

Monday, 10 July 2023

1
2 (10.30 am)
3 **LADY HALLETT:** Ms Blackwell.
4 **MS BLACKWELL:** Good morning, my Lady. May I please call
5 Dr Claas Kirchhelle.
6 **DR CLAAS KIRCHHELLE (sworn)**
7 **Questions from COUNSEL TO THE INQUIRY**
8 **MS BLACKWELL:** Thank you, Dr Kirchhelle, for the assistance
9 that you've so far given to the Inquiry. You have
10 provided an expert report that we have at INQ000205178.
11 Can you confirm, please, that that is your report and
12 that it's true to the best of your knowledge and belief.
13 **A.** Yes, it is.
14 **Q.** Thank you very much. We can take that down.
15 During the course of your evidence this morning, if
16 you require a break at any time, please just say so.
17 Try and speak clearly and slowly and into the microphone
18 so that the stenographer is able to prepare the
19 transcript.
20 I'm going to begin by taking you through your
21 qualifications and experience so far as they're relevant
22 to this Inquiry.
23 You are currently a tenured assistant professor of
24 the history of medicine at the University College
25 Dublin. Prior to that you were a research associate at

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1 cohesion of the public health system, information
2 sharing, the workforce, and on pandemic preparedness and
3 resilience.

4 You make it clear within your report that you were
5 assisted by others in its compilation, but can you
6 confirm, please, Dr Kirchhelle, that the text and
7 opinions stated in the report are yours.
8 **A.** Yes, I would, however, like to acknowledge the fact that
9 peers have reviewed this, as of Professor Sally Sheard,
10 Professor Virginia Berridge, Professor John Stewart and
11 I've particularly drawn on help by Dr James Lancaster,
12 and I would also really like to acknowledge the fact
13 that I was allowed to draw on unpublished research and
14 insights by Professor Allyson Pollock and
15 Peter Roderick.

16 **Q.** Thank you.
17 Your report is in three parts, which correspond with
18 the major shifts of public health policy that took place
19 across all four nations. The first part covers 1939 to
20 2002, and is an overview of the post-war evolution of
21 United Kingdom public health arrangements and
22 infrastructures prior to the major health security
23 oriented regulatory reconfigurations that took place
24 following the 1990s BSE crisis and also the 2001 attacks
25 on the World Trade Center.

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1 the University of Oxford, and you describe yourself as
2 being a historian of bugs and drugs, of laboratory
3 infrastructures and the development, marketing and
4 regulation of antibiotics and vaccines; is that right?
5 **A.** Yes.
6 **Q.** You are also an honorary fellow of the Oxford Vaccine
7 Group, you have an MA in modern and medieval history
8 from the University of Munich, an MA in social sciences
9 from the University of Chicago, and you are a doctor of
10 philosophy at the University College, University of
11 Oxford.
12 You have a large number of published journal
13 articles, edited volumes and book chapters, some of
14 which we'll touch upon during the course of your
15 evidence, and you are the recipient of a number of
16 research and engagement and teaching awards, which are
17 all listed in your CV.
18 You were instructed by the Inquiry to address the
19 following matters: the history of public health bodies
20 in England, Wales, Scotland and Northern Ireland;
21 a description of the key EPRR functions and structures
22 of those public health bodies, including public health
23 laboratories, which we will feature very much during the
24 course of your evidence; and the impact of the changes
25 of public health structures on issues such as the

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1 Part 2 covers 2002 to 2010, and is subheaded
2 "Centralisation and Fragmentation", covering the
3 performance of the new integrated health protection
4 bodies at the level of the UK and also the devolved
5 nations, local health services and evolving pandemic
6 preparedness amidst the 2003 and 2009 outbreaks of
7 SARS CoV-1 and swine flu.

8 Part 3 covers 2010 to 2019 and is subheaded
9 "Austerity and Localism", with a specific focus on the
10 impacts of new doctrines of localism amidst
11 austerity-related cuts to local public health budgets
12 and the influence of new molecular technologies on
13 laboratory infrastructures; is that right?

14 You know, Dr Kirchhelle, that Module 1 is focusing
15 on a date range from 2009 to 2020, so why is it
16 necessary, in your opinion, for us to go as far back
17 as 1939?

18 **A.** So I think there are two reasons for this. The first
19 reason is that the decisions made between 2009 and 2019
20 were heavily influenced by doctrines which were put in
21 place prior to this and also by structural path
22 dependencies within public health systems that had
23 evolved over decades.

24 The second thing is that there's a huge diversity of
25 different public health systems that have been put in

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1 place historically in the UK, so I think you need to
2 have this broad view, this high-level review of these
3 things, in order to make informed decisions about how
4 public health can move forward.

5 **Q.** Is it right, Dr Kirchhelle, that your own experience
6 focuses on the history of public health in England and
7 Wales, and so although your report includes the
8 consideration of Scotland and Northern Ireland, you have
9 drawn on published reports in order to include that
10 information within your report?

11 **A.** Yes, that's true, I'm not an expert on Northern Ireland
12 or Scotland for that matter. The report is a high level
13 report, it summarises peer reviewed published historical
14 evidence, and it also draws, where I can, on primary
15 sources such as those released to me by the Inquiry.

16 **Q.** How much published material is available on the devolved
17 nations compared to that of England or the
18 United Kingdom as a whole?

19 **A.** Surprisingly little. If you think about the fact that
20 various devolved arrangements have been in place for
21 quite a while, there's a remarkable lack of comparative
22 performance data, but there's also a remarkable lack of
23 really holistic, historical overviews for most of the
24 devolved nations, and then also particularly in
25 relationship to England and Wales.

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1 local, in some cases.

2 **Q.** Right. About what public health laboratories?

3 **A.** So those get formalised a lot after -- actually during
4 the Second World War, when Britain puts in place the
5 Emergency Public Health Laboratory Service in
6 preparation for major outbreaks that are predicted to
7 result from aerial bombing and civilian displacement.
8 So in preparation for the war, the UK designates
9 a series of locations across the country, outside of
10 London, where microbiology can be performed, it will be
11 provided free of charge, to local authorities, and the
12 idea there is to have local microbiological competence
13 that is decentralised and flexible to react to problems
14 as they emerge.

15 **LADY HALLETT:** Could you just -- you are speaking terribly
16 quickly.

17 **MS BLACKWELL:** I'm so sorry.

18 **LADY HALLETT:** I do understand how difficult it is, and
19 you're not the first person, don't worry, but we have to
20 remember that -- maybe if you could pause after the
21 answer, Ms Blackwell.

22 **MS BLACKWELL:** Yes, of course.

23 Medical officers of health, I was going to ask you
24 about. When did they come into being and how did they
25 connect with the Emergency Public Health Laboratory

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1 **Q.** Right, but you have done your best with the material
2 that's been available to you?

3 **A.** Absolutely.

4 **Q.** We're grateful for that.

5 My Lady has heard already about differing types of
6 laboratories, over various time periods.

7 I am going to ask you to begin by assisting us in
8 setting out broad definitions of the various
9 laboratories that were available to the various devolved
10 nations over the course of time.

11 Starting with local laboratories, these are
12 predominantly based in NHS hospitals, carrying out
13 clinical microbiological testing to provide diagnoses
14 for patients cared for as either hospital in-patients or
15 outpatients, and they mostly provide a diagnostic
16 service as well for local practitioners; is that right?

17 **A.** It's a bit more complicated than that. So the
18 laboratories evolved substantially over the course of
19 the 20th century, so whereas nowadays a diagnostic
20 laboratory would definitely perform the functions that
21 you have described, if you go back there's a broad
22 institutional diversity of laboratories in the UK --
23 with, in Scotland, for example, university
24 laboratories -- actually part of carrying out core
25 public health functions, which would still be considered

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1 Service that you've described?

2 **A.** The office of medical officers of health emerges in the
3 19th century and it is one of the first key offices of
4 public health in the UK. The medical officer is in
5 charge of infectious disease investigation and control.
6 It's also increasingly important -- and usually it's
7 a he -- in the form of reporting of diseases. The role
8 evolves quite a bit. For a while they run their own
9 hospitals, at the local level they integrate a variety
10 of services, but after the Second World War they form
11 part of a tripartite function of the new national health
12 service, and this is a similar function across nearly
13 all UK nations, where they function as the central port
14 of call for public health at the local level and can
15 draw on their -- what then becomes the public health
16 laboratory service or the various other
17 microbiological services.

18 **Q.** Indeed, did the Emergency Public Health Laboratory
19 Service then become the Public Health Laboratory
20 Service, the PHLS, which we see existing over a long
21 period of time?

22 **A.** Yes. The success during the Second World War is so
23 strong that something that is actually just meant as
24 a stopgap emergency solution becomes permanent.

25 **Q.** Did it start off as an integrated network of

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1 19 laboratories across England and Wales but by 1969 had
2 the number of PHLS laboratories grown to 63?

3 **A.** Yes.

4 **Q.** Many of the new laboratories were located within local
5 hospitals?

6 **A.** Yes.

7 **Q.** All right.

8 Now, I'd like to display, please, a figure that
9 comes from your article called *Giants on Clay Feet* which
10 is at INQ000207449. We can see that here.

11 If we go to page 17, and zoom in to figure 1, just
12 to familiarise ourselves with these four charts, are the
13 red dots representing local laboratories and the black
14 dots representing regional laboratories?

15 **A.** Yes. The distinctions vary over time, but I think
16 between 1946 and 1965 that's a very accurate
17 description.

18 **Q.** Looking at figure A, we can see that at the north of
19 England and Wales there are mainly local laboratories
20 but in the south they are mainly regional laboratories,
21 and we can see that there is a blue square around the
22 Greater London area, which is blown up and depicted in
23 figure B. So we can see that there were a number -- ten
24 in number, I think -- of laboratories in the Greater
25 London area.

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1 **Q.** By 1972 you tell us in your report that the successful
2 integration of local public health and health services
3 was unparalleled in Western Europe or North America?

4 **A.** There is no comparable public health laboratory network.

5 **Q.** All right, thank you. We can take that down now.

6 Moving to a slightly later period, in 1974, was
7 there a major reorganisation of the NHS and local
8 authority services, which led to the abolition of the
9 role of medical officers of health?

10 **A.** Yes.

11 **Q.** Why were they abolished at that time?

12 **A.** There were concerns about the performance of medical
13 officers of health, that the service had become
14 overstretched. I believe there were 550 officers spread
15 over 1,244 local authorities, so that led to concerns
16 both about the overstretched service, and this was also
17 a time when there was significant political desire to
18 reform and make the NHS more efficient. And as
19 a consequence also of the epidemiological shift which
20 we're seeing, where people are no longer primarily dying
21 of infectious diseases but of non-infectious diseases,
22 there's also a relative de-emphasis on the infection
23 control duties and -- that the MOH, you know, had done
24 previously. So it's a constellation of different
25 pressures. The effect at the end of the day is that

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1 Would you have described those as local or regional
2 laboratories?

3 **A.** The London laboratories were technically not part of the
4 Emergency Public Health Laboratory Service but of the
5 Emergency Medical Service, however they did contribute
6 to the overall microbiological intelligence gathering.

7 **Q.** All right.

8 **A.** So, again, over historical time periods of almost
9 a century, the distinctions vary and blur a bit.

10 **Q.** Now, if we look at figure C, we can see that by 1946
11 there were a significantly larger number of both local
12 and regional laboratories. And by 1965, an increase in
13 local laboratories, but around about the same number, if
14 not slightly fewer, of regional laboratories, now
15 configured in the north west and the sort of southern
16 belt -- or the southern Midlands belt of England.

17 Is it right that there was no formal requirement to
18 send samples or report disease outbreaks to the Public
19 Health Laboratory Service?

20 **A.** That's correct. The idea behind this was very simple:
21 this service was designed to slot into existing public
22 health services without disrupting them, so the idea was
23 you would provide free testing services, free
24 epidemiological expertise, without stepping on anybody's
25 administrative toes at the local level.

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1 this integrating focal point of public health at the
2 local level disappears and is very difficult to replace.

