, Webpage, 2023.

<sup>67</sup> Dan Peters, ‘EXCLUSIVE: Local Areas Left in the Dark by Government’, *The Municipal Journal*, 13 May 2020.

<sup>68</sup> UK Health Security Agency, *UKHSA Science Strategy 2023 to 2033: Securing Health and Prosperity*.

there was “a strong sense that local authorities and other local public services have consistently been omitted from central government’s initial thinking on designs for data sharing.”<sup>69</sup> With the creation of this new platform, the focus must be to build systems and processes which are explicitly designed to accept local information on health threats and which can connect this with national data. It must operate in a way which ensures rapid integration to provide an up-to-date picture of emerging threats.

Crucially, it must not simply be a central tool which can collect and manipulate local data for national use, it must be accessible to those working at the local level in public health. As UKHSA develops its data science capabilities and focuses on the ‘analytics’ component of this platform (investing far beyond what the local level could afford), there is an opportunity to build a two-way tool – building national resilience through strengthening the capabilities available to local public health in the next crisis.

**Idea 1:** UKHSA should run simulation exercises to test its new central data and analytics platform, modelling how trend data on nationwide and highly localised threats is captured by this system. This should examine both how local data is collected and integrated nationally as well as how information is accessible at the local level.

This should be underpinned by a wider commitment that the development of this data platform will involve regular engagement with, and testing by, selected local public health actors (such as DPHs) and Local Resilience Forums, with a transparent feedback loop.

## 2.2 Create a more secure environment

The second sub-theme under the ‘prepare’ pillar is to “create a more secure environment”, by “enhancing understanding of threats and building scientific defences against these hazards.”<sup>70</sup> This connects with some of the findings on preparedness set out in section 1.1.

The emphasis on collaboration in this part of the strategy is welcome. At the macro level, the focus on the New Variant Assessment Programme and “partnerships with our WHO collaborating centres and laboratories” will be beneficial to global health security.<sup>71</sup> This builds on a notable strength of the UK’s medical sciences offer and a successful element of the pandemic response: the UK’s genomic sequencing capabilities.<sup>72</sup> The creation of a new Centre for Climate and Health Security which will focus on “partnership including local, national and international organisations” may prove highly effective, if it does indeed adopt a collaborative model.<sup>73</sup> As we have highlighted elsewhere in this report, a culture of

---

<sup>69</sup> House of Commons Health and Social Care and Science and Technology Committees, *Coronavirus: Lessons Learned to Date Sixth Report of the Health and Social Care Committee and Third Report of the Science and Technology Committee of Session 2021–22*.

<sup>70</sup> UK Health Security Agency, *UKHSA Science Strategy 2023 to 2033: Securing Health and Prosperity*.

<sup>71</sup> *Ibid.*

<sup>72</sup> Jane Feinmann, ‘Is the UK Losing Its World Leading Covid Surveillance Network Just When It Needs It Most?’, *The BMJ*, June 2023.

<sup>73</sup> UK Health Security Agency, *UKHSA Science Strategy 2023 to 2033: Securing Health and Prosperity*.

collaboration across the entirety of the entire health system is an essential lesson from the pandemic.

However, there are wider lessons around preparedness which must be taken forward. Some elements of the UK's advance planning for COVID-19 should have been much more effective. As Gareth Davies, Head of the NAO, said upon publication of a report into pandemic preparedness in November 2021: "Although government had plans for a flu pandemic, it was not prepared for a pandemic like COVID-19 and did not learn important lessons from the simulation exercises it carried out."<sup>74</sup>

As was set out in section 1.1, the need for more flexible approaches, so that plans can be adapted in the face of the specific threat which emerges, should be an area of focus. But another important area, as highlighted by some interviewees, is ensuring that there is a more consultative approach to the development of emergency planning documents.

As the UK's national health security body, UKHSA has an essential role in planning for public health threats. For example, just three months ago, the agency published its 'Adverse Weather and Health Plan' – a document setting out the national response to extreme weather events, including how this should be delivered at each tier of government.<sup>75</sup> This is a comprehensive and cohesive plan, with much of the supporting material included alongside the full document.

The 'Adverse Weather and Health Plan' reflects findings from qualitative and quantitative data, alongside "studies conducted by UKHSA and its partners."<sup>76</sup> In the area of addressing health inequalities, the agency's supporting evidence document further notes that "stakeholders were consulted on around 2 key areas of development."<sup>77</sup> It is promising that engagement work was conducted. In preparing any specific plan, collaboration with relevant local bodies (including Local Resilience Forums and DPHs), national organisations, and any relevant representative organisations for particular health threats (e.g. LGBT+ charities in relation to mpox) is wise.<sup>78</sup>

However, as *Reform* argued in an in-depth analysis of Britain's crisis preparedness published in 2021, the process of creating emergency plans must be subject to external scrutiny.<sup>79</sup> UKHSA should embrace this principle, by taking an even more robust approach to ensuring its plans receive additional challenge.

The 'Adverse Weather and Health Plan' did not appear to go through a period of full public consultation – as many other official documents do. Future plans should be published in full draft form by the agency, with a process in place to receive external scrutiny, challenge and feedback from all interested actors. This should lead to revisions, with final plans then published in full as usual.

This model would avoid what appears to have been a reversion to the top-down approach to response planning around mpox, as it spread across the UK.<sup>80</sup> Building in opportunities for

---

<sup>74</sup> National Audit Office, *The Government's Preparedness for the COVID-19 Pandemic: Lessons for Government on Risk Management*.