3 **Q.** In 1988, a report by the then Chief Medical Officer,
4 Donald Acheson, led to further significant changes,
5 didn't it? Each health authority was then to employ
6 a consultant in communicable disease control, or a CCDC,
7 who was accountable to the newly created office of
8 Director of Public Health, and that's something that we
9 recognise in the Inquiry because my Lady has heard
10 evidence about that role before this morning.

11 The regional DPHs, or directors of public health,
12 would co-ordinate health protection across the districts
13 or their regions and report annually on the health of
14 the population in the area that they served; is that
15 right?

16 **A.** That's correct.

17 **Q.** Just pausing and remaining for a moment on the situation
18 of laboratories, though, the 1970s had seen 11 of the
19 Public Health Laboratory Service laboratories close, and
20 by the early 1980s, competition for limited public
21 health resources amidst a growing emphasis, as you've
22 said, on non-communicable diseases led to cost-cutting
23 reviews and posed what you describe as a threat to the
24 whole system; is that right?

25 **A.** Yes.

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1 **Q.** From the 1990s onwards, the Public Health Laboratory
 2 Service had sole management of the laboratories and
 3 charged health authorities and GPs for diagnostic tests;
 4 is that right?

5 **A.** That's correct.

6 **Q.** How did that formalised charging arrangement impact the
 7 relationship between the Public Health Laboratory
 8 Service and the NHS?

9 **A.** It significantly complicated the very effective yet
 10 quite informal arrangements of the post-war period. You
 11 have to imagine public health, especially at the local
 12 level, as a bricks and mortar infrastructure, where
 13 people knew where to go. It was clear that there was
 14 an anchor point within the PHLS. That local anchor
 15 point was integrated into a national network, and often
 16 there were informal economies of intelligence gathering.
 17 So, as a microbiologist, you would speak to your local
 18 clinician, you would know what was going on, you would
 19 also speak, prior to the abolition, to the MOH. So it
 20 was a very dynamic horizontally-integrated system that
 21 was still vertically connected upwards, especially after
 22 the Acheson reforms, with the ability to surge if there
 23 were outbreaks going forward.

24 The idea of the internal market, that's introduced
 25 in the 1990s, was that you would create efficiency in

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1 the PHLS local public health laboratories to the NHS
 2 hospital trusts, and also the setting up of the primary
 3 care trusts.

4 You describe the establishment of the Health
 5 Protection Agency as a painful birth, and that staff
 6 described the integration at that time as challenging,
 7 which perhaps isn't surprising, given that it fused into
 8 a single entity 80 organisations in 140 locations, and
 9 400 distinct IT applications with 40 to 50 websites.

10 It was estimated, was it not, that it would take up
 11 to five years to fully integrate all HPA services, and
 12 did that prove to be the case, Dr Kirchhelle?

13 **A.** So the painful birth is a quote from witnesses at the
 14 time, actually it's from the first executive of the HPA
 15 who describes it in those words. I'd like to take you
 16 back very quickly just into why the HPA was created in
 17 the first place.

18 **Q.** Yes, please.

19 **A.** This was an attempt to move and fundamentally reform
 20 public health reporting to a more upstream function of
 21 intelligence gathering and co-ordination. There had
 22 been long-standing complaints about parallel hierarchies
 23 and competition between the NHS and public health
 24 laboratory provision at the local level, and following
 25 the 9/11 attacks, but also following a request by the

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1 the system by making the system perform according to
 2 market rules. The problem was, however, with the PHLS,
 3 that charging for every single service in many ways
 4 destroys these informal economies of exchange. It
 5 incentivises the NHS and other providers, perhaps, to go
 6 with private providers or it incentivises perhaps less
 7 testing and less reporting.

8 So the PHLS was struggling during this time.

9 **Q.** All right.

10 Moving forward a few years to the mid to late 1990s,
 11 the PHLS was divided into ten regional groups with
 12 devolved budgets, and that number of groups was reduced
 13 to eight by 2002, at which point the Welsh public health
 14 arrangements diverged significantly, didn't they, from
 15 those in England?

16 **A.** Yes, that's a result of a major re-ordering, actually
 17 more at the English level than at the Welsh level.

18 **Q.** Well, let's now deal with each of the four nations
 19 independently, please, starting with England, and the
 20 time period 2002 to 2010.

21 You tell us in your report that the Blair government
 22 made significant reports to health services and the
 23 public health infrastructure, and the ones that I want
 24 to focus on during this period are the establishment of
 25 the Health Protection Agency, the transfer of control of

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1 UK's government, the then UK CMO Liam Donaldson
 2 reconceptualised health protection in a very American
 3 CDC-led style, where you would integrate and combine
 4 responsibilities for infection control, radioactive and
 5 chemical hazard control, into one big agency that could,
 6 in a kind of command and control system, gather the
 7 intelligence and swoop in and help, should there be
 8 problems at the local level.

9 Now, as you've already referred to, it's
 10 an organisational behemoth in contrast to the initial
 11 infection control infrastructures, and the painful
 12 nature of the birth also results from the fact that
 13 there are very strong distinct identities within these
 14 organisations which are all being integrated.

15 So what you have witnesses describing is an extreme
 16 territoriality of different departments vying for
 17 resources within the HPA, and at the same time you have,
 18 I think, just a significant organisational challenge.
 19 It was set up within a matter of months. There was not
 20 years of preparation for this set-up, for things to
 21 work. So it was running from 2003; whether the
 22 functions were perfect, I think the witnesses agree that
 23 there were significant issues.

24 **Q.** Right.

25 In terms of the transfer of the local public health

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1 laboratories, let's just return, if we can, please, to
2 your *Giants on Clay Feet* report and look at another set
3 of figures showing, as we can see in the description at
4 the bottom of this page, the extent of laboratory
5 networks under the Public Health Laboratory Service
6 in 1980, and then the HPA in 2010.

7 Now, what do we see happening in 1980? And take us
8 through how that has transitioned by the time we get to
9 2010, please.

10 **A.** So in 1980 you already see a slightly slimmed down
11 version of the post-war arrangement of public health in
12 England and Wales. We're not talking about Scotland and
13 Northern Ireland here.

14 **Q.** Yes.

15 **A.** It's a very networked infrastructure of public health
16 laboratories, with regional centres that collate
17 information and a very strong national reference system
18 in Colindale in North London, which is now the
19 headquarters also of UKHSA.

20 In 2010, what you see is the result of this attempt
21 to make health protection upstream and integrated, so
22 a complete handing away of the local infrastructure of
23 public health laboratories to the NHS, the microbiology
24 service which takes over the running of those local
25 labs, and a very significant limitation of dedicated

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1 something many other countries are doing at the time,
2 but this is this idea of creating a kind of top-heavy,
3 slimmed-down, rapid-response command and control
4 architecture, that is quite different actually from the
5 architecture of emergency that was predominant during
6 the Second World War.

7 **Q.** Is there a difference between a specialist and reference
8 laboratory and a public health laboratory?

9 **A.** I mean, both are within the public health service.

10 A specialist laboratory will be able to perform, as the
11 name says, specialist tests and highly also have higher
12 security clearance for specific groups of pathogens.

13 **Q.** All right. You describe in your report that the
14 dissolution of local PHLS structures was traumatic. Why
15 do you describe it as such?

16 **A.** Again I quote, so this is the words of the
17 contemporaries. A large part of the PHLS workforce was
18 obviously located in these local laboratories; they had
19 existed for decades, and had an extremely strong
20 identity. And suddenly these laboratories were
21 transferred to the NHS, a very different employment
22 system, and the PHLS was against the will, essentially,
23 of the board, fused with a much larger agency, and for
24 members of the PHLS, if you look at the witness seminars
25 of the time, it is described as traumatic and very

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1 public health laboratory capacity into these regional
2 labs, and London actually has two of these specialist
3 centres.

4 **Q.** Right. So what we see by 2010 is nine, only, what you
5 would describe as regional laboratories? I know that
6 there are only eight dots on the page, but you've said
7 that there are two --

8 **A.** That's a feature of the mapping.

9 **Q.** All right.

10 How did that affect the service that was able to be
11 provided?

12 **A.** The ideal of the service was again slimmed down and
13 efficient. So you would have regional teams which would
14 provide local PCTs, so primary care trusts, with advice.
15 They would also be able to commission more detailed
16 public health work from NHS laboratories. But the idea
17 was that the expertise would be condensed in regional
18 centres, which would also provide epidemiologists and
19 epidemic intelligence to counter outbreaks or identify
20 outbreaks.

21 London again, here, is the centre of most of the
22 specialist laboratories at the time, with Colindale
23 functioning as essentially the heart or the brain of the
24 UK's system here. But you see here a new vision of
25 public health, which is not unique to the UK, this is

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1 turbulent, with lots of confusion with -- between lots
2 of different systems and also within the HPA.

3 **Q.** What about primary care trusts, their creation and the
4 intention that they would improve or provide a health
5 improvement role? How did they come about and how was
6 that change received?

7 **A.** So, I can't -- I think -- I think talking through the
8 history of the overall Blairite reforms of the NHS would
9 be perhaps too big now, but the idea of the PCTs is to
10 unify and to make health and public health more
11 efficient at the local level by integrating various
12 functions, including the health improvement function.

13 Interestingly, however, the proper officer, so,
14 you know, what previously used to be the MOH, and then
15 was the CCDC, that is now moved to the HPA. So the CCDC
16 is employed by the HPA, with these regional teams,
17 rather than being anchored at this local nexus within
18 the PCTs, and -- I'm sure we'll talk about the pandemic
19 responses -- it causes all manner of confusion where
20 this function is located within the administrative
21 system.

22 **Q.** So organisational change on a large scale. In terms of
23 government support for the newly formed HPA, you
24 describe in your report that over this period of time
25 that was somewhat erratic because it had received

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1 £116 million of funding from the Department of Health
2 in 2013, that was its first year in existence, then that
3 rose to £193 million -- I'm so sorry, not 2013; in 2003.
4 Then that rose to £193 million following the 2009
5 swine flu outbreak, and then went back down to
6 £142 million in the 2012/2013 budgetary year.

7 That differing rise and fall was also mirrored in
8 staffing levels, wasn't it? So did that in itself cause
9 a level of confusion?

10 **A.** I think this is a classic example of yo-yo funding for
11 public health in and outside crises. So once the
12 immediate perception of a crisis has passed, funding
13 tends to go down. Within the HPA it's -- it's difficult
14 to comment on whether the funding itself led to
15 confusion. I think it certainly made it difficult to
16 plan for resilience capability building, if there were
17 these huge fluctuations in funding.

18 **Q.** Thank you.

19 I'd like to move now to the period of time that this
20 Inquiry is concerned with, and it's really 2009 or 2010
21 up to the time that Covid hit.

22 You describe in your report that in 2012, in
23 England, we saw the most complex political restructuring
24 of health and public health services that had happened
25 in decades, or perhaps ever. The primary care trusts

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1 a blurred statutory overlap between local authority,
2 Secretary of State and the Civil Contingencies Act
3 duties, and I think you describe it in the following
4 terms: what sounded complicated on paper proved
5 complicated in practice?

6 **A.** That's true. I think I spent -- on this page I spent
7 probably the most time per page to get my head around
8 who was responsible for what, and I think the Inquiry
9 has shown the famous spaghetti chart.

10 **Q.** Yes.

11 **A.** I think it's mirrored in that. So if you want me to
12 explain this, I can. I would prefer to read the report
13 itself so that I don't get it wrong, it's so
14 complicated.

15 **Q.** All right, we'll turn to do that in a short while, but,
16 by way of a very high-level summary, Public Health
17 England combined previously distinct health
18 organisations, health protection and promotion
19 functions, brought all of those together, which involved
20 a merging of 5,000 staff from 120 organisations?

21 **A.** Yes.

22 **Q.** Right. Although it absorbed many pre-existing
23 structures, it also differed from its predecessors in
24 key ways: firstly, as we've just mentioned, the
25 combination of health protection and health promotion.

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1 were abolished and public health competencies were
2 transferred back to local authorities, as had been the
3 case before their creation, and now we see that the HPA
4 was replaced by what is described as
5 a super-organisation, in the form of Public Health
6 England.

7 What was the rationale for making these significant
8 and complex changes?

9 **A.** So in the case of Public Health England, the rationale
10 is to integrate health protection and health improvement
11 functions. The English reforms actually come after
12 similar reforms in the devolved administrations. So
13 health improvement during this time is becoming very big
14 in international health, and the UK is in line with the
15 trends there.

16 At the local level, the idea here is, and this is
17 quoting in many ways the reports of the time, is to
18 avoid and overcome what is perceived to be
19 a structurally inefficient structure of the PCTs, and
20 also to empower local authorities to tackle poor health
21 outcomes with their local knowledge. The assumption is
22 local people know best what the local problems are, so
23 if you devolve power to them they will be best able to
24 spend money rationally to take care of this.

25 **Q.** Despite those intentions, was there, at first at least,

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1 But didn't it also break with post 1950s English
2 traditions of statutory non-departmental public health
3 bodies, because Public Health England became effectively
4 an executive body, as the Inquiry has already heard,
5 within the Department of Health?

6 That in itself resulted in what you describe in your
7 report as far greater political control over public
8 health activities by its ministers, and also meant that
9 the employees of Public Health England were effectively
10 civil servants and subject to the Official Secrets Act?

11 **A.** Yes.

12 **Q.** Was that a cause for concern?

13 **A.** That was a significant cause of concern ahead of the
14 dissolution of HPA but also after the creation of PHE.
15 I know that Jenny Harries has also commented on the
16 independence that she still perceives PHE had. What the
17 historical investigation shows is that senior
18 microbiologists, HPA officials, have consistent concerns
19 about what this might do, in terms of Public Health
20 Agency's ability to speak openly to power. Ahead of the
21 transformation, the BMA surveys its members within the
22 PHE establishment in 2014; they themselves say that it's
23 more difficult to talk freely. And then, later on,
24 local health authorities polled by Ipsos MORI say that
25 they feel that PHE could do more to lobby for public

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1 health protection to the Department of Health.
2 So there are numerous different points of evidence
3 which I think paint a slightly more complicated than
4 perhaps Duncan Selbie or Jenny Harries have said.

5 **Q.** Just touching upon Duncan Selbie, as you mention him,
6 and the fact that he had, at the time that he took over
7 as chief executive of Public Health England, no
8 scientific or medical background.

9 He explained in his evidence to my Lady that despite
10 that and the -- we've talked about the light-hearted way
11 in which that was dealt with in *The Lancet* article --
12 despite that, he felt that he had sufficient experience
13 in the roles that he had fulfilled prior to taking over
14 the chief executive role so that his lack of medical and
15 scientific knowledge did not create any difficulty.

16 Do you think that it is a problem, that the chief
17 executive of Public Health England was neither qualified
18 in science or medicine?

19 **A.** Let me phrase it this way: it's remarkable that for
20 70 years the UK decided to have a medically qualified
21 and scientifically expert executive of the most
22 important Public Health Agency, consistently. And it's
23 also interesting that the choice for UKHSA seems to have
24 gone in the same direction.

25 I admire Duncan Selbie's statement for its frankness
25

1 was some confusion over those responsibilities arising
2 out of what she described as a complicated, overlapping
3 or blurred state of statutory responsibilities, and
4 although she agreed that it wasn't a perfect system
5 before, there was a level of confusion when Public
6 Health England was first created.

7 However, she said that whenever there's any level of
8 structural change, there will be a bedding-in period
9 during which there's confusion. Do you agree with that?

10 **A.** Of course. I think the salient question to ask is how
11 long the confusion lasts for. And if we look at the
12 preparedness exercises, if we look at all of the
13 statements that we have from internal reviews of public
14 health and they are cited in the report, you see that
15 this confusion is remarkably persistent. So you would
16 expect that after, let's say, seven years after the
17 setting up of an agency the confusion would die down,
18 and unfortunately I think in the documents you see that
19 that is not necessarily the case.

20 **Q.** All right.

21 I'd like to turn to funding, please, and display
22 your report at page 72, paragraph 108. Thank you. We
23 can read through this together:

24 "Functioning of the new local and national English
25 public health structures was compromised by austerity
27

1 and, I think, honesty. I think that it is interesting
2 to see how you would be able to communicate complex
3 scientific information to ministers in meetings as the
4 de facto head of the public health establishment.
5 I have no doubt about the managerial expertise, but I do
6 think that if you look at the statements of previous
7 Public Health Laboratory Service directors and HPA
8 directors, you will see that there was substantial
9 effort that they also had to do to communicate the
10 science effectively.

11 **Q.** The 2012 reforms, about which my Lady has heard, and the
12 creation of Public Health England evoked mixed responses
13 from the English public health community, as we've
14 touched upon. When Dame Jenny Harries gave evidence,
15 I took her through five issues which are also dealt with
16 in your report, and I'm going to ask you about now,
17 Dr Kirchhelle.

18 One, confusion over EPRR responsibilities.

19 Two, independence from government, which we've
20 already touched upon.

21 Three, funding issues.

22 Four, capacity issues.

23 Five, fragmentation of the services.

24 So in terms of the first of these topics, confusion
25 over EPRR responsibilities, Dame Jenny agreed that there
26

1 politics. At the local level, the abolition of [primary
2 care trusts] meant that overall public health
3 performance was strongly dependent on local authority
4 capabilities to commission and deliver effective
5 services. Ministers had promised to ring-fence the
6 public health budget for local authorities. However,
7 an in-year cut of £200 million in 2015 was followed by
8 further reductions over the next 5 years. According to
9 the Local Government Association, this amounted to
10 a real term reduction of the public health grant from
11 over £3.5 billion in 2015-16 to just over £3 billion in
12 2020-21 ..."

13 That's a reduction of 14%.

14 "Other estimates by the Institute for Public Policy
15 Research spoke of an even more dramatic reduction of
16 £850 million in net expenditure between 2014/2015 and
17 2019/2020, with the poorest areas in England
18 experiencing disproportionately high cuts of almost
19 15 percent. Resulting pressures on local public health
20 were exacerbated by an overall 49 percent real term cut
21 in central government funding for local authorities
22 between 2010/11 and 2016/17 and a resulting practice of
23 'top slicing' whereby authorities reallocated
24 ring-fenced public health budgets to other services
25 broadly impacting health and wellbeing such as trading
28

1 standards or parks and green spaces. In 2010, *Healthy*
 2 *Lives, Healthy People* had promised to give 'local
 3 government the freedom, responsibility and funding to
 4 innovate and develop their own ways of improving public
 5 health in their area'. Freedom and responsibility had
 6 been granted -- but funding was often lacking."

7 Now, Dame Jenny, when she gave evidence, agreed that
 8 the ringfenced public health budget reduced over time
 9 due to austerity, and she said that she recognised some
 10 of the figures that appear in your report, but she went
 11 on to say that there are 152 top tier local authorities
 12 and a £200 million cut in the year. Well, that's about
 13 1 million each across the various local authorities.
 14 Whilst she agreed that the directors of public health
 15 were under significant pressure, she added that the
 16 local authorities were actually very efficient in
 17 commissioning services and so could generate savings to
 18 mitigate the loss.

19 Do you agree with that interpretation?

20 **A.** I would disagree with parts of it. I think
 21 Duncan Selbie has put it eloquently, that a £1 million
 22 cut for a local authority is a significant cut, and can
 23 result in the closure of a crucial health centre or of
 24 other crucial services. We see this with the top
 25 slicing.

29

1 we see this every time a major reform occurs -- a loss
 2 of expertise, people go into early retirement, knowledge
 3 and competence is lost over time, and I believe at some
 4 point in the report I quote the figure that 17%, at some
 5 point, of local director of public health posts were
 6 vacant.

7 **Q.** Yes.

8 **A.** This is compensated over time, but if you think about
 9 this as a process that is less than a decade long before
 10 the pandemic hits, that is quite a lot of organisational
 11 turmoil at the local level, and also at the national
 12 level, to compensate for when you are also tasked with
 13 providing resilience.

14 **Q.** You also tell us in your report that by 2021,
 15 I appreciate we're moving forwards now, 69% of the
 16 service medical workforce were located in the newly
 17 established UKHSA, the Office for Health Improvement and
 18 Disparities, the OHID, and the NHS, and of non-clinical
 19 specialists, which include the majority of directors of
 20 public health and consultants, 90% were in local
 21 authorities and largely concerned with health promotion.

22 So that shift, in your view, inevitably compromised
 23 local level infection control capabilities; is that
 24 right?

25 **A.** It's an exacerbation of a longer-term trend that starts

31

1 There's also a difference, in my opinion, between
 2 managing cuts efficiently and building resilience and
 3 building capacity for public health. So are we managing
 4 a decline or are we administering public health in terms
 5 of the goals of improving health outcomes?

6 **Q.** In terms of workforce capacity issues -- we can take
 7 that down, thank you -- Dame Jenny Harries told
 8 the Inquiry that lots of staff were lost in the move to
 9 Public Health England because in part at least there was
 10 a change in the hierarchy within the local authority
 11 roles; in other words, with some of the directors of
 12 public health roles, there was a feeling that they were
 13 reduced really in terms of their importance and so that
 14 led to a certain amount of loss of workforce capacity.
 15 In addition to that, particularly from the smaller local
 16 authorities, there was a reduction in staff. Is that
 17 something which you recognised during the change taking
 18 place?

19 **A.** Yes, but just to clarify that PHE would not be the DPH
 20 post, right, that would be the local authority now,
 21 I believe.

22 **Q.** Right.

23 **A.** So I think at both levels there is, as with any big
 24 organisational change, quite a significant turmoil.
 25 There are early retirements which result, again -- and

30

1 earlier but I think does gather steam, and this is based
 2 on research for the Infected Blood Inquiry that
 3 Allyson Pollock and Peter Roderick and James Lancaster
 4 did.

5 **Q.** All right. Let's go back to your report at
 6 paragraph 110, please, which is at page 74, drawing
 7 these threads together. Thank you.

8 You say:

9 "Austerity and workforce pressures also impacted
 10 [Public Health England]. Ahead of the formation of the
 11 new agency, a 2012 strategy paper had warned of
 12 workforce attrition while simultaneously setting out
 13 an ambitious vision of maintaining and expanding
 14 surveillance capacities as well as of improving
 15 oversight and network integration. This vision was
 16 difficult to fulfil. Although regular polling of local
 17 authorities indicated that PHE's staff, expertise, data,
 18 and services were highly valued and that appreciation
 19 increased over time, PHE experienced cuts of core
 20 funding. In 2013/2014, PHE had received
 21 a non-ring-fenced revenue for operating expenses of
 22 £405 million. By 2018/2019, operating activities were
 23 priced at £395.8 million, which amounted to an over
 24 9 percent budget fall since 2013/14 in real terms.

25 Although allocation of funds for infectious disease

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1 control rose during this period, the number of staff
2 employed for the protection from infectious diseases
3 fell from 2,397 to 2,093 ([a fall of] 12.7 percent)
4 while those employed in environmental hazards protection
5 and emergency preparedness fell from 517 to 476 ([which
6 was a fall of] 7.9 percent)."

7 Dame Jenny told the Inquiry that almost all public
8 sector organisations had budget decreases around this
9 time, but of course the combined effect of that meant
10 that if the local authority also had insufficient and
11 the NHS had also dropped their numbers of staff, what
12 happened was, in her view, when you met around the local
13 resilience forum table you may not see the person you
14 saw last week because they'd gone to another position.
15 Did you recognise that in her evidence, and did you
16 recognise that as a problem?

17 **A.** I agree with the evidence. You also see it in the
18 tabletop exercises and the departmental reviews of PHE,
19 where it's noted that the pondents(?), so the
20 corresponding people in other administrations, are
21 increasingly difficult to identify. So this is,
22 I think, a systems-wide problem.

23 You can also refer to the evidence of
24 Dame Sally Davies here, who says that it's obviously not
25 just limited to public health but also to the numbers of

33

1 and also in terms of commercialising some of the
2 services, so spinning out intellectual property, or
3 offering contractual services.

4 Now, in the witness seminars, this is justified by
5 saying it's a moral imperative to save taxpayer money
6 via income generation from public competency, so to
7 speak. The problem -- this is a well known problem in
8 international health -- is that if you become too
9 reliant on ringfenced short-term funding for specialist
10 projects, it can come at the expense of core
11 capabilities. So you might end up having a winner, so
12 to speak, in your department which is endlessly
13 generating money, and that winner then becomes favoured
14 in terms of resource allocation by the department, and
15 departments within PHE or HPA might get less support for
16 the ongoing performance of routine health functions.