<sup>75</sup> UK Health Security Agency, *Adverse Weather and Health Plan Protecting Health from Weather Related Harm 2023 to 2024*, 2023.

<sup>76</sup> UK Health Security Agency, *Adverse Weather and Health Plan Supporting Evidence 2023 to 2024*, 2023.

<sup>77</sup> Ibid.

<sup>78</sup> Though often termed 'monkeypox', we use the term 'mpox' throughout, per the following guidance: 'WHO Recommends New Name for Monkeypox Disease', News, World Health Organization, 28 November 2022.

<sup>79</sup> Shilson-Thomas, Rees, and Pickles, *A State of Preparedness: How Government Can Build Resilience to Civil Emergencies*, 2021.

<sup>80</sup> Jamie Garcia Iglesias et al., *Responding to Mpox: Communities, Communication, and Infrastructures* (University College London, 2023).



public consultation, scrutiny and review can only lead to more flexible and balanced health security threat planning – ensuring more effective preparation before the next emergency arrives.

**Idea 2:** UKHSA should adopt an iterative approach to the production of its national threat response planning documents (like the recently published ‘Adverse Weather and Health Plan’), via a process of open scrutiny and challenge.

This process should include publication of draft versions of these documents, sufficient opportunity for feedback and challenge from interested external parties, and a commitment to revise accordingly before any final planning documents are agreed.

## 2.3 Reduce and eliminate health threats

The second pillar under the UKHSA ten-year strategy is to ‘respond’, by creating the capabilities needed to tackle health security threats and deploying them “rapidly and effectively.”<sup>81</sup> The first sub-theme underneath this is to “reduce and eliminate health threats” through enhanced radiation and chemical hazards functions, better modelling, and working closely with partners to embed evidence into decision-making.

Many of its specific deliverables are aligned with priorities raised by those we interviewed. The role of National Institute for Health and Care Research (NIHR) Health Protection Research Units (HPRUs) was praised by Sally Sheard as aiding efforts to bring together practitioners with diverse expertise to facilitate more informed decision-making. The importance of targeted local approaches (another common theme in interviews) is also essential for any effective health security response. Indeed, as Chapter 1 shows, failing to adopt a localised approach – by underutilising local public health assets or refusing to provide data to Local Resilience Forums – is a major strategic failure in any emergency response.

But of particular note in UKHSA’s strategy is the focus on the differential risks experienced by marginalised communities throughout COVID-19. As a report from the Health Foundation’s COVID-19 impact inquiry explained in July 2021: “In England, COVID-19 mortality rates were more than twice as high for people from the most deprived 10% of local areas compared with people from the least deprived, and almost four times as high for people younger than 65.”<sup>82</sup>

As discussed in Chapter 1, factors such as the likelihood of living in multi-generational households explain some of these differences, as do pre-existing health disparities. While the Government did recognise some differential risks in the COVID-19 response, revealed in the language of ‘shielding’ and ‘co-morbidities’, there were clear issues with reaching marginalised groups. Though better engagement would not have led to equal outcomes, it could have mitigated some of the harm experienced by those who faced higher health risks.

The UKHSA must learn from the experience of the pandemic and, in particular, the flawed approach to communicating with some marginalised groups, when addressing future health

---

<sup>81</sup> UK Health Security Agency, *UKHSA Science Strategy 2023 to 2033: Securing Health and Prosperity*.

<sup>82</sup> Mehrunisha Suleman et al., *Unequal Pandemic, Fairer Recovery: The COVID-19 Impact Inquiry Report* (The Health Foundation, 2021).

security threats. Of course, new threats may not threaten the same groups in the same way. The recent mpox outbreak, for example, appeared to disproportionately affect gay and bisexual men.<sup>83</sup> The agency's recent 'Adverse Weather Health Plan' notes that: "some groups of people are especially vulnerable to the health effects of severe weather conditions... At-risk groups include older people, the very young and people with pre-existing medical conditions as well as those whose health, housing or economic circumstances put them at greater risk..."<sup>84</sup> Differential risks will require different responses.

This is not a task for UKHSA alone. Indeed, with the abolition of PHE, OHID has the primary responsibility for health promotion and addressing unequal health outcomes. Though it does not hold an emergency response function, OHID is an essential part of the public health landscape. Getting the relationship between these two bodies right is essential as UKHSA continues to develop; they should collaborate effectively on areas of shared importance, both at the national level and between their different regional structures, in preparing for a future crisis. UKHSA has a unique part to play, given its scientific expertise and data capabilities.

Thus, the commitment laid out in the UKHSA strategy – to "establish an evidence hub on health equity and health security... [which] will address gaps about health threats that disproportionately affect particular populations" – is extremely welcome.<sup>85</sup> The emphasis on "working in partnership with patient, public and community groups" is too. During the pandemic, the centre failed to listen to local public health experts who already understood and could reach marginalised communities. The strategy suggests an effort to avoid repeating this mistake.

The UKHSA should reflect on what it can do to reduce unequal outcomes during health security threats by working with local figures in advance of the next crisis. In particular, there is a valuable opportunity to support the work of Community Champions.