17 It also -- and this is again from very interesting
18 witness seminars -- creates tensions within the public
19 health organisations between departments which are seen
20 to be flush with funding and people who consider
21 themselves as providing core important services but
22 might have less time and resources to devote to winning
23 these external grants.

24 So there is more money, but it's often quite
25 limited, it can fall off cliff edges, you can get

35

1 people employed in health services in general.

2 **LADY HALLETT:** Sorry, just before you go on, if we've
3 finished with funding of PHE, do we need to consider
4 paragraph 111 of the report?

5 **MS BLACKWELL:** Yes, I was going to go on to deal with that.
6 It's a convenient moment to deal with that now.

7 Similar to PHA, efficiency drives and external
8 funding played an important role in supplementing core
9 budgets, because in 2013 to 2014 PHE gained
10 an additional operational income of £180.3 million
11 through research grants, commercial services, and
12 contract income. By 2018 to 2019, this amount had risen
13 to £240.4 million. That was a 24.2% increase on the
14 2013 to 2014 year, including inflation.

15 Can we just go a little further down, please.

16 Thank you. In fact, let's pause there.

17 Is it important to recognise what's contained within
18 paragraph 111, in looking at the whole picture of
19 funding, both for the HPA and then later PHE.

20 **A.** I think it's a very important story. It starts already
21 with PHLS, with the internal market and the focus of
22 earning money, but under HPA it becomes much more
23 pronounced. So there's a focus within HPA of winning
24 external grants from funders like, for example, the
25 Wellcome Trust or from the United Kingdom Government,

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1 funding for a special project but then it just drops
2 off, and it might distort management priorities towards
3 incentivising income rather than necessarily
4 guaranteeing core functions.

5 **LADY HALLETT:** But if one part of the organisation gets
6 a grant and therefore has sufficient funds to do its
7 work, why doesn't that mean that the money that the
8 organisation would otherwise have had to put into that
9 department not then move to the core capabilities
10 department?

11 **A.** I think that's a very good question. I think you need
12 to see it in the context of an overall decline of
13 funding that is happening. So redistribution might
14 happen, but over time it creates a distortion of
15 priorities within the department to perhaps win funding
16 from certain elements.

17 There is a telling quote from Sir Mark Walport, the
18 director of public health, talking to I think one of the
19 HPA senior executives where he says, "I'm a bit
20 frustrated with HPA, we would like to fund your
21 infectious diseases department but they never seem to
22 have the capacity to even apply for the grants in the
23 first place". So I think that would require more
24 detailed economic analysis of HPA and how they
25 redistributed funds. The anecdotal evidence we have

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1 from the senior executives and also from the funders
2 themselves suggests that infectious disease did not
3 perform perhaps as well as radiation threats within HPA,
4 and then within PHE that will require further research.

5 **MS BLACKWELL:** I'd like to ask you about surge capacity,
6 because Dame Jenny Harries told the Inquiry that, in
7 relation to microbiological testing of virus samples
8 that we're talking about, HCIDs such as SARS, MERS or
9 SARS-CoV-2, microbiological testing of virus samples
10 require what she described as a containment level 4
11 laboratory. Which is the highest level, isn't it?

12 **A. (Witness nods)**

13 **Q.** And are only situated in two sites for Public Health
14 England: Colindale and Porton Down.

15 She told the Inquiry that if we have an HCID or
16 a pathogen X that we're uncertain about, they need to be
17 managed in a way which means that they would almost
18 certainly go to Porton Down, possibly Colindale, and
19 have to be dealt with initially in those high
20 containment facilities; is that right?

21 **A.** Yes.

22 **Q.** All right. So does that mean that at the time that
23 Covid hit, there were only two laboratories that would
24 have been able to initially handle the pathogen?

25 **A.** I'm not sure whether this is the total amount of P4

37

1 the other laboratories?

2 **A.** So the sample from Colindale flowing out -- so the
3 sample would not flow out, right. It would be typed, it
4 would be processed, but the epidemic intelligence that
5 is gathered would flow out and, technically speaking,
6 inform control attempts at the regional and local level.

7 **Q.** At what stage would PHE's involvement then pass over to
8 the other local laboratories?

9 **A.** So even with the PHLs there was a point when testing
10 would also have been handed over to the NHS.

11 **Q.** Yes.

12 **A.** This is part of the multi-phased plans which the UK has
13 had since the 1990s, where you divide a pandemic into
14 specific phases by number of cases and community
15 infection, for example, and you would then, at a certain
16 point, perhaps, hand over testing capabilities.

17 This approach becomes much more pronounced from 2009
18 onwards, with the rapid deployment of PCR, so
19 molecular-based testing, during the swine flu pandemic.
20 The HPA had been preparing for this. They had in 2006
21 established a Regional Microbiology Network and they
22 also had good contacts to NHS virology labs which could
23 get this gold standard diagnostic test and then perform
24 this test themselves.

25 So you need to realise that there's a big difference

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1 certified laboratories in the UK. Porton Down and
2 Colindale have certainly historically been the places in
3 the UK where these pathogens were handled, and you see
4 this in the SARS contingency plan from 2003, they
5 actually give you the sample numbers per day that can be
6 handled in these facilities in the 2003 SARS plan, and
7 that is clearly that Colindale would be the lead but
8 Porton Down actually has a greater capacity for
9 processing --

10 **Q.** Right.

11 Have you discovered through your research any
12 concerns as to the capacity that Porton Down and
13 Colindale provided in terms of the number of samples
14 that they could effectively work through at any one
15 time?

16 **A.** I'm uncertain about how you -- I can differentiate here
17 now between P4 labs, P3 labs, et cetera. I can only
18 tell you a vague guesstimate in terms of, for example,
19 whole genome sequencing capabilities, which played a key
20 role during the early part of the pandemic, and in 2016
21 a review of the Colindale's functions says they can do
22 600 samples per day in Colindale.

23 **Q.** Right. Can you explain to us, Dr Kirchhelle, how the
24 initial analysis of a pathogen being dealt with at
25 either Porton Down or Colindale would then flow out to

38

1 in the time periods that we're talking about. With
2 molecular testing, if you have a PCR machine and you
3 receive the kind of golden recipe, the validated recipe
4 for testing from Colindale, you can technically scale up
5 infinitely, if -- with the laboratories, if the
6 laboratories are using this test.

7 HPA had recognised this capability from the
8 mid-2000s onwards. They did it for swine flu. I think
9 one of the big questions for Module 2 will be how the
10 algorithm for outsourcing or, you know, expanding the
11 testing range was devised for SARS-CoV-2.

12 **Q.** Right. The Inquiry has heard that there may be
13 a criticism laid at the feet of Public Health England
14 that there was little engagement with private testing
15 laboratory facilities in the years running up to
16 Covid-19 hitting. Is that a criticism that you have
17 come across, and do you agree with it?

18 **A.** I know where the criticism is coming from, when it's in
19 comparison to European neighbour states like Germany,
20 which, for example, outsourced or incentivised private
21 testing very early on in the pandemic. However, I think
22 that in the UK case it's a slightly odd criticism,
23 because the UK has a significant sequencing public
24 capability within the NHS and it also has significant
25 sequencing capabilities within the university sector, of

40

1 which PHE were naturally aware because they were working
2 with all of these laboratories prior to the pandemic.

3 So, yes, obviously one could have developed contacts
4 with private industry more, but also I think this is not
5 so much a question of should PHE have automatically gone
6 to the private sector and have mass scale-up with
7 Lighthouse Labs. It's very interesting to see the NHS
8 capabilities perhaps not being used as strongly as some
9 observers would have wanted them to be used in 2020.

10 **Q.** So, in terms of surge capacity, given what you have said
11 about PCR testing and the position where Public Health
12 England was at the time that Covid struck, do you
13 consider that there were any concerns or any valid
14 concerns in terms of surge capacity within the public
15 laboratory system?

16 **A.** Concerns about surge capacity are voiced in multiple
17 preparedness exercises when it comes to the ability to
18 surge beyond the initial hit of one or two HCID cases in
19 the UK.

20 **Q.** Yes.

21 **A.** That is a perpetual challenge, I believe, for every
22 emerging pathogens, when you move from the core elite
23 capability of processing and public health handling
24 towards a broader health systems response.

25 **LADY HALLETT:** Are you moving to a different topic,
41

1 seven local health board directors of public health and
2 their staff of public health experts?

3 **A.** Yes, I think so.

4 **Q.** There was an integrated network of public health
5 laboratories as well as Communicable Disease
6 Surveillance Centre in Cardiff, and they were maintained
7 when Public Health Wales was created?

8 **A.** Yes, so just to confirm that PHLS in England, the
9 reforms abolished the local level laboratories.

10 **Q.** Yes.

11 **A.** Wales decides to take over that system wholesale in
12 2002.

13 **Q.** So did they carry out public health as well as clinical
14 diagnosis functions, those laboratories?

15 **A.** If they continued to function like the original PHLS,
16 yes, they did. That is, however, for further research,
17 I think.

18 **Q.** All right.

19 Well, let's have a look at INQ000107113, which is
20 a report on *Civil Emergencies in Wales* by the Wales
21 Audit Office. My Lady has already seen this during the
22 evidence of Reg Kilpatrick last week.

23 Let's go to page 10 and have a look at paragraphs 17
24 and 18. Thank you.

25 "17. Too many emergency planning groups and unclear
43

1 Ms Blackwell?

2 **MS BLACKWELL:** I am, yes.

3 **LADY HALLETT:** It's been suggested that we break slightly
4 earlier.

5 **MS BLACKWELL:** Certainly, that's a convenient moment.

6 **LADY HALLETT:** Very well, I'll return at quarter to.

7 **MS BLACKWELL:** Thank you.

8 (11.31 am)

(A short break)

10 (11.45 am)

11 **LADY HALLETT:** Ms Blackwell.

12 **MS BLACKWELL:** Thank you, my Lady.

13 Dr Kirchhelle, we're now going to move to look at
14 the structural changes in Wales, Scotland and then
15 Northern Ireland.

16 The Welsh public health arrangements, you say,
17 diverged significantly from those in England during the
18 period between 2002 and 2010. The national public
19 health service for Wales was established in 2003, and
20 then Public Health Wales in October of 2009, and Public
21 Health Wales was tasked with managing health protection,
22 epidemiological surveillance and microbiology services,
23 and also health improvement, health promotion and child
24 protection.

25 Is it right that Public Health Wales employed the
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1 accountabilities add inefficiency to the already complex
2 resilience framework. The current resilience structure
3 is similar to the structure in England, with local
4 resilience forums based on police force boundaries and
5 with each Category One responder having its own
6 emergency planning capability. We consider that the
7 current structure is leading to inefficiencies at
8 a local level, unnecessary complexity and unclear
9 accountabilities, and is an ineffective framework for
10 resilience in Wales. We also agree with the Simpson
11 Review, that there is an urgent need for a fundamental
12 review of local authority emergency planning services.

13 "18. Complex reporting arrangements are leading to
14 confusion about the roles and responsibilities of the
15 numerous emergency planning groups and organisations.
16 This complexity risks fragmentation of resilience
17 activity with potential overlaps or gaps in the
18 arrangements for resilience."

19 Now, in his evidence to the Inquiry,
20 Dr Andrew Goodall said that he believed that they had
21 addressed some of that complexity by the time of the
22 pandemic hitting, but he agreed that there had been many
23 examples of the duplication of activities happening
24 within the health service and also filtering into the
25 emergency planning groups. Is that something that you
44

1 recognise?

2 **A.** I think this is a challenge across the UK, where you've

3 got the Civil Contingencies Act, you've got the NHS

4 systems, you've got the public health systems, and in

5 an emergency all of these need to work together, also

6 with local responders. So there is an inherent risk of

7 duplication and fragmentation. And it's evidenced,

8 I mean, in both the tabletop exercises and the reviews

9 of the 2003 SARS response and the 2009 swine flu

10 responses, that this is one of the core problems.

11 **Q.** Right. Can we take that down, please, and replace it

12 with INQ000089575, which is the 2014 communicable

13 outbreak plan for Wales, and have a look at page 2,

14 please, and what's said here in the preface:

15 "In recent years, there have been multiple plans in

16 Wales for the investigation and control of communicable

17 disease. All these have contained very similar

18 guidance. Whilst it has been recognised that each

19 individual plan was robust and fit for purpose, the

20 presence of several plans for use in outbreaks has

21 caused confusion as to which plan should be followed.

22 Therefore, at the request of the Welsh Government,

23 a multi-agency working group was convened in 2008 to

24 draw the plans together into one generic template."

25 It goes on to say:

45

1 in the national bureaucracies.

2 So what I'm trying to say is that it's good to see

3 these plans evolving. I think that the people, the

4 experts within the public health establishment were much

5 better at abstracting from this than just following by

6 rote a planned system down than perhaps these documents

7 lead us to believe. I'm sure we'll talk about the

8 influenza framework in a bit, but I think this is

9 a consistent observation in the history of medicine, is

10 that the informal ties, the informal networks, regular

11 phone calls between heads of agencies, can do much to

12 compensate for, at first glance, administrative

13 fragmentation or narrow thinking on paper.

14 **Q.** All right, thank you.

15 In terms of funding, the Inquiry has heard from

16 Dr Quentin Sandifer, who was the executive director of

17 public health services and Public Health Wales between

18 2012 and 2020.

19 He told the Inquiry that in his view Public Health

20 Wales was in no way held back by the funding made

21 available to it by the Welsh Government.

22 He set out a series of figures, and his evidence was

23 also complemented by the witness statement of

24 Dr Tracey Cooper, who was Public Health Wales' chief

25 executive from June of 2014.

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1 "This model plan ('The Wales Outbreak Plan') is the

2 result of that work."

3 So, just pausing there, a difficulty or a problem

4 had been identified in 2008 of there being a disparate

5 level of plans to follow in relation to the

6 investigation and control of communicable diseases.

7 This was the result that was created in 2014.

8 Was this essentially a good idea?

9 **A.** I think that the identified concern is a correct one.

10 If you have too many plans for too many different

11 diseases, people forget about the plans. We've seen

12 that with the difficulty of re-identifying the original

13 2003 SARS plan from the English government.

14 The Welsh plan seems to be in line with other model

15 plans developed, for example, for Northern Ireland

16 during this time, where the focus is on generic response

17 capabilities that can then be mixed and matched.

18 **Q.** All right. An improvement, then, in your view?

19 **A.** I think bureaucratically yes. I would perhaps like to

20 make a historical point here. I think the Inquiry

21 naturally focuses on legal documents as the guidelines

22 of responses. If you talk to public health experts,

23 they will tell you that an extremely important component

24 of that work is the informal ties connecting them with

25 their corresponding parts in the health systems and also

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1 She in her witness statement said that the service,

2 Public Health Wales, had been strengthening and

3 transforming its workforce model and capacity over the

4 course of time, embracing and developing an approach to

5 what she described in her statement as multidisciplinary

6 practice, and again that there were little problems

7 caused by any level or decreasing level of funding.

8 But she did highlight what she described as

9 a fragile microbiology service that indeed needed

10 an input of finance, and she described how that took

11 place over the course of time that she has been chief

12 executive of Public Health Wales.

13 Do you recognise that there was a fragility in terms

14 of the microbiology laboratory capability, and that that

15 has or was improved?

16 **A.** That's very difficult to say, because there are so few

17 comparative reviews of the UK health systems. I think

18 the evidence that's been submitted shows an interesting

19 discrepancy between funding levels and perceived

20 robustness. Again, I think this is subject to more

21 research.

22 **Q.** All right.

23 Dr Sandifer told the Inquiry that there was

24 a shortage of microbiologists caused by a number of

25 factors, including the retirement of senior

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1 microbiologists and difficulties encountered in Public
 2 Health Wales of recruiting more people into post.
 3 Was that a particular problem identified and
 4 experienced in Wales, and is that something that was
 5 shared across the United Kingdom, and is that something
 6 which you recognise from your research?
 7 **A.** I come back to the points I made earlier about the
 8 overall decline of intention for infectious disease
 9 threats from the '70s. In my report I cite a warning
 10 from 1980 that is nearly identical to the warnings we
 11 have in the 2010s about lack of competence for
 12 infectious disease control and microbiological
 13 capabilities. So this recruitment problem that is
 14 experienced by seemingly many health services across the
 15 UK is not unique to the UK, it's certainly also
 16 prevalent in northern American services, so I think this
 17 is part of a broader structural issue in terms of how
 18 educational programmes perhaps incentivise people to
 19 specialise in these areas or not.
 20 **Q.** All right.
 21 As far as you are aware from your research, did the
 22 lack of ability to recruit into these roles have any
 23 correlation between a lack of funding or was that not
 24 the problem?
 25 **A.** I think that's very difficult to say in hindsight. If

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1 presented on 27 November 2018. It was noted that
 2 investments already made were positive first steps but
 3 the model developed required significant additional
 4 investment and the whole system approach to strengthen
 5 the National Health Protection Service required
 6 agreement with the health boards and other trusts. It
 7 was agreed that wider engagement with health boards and
 8 trusts should take place before proposals to the
 9 Minister were finalised."
 10 "2. The Chief Medical Officer and the Chief Nursing
 11 Officer hosted a workshop on 17th May 2019 with key
 12 representatives from each health board and trust to
 13 discuss the proposed model. At the workshop there was
 14 general recognition of the challenges described and
 15 general endorsement of the proposals including staffing
 16 models presented. Although the financing of the known
 17 gaps in funding for the proposed model was not
 18 specifically addressed many delegates commented that
 19 they had been to like events in recent years without any
 20 progress being made."
 21 So:
 22 "3. A decision is now required whether to recommend
 23 to the Minister for Health that the strengthening of the
 24 National Health Protection Service is a Welsh Government
 25 priority and such this service should be prioritised for

51

1 you don't have enough people, and the funding is
 2 challenging, it's difficult to untangle these different
 3 factors.
 4 **Q.** Did Wales have a problem with their laboratories not
 5 being fit for purpose?
 6 **A.** Again, since this is a high-level review, I haven't
 7 looked explicitly at the grading of the Welsh
 8 microbiology laboratories. They did have a robust
 9 spatially distributed infrastructure at the handover
 10 point of the PHLS. How much investment was made in
 11 upgrading facilities, especially with regards to these
 12 massive technological transitions that happened between
 13 2000 and 2020, again I think that is something that
 14 needs to be looked at in more depth.
 15 **Q.** Well, one of the documents which you have been invited
 16 to look at is an application that Public Health Wales
 17 submitted for additional funding to the Welsh Government
 18 to strengthen its own specialist health protection
 19 services, particularly in microbiology.
 20 Let's have a look, please, at some of the issues
 21 that arise and that are set out during the course of
 22 this paper. Thank you.
 23 This is:
 24 "1. A paper on the proposed model to strengthen the
 25 National Health Protection Service [and it] was

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1 investment each year up to 2022/23."
 2 Now, if we move down to the summary of the
 3 challenges and just look at the next two paragraphs:
 4 "4. The current microbiology infection services in
 5 Wales are fragile and are struggling to deliver on
 6 a day to day basis the prevention, early diagnosis and
 7 frontline support that professionals and the public
 8 require. As a result, avoidable admissions are adding
 9 to the pressure on hospitals and clinicians in many
 10 cases do not have access to the early diagnostics they
 11 require to guide early and effective treatment which in
 12 turn impacts on in-patient bed days.
 13 "5. The current microbiology laboratory estate
 14 cannot exploit the opportunity that new testing
 15 technologies and robotics can provide. In addition to
 16 the lack of access to rapid testing, there are some
 17 specific workforce/skill capacity challenges, the
 18 current workforce needs to be reskilled and redeployed
 19 and the service is unable to recruit to key professional
 20 leadership roles."
 21 Then if we just move to paragraph 10, please:
 22 "Health security has become a greater public health
 23 threat, professionals are not confident that they could
 24 at all times provide an effective response to high
 25 consequence infections as there are points on the

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1 patient care pathway that are single person dependent."
 2 So it appears that at the time that this application
 3 was made, there were serious concerns about workforce
 4 capacity, about the state of the laboratories, and that
 5 there was a plea being made to the Welsh Government for
 6 further investment in these regards.

7 Do you recognise that that was a problem that had
 8 been caused by the way in which Public Health Wales was
 9 set up and the funding situation?

10 **A.** I think it's difficult to interpret this document,
 11 because there's clearly an overlap here between NHS
 12 diagnostic services and public health laboratory
 13 services, which can be distinct, do not have to be
 14 distinct.

15 **Q.** Should they be distinct?

16 **A.** That is a political decision at the end of the day, and
 17 solutions vary according to countries. They can be
 18 effective if they are well resourced, well financed and
 19 well staffed.

20 What I would like to say again, and this is -- it's
 21 important to understand the depth of the technological
 22 change that has taken place here. It's one thing to
 23 provide a classic microbiological service with perhaps
 24 limited PCR capabilities; whole genome sequencing
 25 requires a raft of expertise such as bioinformatic

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1 different nations, and I think it's quite remarkable,
 2 and it speaks to the theme of the *Giants on Clay Feet*
 3 article, how strong the central capacity in the south of
 4 England has been built, but perhaps how little
 5 consideration has been given to building sustained
 6 capacity in other parts of the UK.

7 **Q.** What we see in this application for funding and the
 8 issues that it raises in terms of capacity, does that
 9 give you concern or should that give the Inquiry concern
 10 that, as of January 2020 when Covid hit, Public Health
 11 Wales and the Welsh system may not have had sufficient
 12 workforce capacity or laboratory capacity to deal with
 13 an HCID outbreak?

14 **A.** I think this document speaks to a consensus amongst
 15 experts who knew their field, and this was a very
 16 serious concern that was raised, so absolutely,
 17 the Inquiry should take this seriously.

18 **Q.** All right. Thank you, we can take that down, please.

19 Moving up to Scotland, by 1945 Scotland already had
 20 a long-standing tradition of independent public health
 21 legislation and independent health systems, did it not?

22 **A. (Witness nods)**

23 **Q.** Scotland decided not to join the Emergency Public Health
 24 Laboratory Service which was set up in 1939 in England,
 25 which Wales was also part of. I'd like to ask you to

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1 technologies, input from academia that may have been
 2 easier to draw on in other parts of the UK, I'm thinking
 3 of the Cambridge/Oxford/London triangle, when it comes
 4 to Colindale developing capabilities with Sanger, as
 5 opposed to the devolved administrations in other parts
 6 of the UK.

7 So I think the historical point here is to recognise
 8 that microbiology requires resourcing, it requires
 9 staff, but that we are now in a different age of
 10 microbiology which might require different forms of
 11 expertise that aren't equally distributed across the UK.

12 **Q.** Are you able to comment on the capacity of Public Health
 13 Wales to look to the English laboratories, the
 14 United Kingdom-wide laboratories, as and when there
 15 might have been need to do so?

16 **A.** I think it's an inherent dilemma within the UK system
 17 that Colindale is "so good" with the reference services.
 18 I think for a long time laboratories in all devolved
 19 administrations have looked on Colindale to provide
 20 expert reference services, and I think that that can
 21 sometimes create capacity issues when perhaps more
 22 specialist microbiological analysis may be required
 23 within the devolved administrations themselves.

24 I know that the Inquiry has looked at HCID treatment
 25 capabilities in these different countries -- in the

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1 what extent did the Scottish Government or public health
 2 bodies in Scotland have control over testing carried out
 3 at the University Hospitals where their laboratories
 4 were based?

5 **A.** I think we should not make the mistake of correlating
 6 current efficient management systems with the 1940s.
 7 These were high-powered university professors who
 8 part-time did a bit of microbiology and then also worked
 9 in teaching. So the degree of central control was
 10 perhaps more minimal than now.

11 The one key point I think always to make about the
 12 devolved administrations is that the population density
 13 is far lower and, as a consequence, if you have eight
 14 people who know each other and talk to each other
 15 regularly, it's far easier to have efficient
 16 co-ordination and you need less formalised management
 17 control structures in these situations, and Scotland
 18 has -- this is the historical consensus --
 19 a long-standing tradition of this communitarian-based,
 20 consensus-based decision-making in these areas.