During COVID-19, the then Ministry of Housing, Communities and Local Government (MHCLG) set up a scheme to support "communities at greater risk of Covid-19" by funding local volunteers – Community Champions – who could use their local networks to support those suffering from the virus and share public health information with their communities.<sup>86</sup> While this £24 million across England was new, these schemes have an extensive history – one iteration based in London was originally founded back in 2008.<sup>87</sup> In many cases, existing schemes like this were adapted to focus on the response to the virus. Beyond the pandemic, some have been used even more flexibly – such as to provide resources and support for those struggling with the cost of living.<sup>88</sup>

Community Champions were effective at reaching marginalised communities. As a paper by SAGE sub-group SPI-B explained, they are likely to "enable health workers to better understand and address people's fears and needs" and "reach individuals that are isolated or marginalised to communicate important health messages."<sup>89</sup> A more recent study from the

---

<sup>83</sup> Terrence Higgins Trust, 'Monkeypox in the UK', Webpage, 18 October 2022.

<sup>84</sup> UK Health Security Agency, *Adverse Weather and Health Plan Protecting Health from Weather Related Harm 2023 to 2024*.

<sup>85</sup> UK Health Security Agency, *UKHSA Science Strategy 2023 to 2033: Securing Health and Prosperity*.

<sup>86</sup> Ministry for Housing, Communities and Local Government et al., 'Community Champions to Give COVID-19 Vaccine Advice and Boost Take Up', 25 January 2021.

<sup>87</sup> *Transformations in Community Collaboration: Lessons from COVID-19 Champions Programmes across London (Feb 2023)* (Association of Directors of Public Health, 2023).

<sup>88</sup> 'Sharing Information throughout the Community', Webpage, Community Information Champion Project, 2023.

<sup>89</sup> Scientific Advisory Group for Emergencies, *Role of Community Champions Networks to Increase Engagement in Context of COVID-19: Evidence and Best Practice*, 2020.

LSE in July 2022, which evaluated community champion networks in “super-diverse” areas, found a “positive impact on vaccination uptake” as well as “increased trust and engagement with wider services”.<sup>90</sup>

Ivan Browne suggested that early funding for this would have been useful, saying: “It wouldn’t have been difficult in my mind, even prior to the pandemic, to look at [high-risk] areas of the community in our country and...make sure those areas in particular get funding to do their Community Champions work.” Community Vaccine Champions (referenced in Chapter 1) also showed signs of success by adopting this local-first approach.<sup>91</sup>

Just as with its data analytics platform, UKHSA is set to produce something exceptionally valuable at the national level: an evidence hub on health equity. But the real success will only come if the insights generated lead to positive public health benefits on the ground. Given its remit as the body responsible for health promotion, engaging closely with OHID to share findings – and ensure they have practical effect before the next crisis – is also essential.

On this basis, UKHSA should work with OHID and local government to strengthen the Community Champions network before new health security threats hit. This would involve the design and delivery of a new training and development hub, accessible to Community Champions across the UK and co-led by UKHSA and OHID, and co-designed with local public health leaders. Its aim would be to connect scientific insights with those working on the frontline, empowering local volunteers to be more informed and effective when engaging with hard-to-reach groups. It should also draw lessons from successful local examples of training programmes targeted at these volunteers, such as in Sandwell.<sup>92</sup>

Specifically, this hub should offer practical guidance to be shared with marginalised communities at risk (e.g. for gay and bisexual people in relation to mpox), training resources for all newly-recruited volunteers, and channels for local volunteers to request further development or educational activities which might benefit their work.

Over the medium-term, this training and development hub should contain engagement strategies for likely future health security threats too – developed with local authorities, Local Resilience Forums and Community Champions themselves. These would take evidence from UKHSA’s scientific work (especially its equity hub) and combine them with insights from the local level on best practice in reaching likely at-risk communities – enabling a more agile response when the next pandemic arrives.

---

<sup>90</sup> Dr Atiya Kamal and Professor Laura Bear, *Community Champions Policy: Key Principles and Strategic Implications for Recovery from Covid-19*.

<sup>91</sup> *Transformations in Community Collaboration: Lessons from COVID-19 Champions Programmes across London (Feb 2023)*.

<sup>92</sup> Sandwell Metropolitan Borough Council, ‘Sandwell Has Won a National Public Health Award for Its Covid Vaccination Programme.’, 9 November 2021.

**Idea 3:** The UKHSA should collaborate with OHID and local actors to strengthen the Community Champions network, by creating a new training and development hub accessible to all volunteers working in these roles.

This body should provide practical guidance on existing health risks, training resources for new volunteers, and channels for requesting additional development activities. In the medium-term, it should include engagement strategies for reaching marginalised communities which can be deployed rapidly in future health security crises.

## 2.4 Act on the scientific evidence

The second sub-theme under the ‘responding’ pillar of the UKHSA strategy is to “act on the scientific evidence” – a small, but significant distinction from the ‘follow the science’ mantra adopted throughout the pandemic.<sup>93</sup> In this area, the strategy emphasises the importance of diverse scientific expertise (“developing UKHSA’s capabilities in behavioural, social and implementation science”) and properly understanding the operational impact of scientific knowledge (“translating data, knowledge and insights into practical actions”).

The emphasis on these two areas is, again, to be welcomed. The discussion of operational impact suggests a desire to avoid a common critique made of PHE – that it focused on scientific expertise alone. As a joint report from the House of Commons’ Health and Social Care and Science and Technology Committees stated: “Public Health England seemed to be better at its scientific responsibilities than in its operational response to a mass outbreak of disease...”<sup>94</sup> Similarly, among the interviewees for this paper, Darius Hughes argued that PHE did not contain sufficient operational capabilities either. Scientific expertise can only be used to inform practical actions if a public health agency has a strong understanding of implementation. Crucially, this implementation expertise is not the same thing as doing everything from the centre directly.