21 **Q.** All right.

22 Following devolution, did the years between 1999 and
 23 2004 see the Scottish Government re-emphasise
 24 a collaborative approach to health service provision by
 25 abolishing the internal market and that collaborative

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1 approach, and the need to tackle health inequalities was
2 emphasised in official planning documents such as the
3 1999 White Paper *Towards a Healthier Scotland*?

4 **A.** Yes.

5 **Q.** All right. Did initial reforms see the merging of
6 Scotland's 47 NHS trusts into 28 local healthcare
7 co-operatives?

8 **A.** Yes.

9 **Q.** In 2005, was Health Protection Scotland formed to act as
10 a centre of epidemic intelligence capable of rapidly
11 reacting to major incidents whilst liaising with other
12 United Kingdom and European public health hubs?

13 **A.** Yes. I think even the names for UK organisations are
14 a clear clue that -- you know, how should I say? --
15 philosophical development of health protection is
16 evolving along similar lines. So you've got HPA, HPS
17 and then now you've got PHS, PHE, PHW. So there is
18 a clear -- and, again, it speaks to the wider academic
19 culture in which these agencies are based, that there's
20 a clear line of thought that is leading to this
21 evolution.

22 **Q.** Did Health Protection Scotland integrate microbiology
23 and surveillance capabilities that had formerly been
24 provided by the Scottish Centre for Infection and
25 Environmental Health? I think you describe in your

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1 of this, the reason Scotland has this arrangement at all
2 is because in the 1960s they had outbreaks that they
3 didn't realise they had because they had no integrated
4 epidemiological function, so London told the Scottish
5 authorities that they had typhoid and paratyphoid
6 outbreaks. So this is why this focus on epidemiological
7 integration is made but perhaps no streamlining of
8 a coherent -- well, I shouldn't say "coherent", but
9 fully integrated microbiological system.

10 **Q.** So it worked for Scotland because of the history which
11 you've just set out but also the size of the population?

12 **A.** Yes.

13 **Q.** And the relationships that existed between those who
14 were running the services?

15 **A.** Yes, and that is something that is specifically fostered
16 by repeated Scottish administrations. Scotland is
17 remarkable for health liaison committees from the '60s
18 and '70s onwards that are designed to foster this
19 collaborative spirit.

20 **Q.** Is it right that Public Health Scotland became a legal
21 entity in December of 2019 and came into operation in
22 April of 2020?

23 **A.** Yes.

24 **Q.** The Inquiry has heard about those timings, and the fact
25 that it effectively brought together three legacy

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1 report as, rather than creating a parallel public health
2 system and employing its own health protection teams,
3 Health Protection Scotland worked as a division within
4 the NHS National Services Scotland organisation.

5 How did that differ, then, from the way in which
6 matters were organised in England and Wales?

7 **A.** So, in Wales, NPHS creates a completely -- almost
8 completely integrated organisation that uses, within
9 also the NHS structure -- at first NPHS and then later,
10 via PHW, employs people from the local level to the
11 national level.

12 **Q.** All in one organisation?

13 **A.** In one, exactly.

14 **Q.** Right.

15 **A.** At least that's my understanding.

16 In the Scottish case it builds on these pre-existing
17 traditions of having rather loose co-ordination via
18 CD(S)U, and that tradition is perpetuated with HPS,
19 which again co-ordinates. We aren't speaking about
20 a huge population, we're speaking about a manageable
21 smaller number of health boards, so the system you might
22 choose for that might be different strategically, and in
23 the Scottish case, again, because it is smaller, people
24 know each other, so looser epidemic intelligence might
25 do the job just as well. To give the historical context

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1 bodies: the Health Protection Scotland, the Information
2 Services Division, and the NHS Health Scotland agency.

3 In her evidence to the Inquiry,
4 Dr Catherine Calderwood has spoken about funding of
5 Public Health Scotland, and has said that there was
6 a specific budget within the overall healthcare budget
7 to fund pandemic and emergency preparedness within
8 NHS Scotland and specifically public health.

9 But she said that a small proportion of the overall
10 healthcare budget is used to fund public health, only
11 a small proportion of that, and that there has long been
12 criticism from those working in public health in
13 Scotland that -- in prevention services, in resilience
14 groups, towards the government funding bodies, and that
15 their view is that public health has not received the
16 funding required for optimal functioning and outcomes,
17 and that that in itself has had a knock-on effect on the
18 ability of those organisations to properly engage in
19 pandemic planning.

20 Is that something that you recognise from your
21 research?

22 **A.** I think it speaks to the overall problems within the UK
23 system. So even within the NHS system you can have
24 public health budgets being raided. This is something
25 that, for example, in the case of the UK during the PCT

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1 era of the New Labour government is repeatedly
2 criticised by the Chief Medical Officer, Liam Donaldson,
3 actually -- I'm quoting here -- saying public health
4 budgets are being raided within the NHS to provide other
5 more short-term priority services.

6 So I think the wider point here is to say that,
7 regardless which organisational structure you choose to
8 embed your public health system in, you need to protect
9 the core budgets because clinical colleagues can take
10 resources from public health and, in the case of the
11 local authorities, if you don't fund sufficient public
12 health services they will also, regardless of
13 efficiency, be unable to deliver core functions.

14 **Q.** Over this course of time between 2002 up until the onset
15 of Covid, does your research tell you that there were,
16 as we've just discussed in terms of Wales, any workforce
17 or laboratory difficulties or problems within Scotland?

18 **A.** Not that I know of, but that is a factor of, I think,
19 the six weeks that I had to research the report. So if
20 I had more time, perhaps I would be able to find
21 something.

22 **Q.** All right.

23 I want to move now to look at Northern Ireland, and
24 the evolution of health services in Northern Ireland,
25 which in broad terms are paralleled by what was

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1 Northern Ireland.

2 **Q.** There were a number of health and social services boards
3 created, and also local health and social trusts which
4 were in charge of the laboratories; is that right?

5 **A.** Yes. These trusts, however, and these arrangements
6 pre-dated the Good Friday Agreement.

7 **Q.** Yes. Did they carry on post the Good Friday Agreement?

8 **A.** Yes. Yes.

9 **Q.** Is that still the position in terms of the local trusts
10 running the microbiological services?

11 **A.** No, so in 2009 Northern Ireland undergoes significant
12 reforms, both for the public health system but also for
13 its wider health and social care system. So you've now
14 got a completely integrated -- and I hope I'm getting my
15 terminology right -- Health and Social Care Board, which
16 commissions services from health and social care
17 trusts --

18 **Q.** Right.

19 **A.** The report contains the correct terminology here. But
20 essentially what you have is a completely now integrated
21 system of commissioning from trusts and also from local
22 health authorities of microbiology services, but the
23 trusts run most of the major microbiology labs,
24 including the central one in Belfast which is run --
25 I think by the East Belfast trust, but the correct

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1 happening elsewhere in the United Kingdom.

2 In 1953 there was the creation of Northern Ireland
3 Central Public Health Laboratory, and that network
4 expanded, and then, following the passage of the 1999
5 Northern Ireland Act, did Northern Ireland regain its
6 competencies for structuring its health and public
7 health services on its own?

8 **A.** I believe so, yes.

9 **Q.** All right. Is there a significant divergence from Wales
10 and Scotland in Northern Ireland in terms of how the
11 surveillance functions of the laboratories were set up?

12 **A.** Northern Ireland is very interesting, because in 1999
13 the decision is made to outsource or to contract the
14 PHLS and then later the HPA to provide the
15 epidemiological functions of Northern Ireland. So
16 rather than directly creating its own completely
17 homogeneous public health system, the key epidemic
18 intelligence point is actually provided by the PHLS, and
19 the PHLS representative is accountable both to the
20 Northern Irish government and the CMO, but also to the
21 PHLS. So this is a very unique contractual engagement,
22 maybe the result of the smaller population size of
23 Northern Ireland during this time. I haven't found any
24 detailed justification of why this decision was made to
25 outsource rather than build the capacity within

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1 detail is in the report.

2 **Q.** All right.

3 You tell us in the report that there was a review of
4 Northern Ireland's public health functions in 2004 and
5 that that review expressed concern about
6 an over-reliance on English services and suggested
7 replacing the HPA's CDSC Northern Ireland with a new
8 regional Northern Irish health protection body, and is
9 that what happened?

10 **A.** That is what eventually happened. In the case of
11 Northern Ireland obviously the overarching political
12 context is very important to understand. There were
13 repeated breakdowns of power sharing, and so multiple
14 reviews expressed slightly varying concerns and the
15 actual time windows for political action were
16 around 2009 for many of these reforms that then
17 eventually took place.

18 **Q.** I want to bring us forwards now to 2015, when the then
19 Minister for Health, Simon Hamilton, announced that in
20 response to recommendation 1 of *The Right Time, The*
21 *Right Place* report by Sir Liam Donaldson, that he would
22 appoint an expert clinically-led panel to consider and
23 lead an informed debate on the best configuration of
24 health and social care services in Northern Ireland.

25 That board was led by Professor Rafael Bengoa,

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1 a name that was mentioned during the evidence of
2 Robin Swann to my Lady on Friday.
3 Now, the resultant Bengoa report covered the issues
4 of inequalities, the ageing population, primary care and
5 hospital services, and workforce as well, and the main
6 recommendation of the report was that there should be
7 a triple aim within health and social care in
8 Northern Ireland to improve patient experience, to
9 improve the health of the population, and to provide
10 a better value in terms of funding and output.

11 That report in 2015 was then taken forwards, because
12 in 2016 there was a further review that drew upon the
13 Bengoa report of the Northern Ireland health system
14 called *Systems, Not Structures: Changing Health and*
15 *Social Care*. In your report, you say that in 2017,
16 acting on the recommendations which followed on from the
17 committee and then the report which was provided in
18 2016/2017, that Stormont then introduced a new ten-year
19 health and wellbeing plan; is that right?

20 A. Yes.

21 Q. Was that plan implemented?

22 A. That's difficult to say because obviously it's
23 a ten-year plan --

24 Q. Yes.

25 A. -- and there were problems with power sharing after

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1 the preparedness frameworks which occurred in 2003 when
2 the global alert was issued for SARS in March of that
3 year.

4 You say fortunately the UK experienced a small
5 number of probable cases and no fatalities before the
6 World Health Organisation announced that human-to-human
7 transmission had been broken in late July of 2003.

8 But you do record that between March and July of
9 that year, the Public Health Agency dealt with
10 368 reports of suspected cases, of which nine were
11 classified as probable, and one eventually tested
12 positive, following PCR confirmation.

13 You go on to say that the outbreak nonetheless
14 revealed the significant strains that even
15 a comparatively small outbreak could place on the UK's
16 public health systems.

17 Can you expand upon that, please, and why you say
18 that despite there being a relatively minor outbreak and
19 only one confirmed case, that that led to obvious
20 strains?

21 A. So the volume of testing that was suddenly required
22 stressed the new arrangements. So we have to remember
23 that, in the case of SARS, HPA was just in the process
24 of being set up.

25 Q. Yes, in its infancy?

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1 this, and my report ends in 2019, so I'd leave that to
2 the experts of Module 2.

3 Q. Well, that's what I was getting at. Although the report
4 had been presented in 2016/2017, we know that there was
5 then a breakdown of the power-sharing agreement
6 between 2017 and 2020, so are you able to in any way
7 accurately predict which parts of the report were
8 brought into force and whether the aims were in fact
9 ever achieved?

10 A. Again, that's very difficult to say because, even with
11 the best will of an administration, given the breakdown
12 of power sharing, given the uncertainties of planning --
13 and I think you've also got another expert report on
14 this -- that it's -- any ambitious reform could not have
15 been completely implemented, given these circumstances.
16 But again I guess I waive my right here as a historian
17 to say that I focus more on the past and not on the
18 current implementation.

19 Q. All right.

20 Having looked at the structure of public services
21 and their history in all four nations, I want to turn
22 now to talk about what you as a historian are able to
23 comment upon in terms of the pandemic preparedness of
24 the United Kingdom, and focus first of all on what you
25 describe in your report as being the first major test of

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1 A. Yes, actually it's created right in the middle of the
2 pandemic wave, so that might explain some of this.
3 However, later assessments do reveal that the new PCTs
4 may have had too little PPE, so personal protective
5 equipment, stored to deal with prolonged surges, and
6 later reviews also -- and this is an important thing --
7 revealed that there was a problem with regards to local
8 access to epidemic intelligence that was relevant to the
9 local level.

10 Q. What were those problems?

11 A. The problems were that the local level was reporting
12 suspected clinical diagnosis of SARS up to HPA, but
13 there was a problem of communicating this down
14 effectively via the regional health protection teams to
15 the relevant clinical authorities within the NHS.

16 We have to remember that SARS at this time was
17 primarily a big challenge in nosocomial, so in hospital
18 settings, and that PCTs and authorities within the NHS
19 and also at the local authority level had a big problem
20 with the fact that they did not have all of the
21 information at their hands that they might have had
22 earlier.

23 The second thing is obviously to remember that
24 people barely knew the new structures of HPA at this
25 time, so in testimonies of the time the microbiologists

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1 recall that they spent a lot of time just phoning
2 laboratories that had previously been PHLS to send
3 samples and report samples up to the HPA, for example.

4 **Q.** So was there a lack of clarity in terms of which
5 laboratories were performing which assessments and which
6 roles?

7 **A.** Yes. That is one of the problems. That can, however,
8 obviously be explained by the structural flux within --

9 **Q.** Yes.

10 **A.** -- which the system was. The more salient point I think
11 was lack of access to relevant information. Another
12 point that was identified was lack also of local
13 epidemiological competence to act on this information
14 now that HPA was more regional based, and obviously, for
15 the Covid 2 outbreak, the lack of PPE stored within
16 primary care trusts.

17 The final point that one later review revealed was
18 a fear that, given the small number of staff working at
19 HPA, there was a danger of burn-out of key personnel
20 during prolonged surges.

21 **Q.** I just want to take a look at paragraph 83 of your
22 report, which is at page 58, because you produce a quote
23 from the PHLS's former head of virology,
24 Philip Mortimer, and you can see that towards the bottom
25 of the paragraph. Let's just pick it up, please, three

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1 with Covid-19.

2 What notice was taken of these sorts of issues, not
3 necessarily from Mr Mortimer himself, but from what you
4 have seen, the concerns that you have said were
5 expressed coming out of the SARS outbreak? Did it lead
6 to any action within any of the areas about which
7 concern is being expressed?

8 **A.** So the UK does develop a SARS plan that is published
9 in -- well, not officially published, not publicly
10 published -- late 2003 following the experience of the
11 SARS pandemic, and that plan warns that there may be
12 community transmission of a recurrence of SARS CoV-1,
13 which is a distinct virus from SARS-CoV-2.

14 The plan has numerous recommendations for how
15 authorities should deal with it. To my knowledge I have
16 not seen any other plan that is building capacity to
17 address the gaps --

18 **Q.** Yes.

19 **A.** -- identified in this plan.

20 I should say that Mortimer's warnings here are not
21 isolated. These are warnings that surface from other
22 people in the health system too, and --

23 **Q.** Can I just ask --

24 **A.** Yes.

25 **Q.** -- the health system within the United Kingdom or

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1 lines up from the bottom, and if we can -- thank you --
2 read through what you say here about Philip Mortimer's
3 warning:

4 "Writing in 2003, the PHLS' former head of virology,
5 Philip Mortimer, warned that over-reliance on
6 centralised epidemic intelligence in the absence of
7 sufficient local capacity for testing, contact tracing,
8 and isolation beds could prove costly during future
9 pandemics. What was needed was sustained
10 investment ..."

11 Let's look at the quote itself, please. He says:

12 "... it should not be assumed that a resurgence of
13 SARS is unlikely, or that a further outbreak would be
14 controllable ... if there are weaknesses or deficiencies
15 it should not be thought that they can or should be
16 repaired by quick fixes each time an acute threat
17 materialises. Such expenditures fail to build the
18 infrastructure needed to maintain a comprehensive
19 capacity for rapid and technologically appropriate
20 response to new pathogens, and over time they distort
21 facilities and so hinder the effective management of the
22 laboratory."

23 In your article *Giants on Clay Feet* you describe
24 what Philip Mortimer is expressing here as being
25 prescient because of what we now know went on to happen

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1 worldwide?

2 **A.** In the United Kingdom primarily. There are, however,
3 also concerns in other western health systems raised
4 about the ability to provide sufficient surge capacity
5 should an outbreak like SARS prove more sustained.

6 There's also initially a recognition that if you
7 want to control SARS you need to act very fast and hit
8 it very hard when it comes to, for example, improving
9 infection control procedures within hospitals and
10 resorting to things such as school closures. The 2003
11 plan actually mentions hospitality sector closures in
12 response to it.

13 So these are significant learnings in many ways that
14 are taken here. We will come to 2009 with the swine flu
15 pandemic --

16 **Q.** Yes.

17 **A.** -- which is a different, obviously theoretical -- well,
18 no, a real risk.

19 **Q.** All right. Certainly as of 2003, concerns expressed in
20 the way in which we see here not only by Philip Mortimer
21 but also by others within the United Kingdom and
22 worldwide?

23 **A.** I believe the person who signs off on the 2003 SARS
24 report is Peter Horby, so --

25 **Q.** Right.

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1 **A.** -- that is somebody obviously who is quite senior within
 2 the UK public health --
 3 **Q.** Yes, and has assisted the Inquiry.
 4 **A.** Yes.
 5 **Q.** Before we move to look at what we learnt from the 2009
 6 swine flu outbreak, I just want to remind ourselves
 7 that, in terms of the chronology, in 2007 between SARS
 8 and swine flu there was Exercise Winter Willow, which
 9 was a large-scale pandemic tabletop exercise of
 10 5,000 participants, and it highlighted potential --
 11 what's described as response misalignment resulting from
 12 devolution, as well as the need to strengthen linkages
 13 between established local and regional resilience
 14 structures and their equivalents within the NHS.

15 So an indication, then, that there needed to be
 16 links strengthened within the various four nations.

17 Then to the 2009 swine flu pandemic. You say in
 18 your report that the official reviews painted an overall
 19 positive picture of the United Kingdom response, and
 20 that praises were centred around advanced procurement
 21 orders, the rapid development of the PCR diagnostic test
 22 by Colindale and various responses on the ground.

23 This Inquiry has heard much about the subsequent
 24 review that was commissioned and in relation to which
 25 Dame Deirdre Hine produced her report the following

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1 again, integration needs to be strengthened. But what
 2 especially Professor Virginia Berridge, of the London
 3 School of Hygiene and Tropical Medicine, conducted
 4 during this time shows that there were significant --
 5 also -- tensions about responsibilities between NHS,
 6 HPA, and also confusion about what local resilience fora
 7 were supposed to perform. You know, so there was
 8 misalignment and confusion about roles. That is
 9 something that emerges quite clearly from these
 10 statements.

11 I think another thing that is mentioned that is
 12 interesting for the expert advice system was that
 13 figures within HPA who were interviewed by
 14 Professor Berridge, the reports could never be
 15 published, their publication was, according to
 16 Professor Berridge, stopped. Also noted that it was
 17 difficult sometimes for HPA in wider expert meetings
 18 such as SAGE to assert itself because they were often
 19 presenting a corporate view of expertise as opposed to
 20 more independent statements by other SAGE members.

21 Finally, HPA also perceived it to be difficult, and
 22 this is something that emerges also in the Hine review,
 23 to sometimes reconcile its own forecasts of pandemic
 24 severity with reasonable worst-case scenarios that were
 25 frequently mobilised by the CMO of the time,

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1 year.

2 Now, in the main the report appears to be positive,
 3 but in your report, Dr Kirchhelle, you point to what you
 4 describe as difficulties, issues that were raised by
 5 independent observers, by historians, and by public
 6 workers in the field.

7 Do you suggest that the sentiments and decisions
 8 expressed by Dame Deirdre Hine being at odds with the
 9 expressions of concern that you have found, could be
 10 explained by the people and the positions of those
 11 people who were asked to provide information for the
 12 report?

13 **A.** I think there is a clear misalignment, despite this
 14 being a very good report overall of the swine flu
 15 pandemic, of what people at the national level say about
 16 the UK response as opposed to independent research which
 17 was conducted at the coalfront of the pandemic during
 18 the pandemic.

19 **Q.** What are those differences?

20 **A.** Key differences in the response are -- that emerge as
 21 a result of detailed interviews of frontline workers in
 22 2009 are that there was much more pronounced
 23 misalignment and confusion about responsibilities at the
 24 local level than appears in the report. The report also
 25 says that there were confusions and that in future,

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1 Liam Donaldson, in warnings to the press, for example.

2 **Q.** All right.

3 You conclude in your report that whilst the 2009
 4 epidemic ultimately proved less severe than feared and
 5 showcased the startling potential of molecular
 6 diagnostics and vaccine design, it also revealed that
 7 well known problems of local and national co-ordination
 8 and resourcing had not been resolved, and to that, from
 9 what you have just told us, you would add a lack of
 10 clarity in terms of the roles that people were expected
 11 to fill during the course of the outbreak and in order
 12 to react to it?

13 **A.** I think that's a consistent feature, yes.

14 **Q.** All right.

15 **A.** Just one thing I would like to add, though, is this was
 16 not just something that was unique to swine flu, this
 17 was also highlighted by further reviews of the public
 18 health systems. So --

19 **Q.** At the time?

20 **A.** Even before swine flu. So in 2007 the European Centers
 21 for Disease Control -- and again you will find the
 22 references in the report -- and I believe also
 23 Parliamentary committees were interested in these issues
 24 and highlighted the need to look further at local
 25 co-ordination.

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1 Q. Following on from the Hine review, the Inquiry has heard
2 much about the 2011 United Kingdom pandemic influenza
3 strategy, with its learnings and emphasis on individual
4 behaviour. One of the criticisms that my Lady has heard
5 is about the comparative lack of consideration of
6 non-medical countermeasures, and that perhaps more
7 should have been said in the strategy about the aspects
8 of social distancing or school closure or even lockdown,
9 which we know does not appear within the strategy.

10 Has your work, Dr Kirchhelle, shown that in fact
11 some of those non-medical countermeasures, as you
12 describe them, had been raised in previous papers and
13 the reaction to the 2003 SARS outbreak and the 2009
14 swine flu outbreak, and that they were very much on the
15 radar even though they might not have been considered
16 and certainly not considered in detail within the
17 strategy?

18 A. The non-medical interventions are a core part of
19 pandemic planning from the 1990s onwards. It's a core
20 part of the 1997 UK multi-phase influenza plan.
21 In 2003, in the case of SARS, with the plan that is
22 released we have many of the interventions that are
23 later rolled out during the Covid 2 outbreak happening,
24 so from -- and we also had during swine flu have school
25 closure, we have border controls, we have -- with Ebola

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1 Let's look, please, at page 4. This was a review
2 that was prompted by Sir Gus O'Donnell, and we can see
3 his signature there at the bottom, together with
4 Sir Michael Bichard, and if we read into what the report
5 was really set up to achieve:

6 "Influencing people's behaviour is nothing new to
7 Government, which has often used tools such as
8 legislation, regulation or taxation to achieve desired
9 policy outcomes. But many of the biggest policy
10 challenges we are now facing -- such as the increase in
11 people with chronic health conditions -- will only be
12 resolved if we are successful in persuading people to
13 change their behaviour, their lifestyles or their
14 existing habits. Fortunately, over the last decade, our
15 understanding of influences on behaviour has increased
16 significantly and this points the way to new approaches
17 and new solutions.

18 "So whilst behavioural theory has already been
19 deployed to good effect in some areas, it has much
20 greater potential to help us. To realise that
21 potential, we have to build our capacity and ensure that
22 we have a sophisticated understanding of what does
23 influence behaviour. This report is an important step
24 in that direction because it shows how behavioural
25 theory could help achieve better outcomes for citizens,

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1 later on too -- travel restrictions or travel caution,
2 we have hospitality sectors being concerned.