Equally, the focus on utilising a diverse range of scientific expertise is promising. In interview, Jim McManus highlighted how behavioural science could have been used in diverse ways during the pandemic, including work around how to “maintain and understand public trust” and to understand “how people cope with trauma.” The types of scientific knowledge utilised in a public health crisis will shape what kinds of interventions are deemed possible – the early pandemic belief that the public would not comply with a national lockdown was, for example, proven erroneous.

A diverse evidence base, one which includes behavioural science as well as other important disciplines such as health economics, is a significant asset when trying to formulate the most effective public health responses possible. Conscious efforts to utilise a plurality of expertise – from behavioural insights through to economic modelling – can expand the range of potential options presented to policymakers.

---

<sup>93</sup> UK Health Security Agency, *UKHSA Science Strategy 2023 to 2033: Securing Health and Prosperity*.

<sup>94</sup> House of Commons Health and Social Care and Science and Technology Committees, *Coronavirus: Lessons Learned to Date Sixth Report of the Health and Social Care Committee and Third Report of the Science and Technology Committee of Session 2021–22*.

Even the heading of ‘act on the scientific evidence’ suggests the right philosophy. As was discussed in Chapter 1, the idea that government can simply ‘follow the science’ is built on a misconceived sense of what scientific knowledge is or does. In an interview, Paul Atkinson noted a related finding that: “scientists...were saying we’re very uncomfortable about being told that the Government is going to ‘follow the science’ because what we want to do is inform and not determine.”

In terms of concrete steps, UKHSA should focus on efforts to embed diverse scientific thinking into its executive functions. In September 2022, UKHSA agreed the terms of reference for a new Science and Research Committee that forms part of its governance structure; its role is to “assist the UKHSA Advisory Board by providing scientific support, advice and challenge to the UKHSA Executive.”<sup>95</sup> This includes scrutinising the ten-year strategy, updating on “important new developments in science and research”, and advising on enablers including “how UKHSA identifies, generates and applies scientific evidence and advice”.<sup>96</sup> This group will influence how UKHSA views and applies science and has already begun its cycle of regular meetings (with four to be held each year).<sup>97</sup>

It includes scientific expertise (the agency’s Chief Scientific Officer), medical knowledge (Chief Medical Adviser) and technical skillsets (Data and Analytics Lead) among its core members, as well as an international impact expert, an industry scientific expert, and an expert on environmental hazards.<sup>98</sup> Based on the most recent minutes for this committee, it is not clear that either of the last two have been appointed as yet.<sup>99</sup> There is also a commitment to invite topic experts as relevant and review the membership every two years.

Among the current board members, there is some behavioural science expertise – the UKHSA’s interim CSO Isabel Oliver, though originally trained in acute medicine and epidemiology, co-directs the Bristol-based NIHR Health Protection Unit (HPU) on Behavioural Science and Evaluation.<sup>100</sup> However this behavioural science expertise is contingent on her remaining in this (interim) post, rather than representing a permanent expert position on the Committee in the way that environmental hazards expertise and industry experience are.

Given the importance of behavioural science to weighing up possible public health interventions, this should be a standing post. Similarly, given the need for UKHSA to build close connections with local public health figures as well as OHID (as discussed earlier in the paper), standing members for these respective portfolios would be appropriate. A senior figure in OHID (ideally its director general) and an individual with a board position in the Association of Directors of Public Health (ADPH) should also be included within the committee to ensure the practical implications of scientific insights are understood.

---

<sup>95</sup> ‘UKHSA Advisory Board: Science and Research Committee Terms of Reference’, Corporate report, UK Health Security Agency, 16 November 2022.

<sup>96</sup> Ibid.

<sup>97</sup> See minutes here — UK Health Security Agency, ‘UKHSA Advisory Board: Science and Research Committee Minutes’, Corporate report, 14 March 2023.

<sup>98</sup> ‘UKHSA Advisory Board: Science and Research Committee Terms of Reference’.

<sup>99</sup> UK Health Security Agency, ‘UKHSA Advisory Board: Science and Research Committee Minutes’.

<sup>100</sup> GOV.UK, ‘Chief Scientific Advisor Transition Lead Professor Isabel Oliver’, Webpage, 2023.

**Idea 4:** UKHSA should expand the list of ‘additional members’ on its Science and Research Committee to include places for a leading behavioural science expert, a board member from the Association of Directors of Public Health, and a senior OHID leader.

This would ensure that UKHSA is more effective at embedding behavioural science into its work, learns more regularly from insights taken from the local level, and builds a closer collaboration with OHID in sharing knowledge and scientific expertise.

## 2.5 Unlock the potential of the UK’s assets

The final pillar of UKHSA’s strategy is also the broadest. It covers vaccine development, working with the MHRA, strengthening data science and tech functions, creating new commercial frameworks and building the “health protection scientific workforce of the future.”<sup>101</sup> This demonstrates a recognition that UKHSA should be a more visible leader in the health sector and can play an important part in supporting the UK’s commercial goals.

This has been acknowledged by Dr Jenny Harries, the Chief Executive of UKHSA, who has set a clear commitment that the agency will support the UK science sector more widely. At a public event in July 2022, she described this as one of UKHSA’s three goals, saying: “I hope that the UKHSA will become – if it’s not considered already – a world leader in science, so we will contribute to the UK science superpower ambition and status.”<sup>102</sup> Part of this, of course, must involve effective collaboration with the newly-formed DSIT.

In addition, that the ‘build’ pillar cites a desire to help “deliver the government’s Life Sciences Vision” is a positive sign. As *Reform* wrote in ‘Boosted by the vaccine’, the successful and rapid development of the COVID-19 vaccine showed the potential of the life sciences when the right enablers are in place.<sup>103</sup> UKHSA’s commitment to create a Vaccine Development and Evaluation Centre (VDEC) which “builds on the legacy of the COVID-19 pandemic” is in exactly this spirit.<sup>104</sup> The focus on the 100 Days Mission – efforts to ensure diagnostic tools, therapeutics interventions and vaccines are available within 100 days of a future pandemic – shows the health security benefits of this approach too.<sup>105</sup>

However, unlocking the potential of assets in the public health space cannot only mean building an effective central organisation, nor can it be about vaccine development, technological expertise, or commercial collaboration alone. It must also mean prioritising efforts to unlock the potential of local public health assets, recognising and strengthening them as the true ‘first responders’ to health security threats.

This was the strongest theme to emerge from the interviews for this project and is the overarching lesson of this paper. The failure to properly utilise local assets was a fundamental flaw in the pandemic response – with some worrying signs that top-down approaches are

---

<sup>101</sup> UK Health Security Agency, *UKHSA Science Strategy 2023 to 2033: Securing Health and Prosperity*.

<sup>102</sup> Institute for Government, ‘In Conversation with Dame Dr Jenny Harries, Chief Executive of the UK Health Security Agency’, Webpage, 28 July 2022.

<sup>103</sup> Sweetland, *Boosted by the Vaccine: Lessons from COVID-19 for the Future of the Life Sciences*.

<sup>104</sup> UK Health Security Agency, *UKHSA Science Strategy 2023 to 2033: Securing Health and Prosperity*.

<sup>105</sup> See here — Cabinet Office, *100 Days Mission to Respond to Future Pandemic Threats*, 2021.

continuing (such as in the response to mpox), it is essential that the same mistakes are not repeated when dealing with future crises.<sup>106</sup>

This will require UKHSA to clarify exactly what its role is in dealing with health security threats. In contrast to PHE, which one interviewee characterised as behaving as though it were the responder, UKHSA should view itself as a coordinator and expert advice body in a crisis, not act as though it can deliver the operational response on the ground in local communities. This local-first approach builds on many of the other lessons identified in this paper: tackling unequal outcomes means working with those closest to local communities, while building effective public health responses demand open local-national data sharing.

A recent Public Accounts Committee report into the DHSC's accounts also shows that UKHSA lacks the capacity to be the responder: "in March 2022...UKHSA began a restructure which resulted in it decreasing its workforce from 18,000 to 6,700 full-time equivalents."<sup>107</sup> The complexity of achieving such a drastic reduction – plus the challenge of standing up this new agency mid-pandemic (compared to "creating a FTSE 50 sized company through a merger of three entities, with different systems and cultures, in six months"<sup>108</sup>) – may also account for the governance issues UKHSA has encountered in its early years.<sup>109</sup>

UKHSA simply does not have the resources to be the primary responder to a major health security threat – though even if it did, for all the reasons discussed above, it should not be fulfilling this role. Using properly resourced local public health expertise, with its existing networks, deep understanding of communities, and its credibility among local people, is the most effective way to address public health threats. This leaves UKHSA to do what it can do best: coordinate, provide scientific expertise and world-class data science functions, set standards, and provide guidance. It should act as a central strategic hub and not seek to do everything.

Clarifying UKHSA's role in this way would be a major strategic shift – one that must be handled carefully. Indeed, there are legitimate concerns about ensuring other bodies take on the right responsibilities, if UKHSA adopts this more appropriate role. If pursued, it would require a wide range of policy measures, years to transition fully, and skilful navigation between national stakeholders (including politicians), partner agencies and local actors. This is no easy task, but the evidence indicates it is the right path to building a truly effective public health system.

To begin this process, UKHSA should commit to reviewing the operating models of leading public health bodies around the world, as well as the approaches adopted in the devolved administrations of the UK – identifying how it can rebalance the relationship between the national and the local. This should be an open-minded effort to explore how UKHSA can move towards becoming a coordinator and strategic leader in the health security space, while working to empower local public health agencies – rather than controlling from the centre.

---

<sup>106</sup> Iglesias et al., *Responding to Mpox: Communities, Communication, and Infrastructures*.

<sup>107</sup> House of Commons Committee of Public Accounts, *Department of Health and Social Care 2021–22 Annual Report and Accounts, Sixty-Second Report of Session 2022–23*, HC 997 (London: The Stationery Office, 2023), 2021–22.

<sup>108</sup> *Ibid.*

<sup>109</sup> See — House of Commons Committee of Public Accounts, *Department of Health and Social Care 2021–22 Annual Report and Accounts, Sixty-Second Report of Session 2022–23*, National Audit Office, 'Department of Health and Social Care Annual Report and Accounts 2021-22'.

This *Reform Ideas* paper does not seek to provide a full roadmap for how UKHSA could make this shift. However, our external reviewers highlighted two case studies which might provide particular insights – one from continental Europe and one from the devolved nations.

The first is the approach adopted in Germany, where the national public health body is the Robert Koch Institute (RKI). Back in August 2020, when the then Secretary of State for Health and Social Care Matt Hancock presented his plans to abolish PHE, he explicitly stated his desire to learn from the approach taken by the RKI in tackling COVID-19.<sup>110</sup> Yet, RKI's role is not that of a national responder – something which is perhaps unsurprising in the German federal model (a much more devolved polity than the system operating in England).

This is evidenced in the organisation's RKI 2025 strategy, where the focus is on finding insights and communicating them; much closer to an advisory function. It describes “monitoring, surveillance and prediction”, acting as a data hub, producing research, and then advising government and “key stakeholders in the health care sector and the scientific community.”<sup>111</sup>

In this vein, it places much emphasis on developing a more mature and tailored approach to communications via “target group-specific knowledge transfer”, which recognises that “only if appropriate target groups can be reached quickly and effectively can the institute's recommendations make a difference”.<sup>112</sup> Avoiding a response function and focusing ‘only’ on providing expert research, guidance and advice is no modest role – it's a complex task that can offer considerable value.

Scotland's equivalent body (Public Health Scotland) was also cited as a model to learn from. This comparison is perhaps more complex – UKHSA has some UK-wide health security functions, even if most relate only to England.<sup>113</sup> But the Scottish model offers useful lessons, as it was deliberately designed with a local approach in mind, having been founded in April 2020. The national consultation prior to its founding set out several “key design principles”, including plans to “be jointly accountable to Scottish Ministers and Local Government”, an aim to be “continually and proactively seeking opportunities to undertake processes jointly between national and local government”, and a goal for its “staff to be located and deployed in a way that helps to re-orient the public health system to be more local-facing.”<sup>114</sup>

A significant practical difference highlighted in interviews was the relative placement of local health protection teams. Below UKHSA's national functions, there are nine regionally-based teams (e.g. London, East Midlands, East of England) across the country – “acting as the gateway to all of our local health protection services”.<sup>115</sup> Jim McManus explained that UKHSA's resources in the East of England region, for example, include three local health protection teams. These cover the whole region and are “managed regionally and accountable nationally [i.e. to UKHSA], they're not strictly local.” By contrast, local health protection teams are not managed by the national body in Scotland at all. Instead, they are embedded into the regional NHS tier – with Public Health Scotland's website directing those looking for local

---

<sup>110</sup> Department of Health and Social Care and The Rt Hon Matt Hancock MP, ‘The Future of Public Health’.

<sup>111</sup> Robert Koch Institute, ‘Robert Koch Institute 2025 (RKI 2025)’, Webpage, 26 June 2017.

<sup>112</sup> Ibid.

<sup>113</sup> Amos, ‘UK Health Security Agency’.

<sup>114</sup> *A Consultation on the New National Public Health Body ‘Public Health Scotland’* (COSLA, 2019).

<sup>115</sup> UK Health Security Agency, *UKHSA Annual Report and Accounts 2021/22, 2023*.



services away from the national body and providing contact details linked to regional bodies instead.<sup>116</sup>

Both of these models offer useful insights for UKHSA. The Robert Koch Institute in Germany is a renowned public health body, which focuses on providing world-class expertise and research to be communicated across the system and to all tiers of government. The Scottish model shows how a fundamental focus on the local – from strategic principles through to concrete decisions – can be achieved in a context much closer to home. Thus, while developing a full roadmap for a revised UKHSA model is out of scope for this paper, these models offer useful pointers.

**Idea 5:** UKHSA should conduct an extensive evaluation of alternative models adopted by other countries (including the devolved administrations) to tackle health threats, with an emphasis on identifying best practice in local-national working.

Following this process, UKHSA should report on its findings and set out a practical roadmap for moving towards the less centralised model found in other countries.

---

<sup>116</sup> 'Health Protection Team Contacts', Webpage, Public Health Scotland, 6 October 2022.

---

# Conclusion

The pandemic was a revealing test of Britain's national resilience. While there were examples of extraordinary bravery and remarkable adaptability, from the efforts made by key workers across different sectors to the development of world-leading vaccines at unexpected pace, there were also striking failures in our public health response. These failures, as is inevitable in the context of a global pandemic, had deadly consequences.

The aim of this short paper is not to tell the full story of COVID-19, nor to provide a comprehensive account of the entire public health response. Instead, the paper has sought to identify ways in which the UKHSA can build on the lessons of the pandemic and ensure its new strategy is delivered as effectively as possible. The particular focus has been to set out why UKHSA should take a different approach to PHE, building the capabilities of local public health agencies before the next crisis so that they can play a far stronger role than they did in our pandemic response.

In Chapter 1, five key weaknesses were identified from the COVID-19 response. These included issues with preparedness, insufficient use of diverse scientific disciplines, inadequate efforts to support groups with more serious risk profiles, and problems around data sharing. Above all, the paper identified a failure to properly understand local public health capabilities, communicate with local agencies, and respond alongside those working closest to communities was the most fundamental problem.

In Chapter 2, these five lessons were applied to the ten-year strategy recently published by UKHSA. By adopting the five ideas put forward, UKHSA's approach would be strengthened and as such the nation would be more resilient in the face of the next health security crisis. It is time to rebuild our health security, but this time from the ground up.

---

# Bibliography

- A Consultation on the New National Public Health Body 'Public Health Scotland'*. COSLA, 2019.
- Amos, Nathaniel. 'UK Health Security Agency'. Institute for Government, 12 June 2023.
- Atkinson, Paul, Nina Gobat, Suzannah Lant, Hayley Mableson, Caitlin Pilbeam, Tom Solomon, Sarah Tonkin-Crine, and Sally Sheard. 'Understanding the Policy Dynamics of COVID-19 in the UK: Early Findings from Interviews with Policy Makers and Health Care Professionals'. *Social Science & Medicine* 266 (December 2020).
- Atkinson, Paul, Hayley Mableson, Sally Sheard, Aleksandra Borek, Ann-Marie Martindale, Caitlin Pilbeam, and Tom Solomon. 'How Did UK Policy Making in the Covid-19 Response Use Science? Evidence from Scientific Advisers - Manuscript Draft'. *Evidence & Policy: A Journal of Research, Debate and Practice*, 2022.
- Atkinson, Paul, and Sally Sheard. 'Designing Effective Central-Local Co-Operation: Lessons from Liverpool's Covid-19 Response'. *Policy Design and Practice* 5, no. 3 (3 May 2022).
- Bambra, Professor Clare, and Professor Sir Michael Marmot. *Expert Report for the UK Covid-19 Public Inquiry*. INQ000195843\_0001, 2023.
- Blanco-Jimenez, Celia. 'Why Didn't Pandemic Planning Anticipate the Need for Lockdowns?' *London School of Economics*, 17 March 2021.
- Booth, Robert. 'UK Covid Inquiry: Public Health Bosses Relied on Media for Information'. *The Guardian*, 5 July 2023.
- Cabinet Office. *100 Days Mission to Respond to Future Pandemic Threats*, 2021.
- . *The Role of Local Resilience Forums: A Reference Document*, 2013.
- Campbell, Denis. 'Abolition of Public Health England Just "Passing of Blame for Coronavirus Mistakes"'. *The Guardian*, 19 August 2020.
- Community Information Champion Project. 'Sharing Information throughout the Community'. Webpage, 2023.
- Department for Levelling Up, Housing & Communities, and IFF Research. *Community Vaccine Champions Evaluation Report*, 2023.
- Department of Health and Social Care and Office for Health Improvement and Disparities. 'New Era of Public Health to Tackle Inequalities and Level up the UK'. Press Release, 1 October 2021.
- Department of Health and Social Care and The Rt Hon Matt Hancock MP. 'Plan, Prevent and Respond: Reforming Health Security'. Speech, 24 March 2021.
- . 'The Future of Public Health'. Speech, 18 August 2020.
- Dr Atiya Kamal, and Professor Laura Bear. *Community Champions Policy: Key Principles and Strategic Implications for Recovery from Covid-19*. London School of Economics and Political Science, 2023.
- Feinmann, Jane. 'Is the UK Losing Its World Leading Covid Surveillance Network Just When It Needs It Most?' *The BMJ*, June 2023.
- Gatseva, Penka D., and Mariana Argirova. 'Public Health: The Science of Promoting Health'. *Journal of Public Health* 19 (March 2011).
- GOV.UK. 'Chief Scientific Advisor Transition Lead Professor Isabel Oliver'. Webpage, 2023.
- . 'Human Animal Infections and Risk Surveillance Group'. Webpage, 2023.
- Gulland, Anne. 'UK Falls off Second Spot in Global Ranking of Pandemic Preparedness'. *The Telegraph*, 8 December 2021.
- Harries, Dame Jenny. 'Evidence to the COVID-19 Inquiry'. Module 1 Day 9, 26 June 2023.
- HM Government. *UK Biological Security Strategy*, 2023.
- House of Commons Committee of Public Accounts. *Department of Health and Social Care 2021–22 Annual Report and Accounts, Sixty-Second Report of Session 2022–23*. HC 997. London: The Stationery Office, 2023.

- House of Commons Health and Social Care and Science and Technology Committees. *Coronavirus: Lessons Learned to Date Sixth Report of the Health and Social Care Committee and Third Report of the Science and Technology Committee of Session 2021–22*. HC 92. London: The Stationery Office, 2021.
- House of Commons Health and Social Care Committee Science and Technology Committee. 'Oral Evidence: Coronavirus: Lessons Learnt', 1 December 2020. HC 877.
- House of Commons Science and Technology Committee. 'Oral Evidence: UK Science, Research and Technology Capability and Influence in Global Disease Outbreaks'. HC 136. London: The Stationery Office, 2020.
- Iglesias, Jamie Garcia, Jeremy Williams, Maurice Nagington, Tom May, Sophie Buijsen, Ciara J. McHugh, Jeremy Horwood, Martyn Pickersgill, Joanna Chataway, and Richard Amlot. *Responding to Mpox: Communities, Communication, and Infrastructures*. University College London, 2023.
- Improving People's Health: Applying Behavioural and Social Sciences to Improve Population Health and Wellbeing in England*. Public Health England, 2018.
- Institute for Government. 'In Conversation with Dame Dr Jenny Harries, Chief Executive of the UK Health Security Agency'. Webpage, 28 July 2022.
- John Hopkins Bloomberg School of Public Health, and Nuclear Threat Initiative. *Global Health Security Index: Building Collective Action and Accountability*, 2019.
- Kanja, Claire, and Sarah Bunn. 'Drug Therapies for COVID-19'. *Parliamentary Office of Science and Technology (POST)*, 19 April 2022.
- Kelly, Professor Michael, Professor Peter Littlejohns, and Dr Sarah Markham. 'Evidence – Was It Really Used in the Covid-19 Pandemic? A Key Issue for the Covid-19 Inquiry to Address'. *NIHR: National Institute for Health and Care Research*, 22 April 2022.
- Lee, A C K, P English, Bharat Pankhania, and J R Morling. 'Where England's Pandemic Response to COVID-19 Went Wrong'. *Public Health* 192 (21 November 2020).
- Ministry for Housing, Communities and Local Government, Department for Health and Social Care, The Rt Hon Nadhim Zahawi MP, The Rt Hon Matt Hancock MP, and The Rt Hon Robert Jenrick MP. 'Community Champions to Give COVID-19 Vaccine Advice and Boost Take Up', 25 January 2021.
- More in Common. 'Written Evidence Submitted by More in Common: Misinformation and Trusted Voices', 2022.
- National Audit Office. 'Department of Health and Social Care Annual Report and Accounts 2021-22'. Press Release, 26 January 2023.
- . *Test and Trace in England – Progress Update Department of Health & Social Care*, 2021.
- . *The Government's Preparedness for the COVID-19 Pandemic: Lessons for Government on Risk Management*, 2021.
- NHS. 'What Is Public Health?' Webpage, 2023.
- Parker, George, Clive Cookson, Sarah Neville, Sebastian Payne, Camilla Hodgson, Anna Gross, and Laura Hughes. 'Inside Westminster's Coronavirus Blame Game'. *Financial Times*, 16 July 2020.
- Peters, Dan. 'EXCLUSIVE: Local Areas Left in the Dark by Government'. *The Municipal Journal*, 13 May 2020.
- Public Health Scotland. 'Health Protection Team Contacts'. Webpage, 6 October 2022.
- Raleigh, Veena S. 'Ethnic Differences in Covid-19 Death Rates'. *The BMJ* 376 (23 February 2022).
- Robert Koch Institut. 'Robert Koch Institute 2025 (RKI 2025)'. Webpage, 26 June 2017.
- Rt Hon Matt Hancock. 'Written Evidence: UK COVID-19 Inquiry'. INQ000181825, 12 May 2023.
- Sachs, Professor Jeffrey D, Professor Salim S A Karim, Professor Lara Aknin, Joseph Allen, Kirsten Brosbøl, and Francesca Colombo. 'The Lancet Commission on Lessons for the Future from the COVID-19 Pandemic'. *THE LANCET COMMISSIONS* 400, no. 10359 (8 October 2022).

Sandwell Metropolitan Borough Council. 'Sandwell Has Won a National Public Health Award for Its Covid Vaccination Programme.', 9 November 2021.

Scientific Advisory Group for Emergencies. *Role of Community Champions Networks to Increase Engagement in Context of COVID-19: Evidence and Best Practice*, 2020.

Shilson-Thomas, Aidan, Sebastian Rees, and Charlotte Pickles. *A State of Preparedness: How Government Can Build Resilience to Civil Emergencies*. Reform, 2021.

———. *A State of Preparedness: How Government Can Build Resilience to Civil Emergencies*. Reform, 2021.

Simmons, Michael. 'Sage Scenarios vs Actual: An Update'. *The Spectator*, 16 January 2022.

Sir Chris Whitty. 'Evidence to the COVID-19 Inquiry'. Module 1 Day 8, 22 June 2023.

Suleman, Mehrunisha, Shreya Sonthalia, Caitlin Webb, Adam Tinson, Martina Kane, Sabrina Bunbury, David Finch, and Jo Bibby. *Unequal Pandemic, Fairer Recovery: The COVID-19 Impact Inquiry Report*. The Health Foundation, 2021.

Sweetland, James. *Boosted by the Vaccine: Lessons from COVID-19 for the Future of the Life Sciences*. Reform, 2022.

Terrence Higgins Trust. 'Monkeypox in the UK'. Webpage, 18 October 2022.

The Health Foundation. 'PHE Reorganisation Is Highly Risky and Justification for the Change Has Not Been Fully Set Out'. Press Release, 18 August 2020.

The Heinz Awards. 'C. Everett Koop', 2023.

*Transformations in Community Collaboration: Lessons from COVID-19 Champions Programmes across London (Feb 2023)*. Association of Directors of Public Health, 2023.

'UK Covid-19 Inquiry'. Module 1 Day 1, 13 June 2023.

UK COVID-19 Inquiry, *Extract of Pandemic Preparedness Organograms Covering 2009-2020*, INQ000204014\_0004, 2023.

UK Health Security Agency. *Adverse Weather and Health Plan Protecting Health from Weather Related Harm 2023 to 2024*, 2023.

———. *Adverse Weather and Health Plan Supporting Evidence 2023 to 2024*, 2023.

———. *Syndromic Surveillance: Systems and Analyses*, 2023.

———. 'UKHSA Advisory Board: Science and Research Committee Minutes'. Corporate report, 14 March 2023.

UK Health Security Agency. 'UKHSA Advisory Board: Science and Research Committee Terms of Reference'. Corporate report, 16 November 2022.

. *UKHSA Annual Report and Accounts 2021/22*, 2023.

———. *UKHSA Science Strategy 2023 to 2033: Securing Health and Prosperity*, 2023.

University of Bristol, and King's College London. 'Coronavirus: Who the Public Trust on the Pandemic'. 18 February 2021.

World Health Organization. 'Health Promotion'. Webpage, 2023.

———. 'Health Security'. Webpage, 2023.

———. 'Surveillance in Emergencies'. Webpage, 2023.

World Health Organization. 'WHO Recommends New Name for Monkeypox Disease'. News, 28 November 2022.

# REFORM

ISBN: 978-1-910850-53-4



[@reformthinktank](https://twitter.com/reformthinktank)



[info@reform.uk](mailto:info@reform.uk)



[www.reform.uk](http://www.reform.uk)