3 What is, however, new obviously in 2019/2020 with
4 Covid-19 is the scale of lockdowns, the scale of
5 societal closure that is considered. I don't think that
6 that was conceived of in the initial influenza plans,
7 where the traditional emphasis of government has always
8 been on business continuity, so minimising disruption to
9 trade, minimising also disruption to the economy.
10 That's a core part of pandemic planning essentially from
11 the late 1970s onwards.

12 Q. I also want to ask you about another developing area of
13 consideration in terms of pandemic planning, and it
14 relates to behavioural science.

15 You say that within the United Kingdom the status of
16 both epidemiological modelling and behavioural
17 scientists in pandemic responses and in pandemic
18 planning has received what you describe as a significant
19 upgrade during the mid-2000s and ongoing from there.

20 I'd like to look, please, at a report which is
21 called the MINDSPACE report -- it's at INQ000207450 --
22 by the Cabinet Office and Institute for Government,
23 which underlined the advantages of using what they
24 described as low cost, low pain ways of tackling
25 problems.

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1 either by complementing more established policy tools,
2 or by suggesting more innovative interventions. In
3 doing so, it draws on the most recent academic evidence,
4 as well as exploring the wide range of existing good
5 work in applying behavioural theory across the public
6 sector. Finally, it shows how these insights could be
7 put to practical use."

8 So:

9 "This report tackles complex issues on which there
10 are wide-ranging public views. We hope it will help
11 stimulate debate amongst policy-makers and stakeholders
12 and help us build our capability to use behaviour theory
13 in an appropriate and effective way."

14 Thank you. We can take that down, please.

15 Now, you observe in your report, Dr Kirchhelle,
16 citing this MINDSPACE report, that the authors of the
17 2011 strategy hoped that there would be more of
18 a consideration of voluntary responsible behaviour, that
19 effectively behavioural science was being identified not
20 only by those involved in drafting the strategy but
21 also, as we can see, those who were looking more widely
22 at the health of the United Kingdom, and that it was
23 becoming an important consideration in planning or
24 attempting to plan as to how best to tackle something
25 like a pandemic when it was next going to hit.

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1 Is that reflected in your knowledge and research of
2 what was going on about this time? So we're now talking
3 ten years or so before the pandemic hit.

4 **A.** There's a marked increase in interest in behavioural
5 theory from around 2000 onwards. This is not just in
6 the UK, this is also at the WHO level where there is
7 a consistent focus on non-medical interventions but also
8 focusing on vaccine uptake in the population.

9 Now, it's a very interesting historical coincidence
10 that this new emphasis that is placed on behavioural
11 science, which primarily uses social cues to nudge
12 people in the right direction -- there's also a nudge
13 unit founded in the Cabinet Office during this time --
14 it coincides with the election of a government which
15 emphasises individual responsibility and
16 market-efficient responses. Behavioural science at this
17 time is closely integrated with market psychology,
18 and -- and I'll slow down.

19 **Q.** Sorry. Thank you.

20 **A.** -- and it's a core part also of the Hine review of 2009
21 that more use could be made of it.

22 The UK's advice gremia, they start taking up on this
23 from around 2005 onwards and start using behavioural
24 scientists to draft, for example, business as usual
25 messages for the UK Government, so to say, "Continue to

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1 **Q.** Sorry, I want to bring you on, please, to look at in
2 particular the results from Exercise Cygnus, about which
3 my Lady has heard much during the course of this
4 Inquiry.

5 Just to set it into context, as we know, you've
6 already mentioned the Ebola outbreak, which we know
7 about, then there was the Exercise Alice exercise
8 dealing with a MERS outbreak in 2016, and other such
9 exercises, culminating in the large exercise of Cygnus,
10 which my Lady has heard much about, and the report which
11 came out of that exercise.

12 In your consideration of the report, you tell us
13 that the exercise revealed significant pandemic
14 vulnerabilities and that the final report warned that
15 there is no overview of pandemic response plans and
16 procedures and that the health system's restructuring
17 across all devolved administrations meant that key
18 organisations referred to in plans and the 2011 strategy
19 no longer existed.

20 But it's the issue that you picked up about
21 vulnerabilities and that in conjunction with behavioural
22 science that I'm going to suggest might have been
23 missing.

24 What do you say about the fact that vulnerabilities
25 were capable of being identified during the course of

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1 go to work, the situation is under control".

2 What is interesting what is missing from the
3 behavioural science advice, that is response or
4 representation from social sciences disciplines, which
5 are more structural, so which try and understand the
6 structural determinants of behaviour versus individual
7 psychological determinants of behaviour, and obviously
8 from 2015 onwards a large part of the research on social
9 priming that underlies these hopes for behaviourist
10 interventions at the scientific level experiences
11 a crisis, the so-called replication crisis, where some
12 of the assumptions about effects that can be scaled up
13 to a population size are not replicable in repeat
14 experiments, so the scientific advice and the state of
15 science changes quite significantly during this time.

16 **Q.** Right.

17 Does that mean that, in your opinion, enough
18 emphasis was placed upon behavioural science in pandemic
19 planning and in what we're going to look at briefly now,
20 in the exercises that were performed?

21 **A.** I think clearly no, because the emphasis here is on
22 assumptions of the behaviour in a universal individual,
23 with not enough regard to cultural and structurally
24 determined aspects of behaviour. So how would ethnic
25 minorities respond to public health interventions --

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1 that exercise and flowing from it from 2016, but may not
2 have found their way into the pandemic plans, and how
3 that sits with what you've just described as a lack of
4 consideration of behavioural science?

5 **A.** So there are multiple things to unpack here with
6 vulnerabilities. Right? There are health
7 vulnerabilities which the committee has already heard
8 from -- the Inquiry -- from other experts.

9 **Q.** Yes.

10 **A.** I think that what's quite remarkable about the tabletop
11 exercises is that they assume homogeneity of the
12 UK population which is being managed in response to an
13 exercise. There are always calls for more research on
14 how populations would respond to triage, to mass
15 burials, et cetera, but there is very little --
16 remarkably little -- consideration given to the fact
17 that the UK has become a substantially more diverse
18 population in this time, that people with different
19 cultural backgrounds, different experiences, will have
20 different responses and expectations of what health
21 services deliver.

22 Now, this is not in the report, this is something
23 that however should be looked into more. With Ebola,
24 anthropologists proved crucial in optimising responses
25 in response to burial practices, but it seems that

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1 the UK was good at employing anthropologists for foreign
2 responses. It would have been good to see more
3 ethnographic and sociological studies of mixed responses
4 within the UK population itself to restrictions, mask
5 mandates, things like that.

6 **Q.** All right, thank you.

7 So drawing those threads together, the potential to
8 have more consideration to behavioural science, the
9 potential to have more consideration to various
10 vulnerabilities including health inequalities in
11 pandemic planning, and --

12 **A.** If I may -- I'm sorry, if I may just interrupt.

13 **Q.** Yes.

14 **A.** So it's not just the behavioural sciences, it's actually
15 the social sciences, so that we have an acknowledgement
16 of structural variation within the UK population feeding
17 into plans which are supposed to protect the health of
18 this population.

19 **Q.** All right, thank you for that.

20 If we look at paragraph 139 of your report, we can
21 see your conclusions in this respect, and your comments
22 on the tabletop exercises and the results of those
23 exercises.

24 So it's page 90, paragraph 139 in your report, which
25 is INQ000205178. Thank you.

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1 So all of the clues were there, some of them had
2 been picked up and had formed part of the pandemic
3 planning, but there were warnings and alerts which
4 hadn't been given perhaps as much emphasis as they
5 might.

6 When one takes into account the issues which you've
7 also set out in terms of funding and workforce capacity,
8 how do you say that the planning and the issues that
9 were affecting the United Kingdom in the run-up to
10 Covid-19 hitting created a difficulty?

11 **A.** So I think what we see in this period are obviously the
12 warnings, we see the tabletop exercises, but we don't
13 see a political -- consistent political ownership of the
14 issues that are raised.

15 Pandemic preparedness is frequently voiced in
16 public. There are lots of Hollywood movies, in popular
17 culture it also has a high place, but at the political
18 level there doesn't seem to be a consistent driver in
19 terms of improvement of the capabilities.

20 This is caused by, I would say, budget pressures
21 that are imposed, the need for efficiency, to manage
22 reductions, and finally -- and you have heard multiple
23 witnesses testify to this -- preparations for the real
24 projected threat of the exit from the EU perhaps
25 overshadowing resilience planning especially in the last

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1 You say:

2 "The described exercises foreshadowed many of the
3 key challenges that would emerge during Covid-19.
4 Recurrent warnings about the same vulnerabilities also
5 underlined the difficulties UK planners faced in moving
6 from tabletop exercises and influenza plans to creating
7 and sustaining the real physical infrastructures,
8 staffing levels, and regulatory alignment necessary for
9 an effective pandemic response. Although pandemic
10 preparedness remained a frequently voiced concern,
11 actual UK infection control capacity building between
12 2010 and 2019 was undermined by budget cuts, regulatory
13 heterogeneity ..."

14 Can you explain to us what that is, please?

15 **A.** Multiple not homogeneous regulatory systems. So
16 different --

17 **Q.** Diverse?

18 **A.** Diverse, yes, that's a good word.

19 **Q.** All right, thank you:

20 "... repeated health services shake-ups, workforce
21 shortages, and rapidly expanding public health remits.
22 Following the 2016 Brexit referendum, there was also
23 concern about reduced European coordination and a loss
24 of British influence on European public health bodies."

25 Thank you, we can take that down.

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1 three years before the pandemic.

2 **Q.** You also refer in your conclusion there to the stark
3 difference between considering an issue during
4 a tabletop exercise and really being prepared for the
5 reality when it hits. Do you think that the exercises
6 about which this Inquiry has heard are effective, are
7 worthwhile, could be improved, or is there always going
8 to be a chasm between thinking about something within
9 the clinical confines of a meeting room and the reality
10 when it hits?

11 **A.** I think the truth of that is self-evident.

12 **Q.** Yes.

13 **A.** The exercises are important, they get people into
14 contact who need to know each other. However, similar
15 to the proverb about battle plans, the first thing that
16 goes out of the window, within an hour, is the
17 battle plan, and in that situation you need to have the
18 resilience and the resources to pivot and adapt.

19 I remember statements from Mike Ryan from the WHO
20 during the first month of the pandemic saying that you
21 just need to -- failure is okay, you continue, you just
22 need to continue adapting. And for that you need to
23 have the resources and the resilience in place, and you
24 need to have the trust and the knowledge about who is
25 responsible for what between key actors.

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1 Q. Right.
 2 Before coming to your conclusions as you set them
 3 out in the report --
 4 LADY HALLETT: Just before you do, can I ask roughly how
 5 long ...
 6 MS BLACKWELL: I think I will be five minutes more, my Lady.
 7 LADY HALLETT: Because then Mr Lavery has some questions
 8 too.
 9 MS BLACKWELL: Right. I am happy to break now, if my Lady
 10 would prefer.
 11 LADY HALLETT: I think probably -- unless it causes you any
 12 problems if we --
 13 A. I would just make one final point, please, about -- if
 14 I may?
 15 LADY HALLETT: No, whether or not we break now.
 16 A. Yes, of course.
 17 LADY HALLETT: You can be back this afternoon?
 18 A. Yes, I can do that.
 19 LADY HALLETT: Okay. We shall return at 1.50, please.
 20 (12.55 pm)
 21 (The short adjournment)
 22 (1.50 pm)
 23 LADY HALLETT: Ms Blackwell.
 24 MS BLACKWELL: Thank you, my Lady.
 25 Dr Kirchhelle, before we look at the conclusions

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1 A. I think that's true, yes.
 2 Q. Further, in his evidence, Professor Woolhouse told
 3 the Inquiry last week that the designer of the indices
 4 defended them on the grounds that they weren't intended
 5 to be predictive, and he then asked rhetorically: well,
 6 if they weren't, then what were they for?
 7 Taking all of that into account, do you think that
 8 these types of international reviews are helpful or do
 9 they create the trap of complacency and fail to have any
 10 or any sufficient regard to vulnerabilities?
 11 A. So I read the same article that Professor Woolhouse
 12 read, and I had the same thought with regards to the
 13 conclusion that the authors drew there.
 14 So I think that international comparisons actually
 15 are incredibly important for public health preparedness.
 16 The question is what kind of comparisons we have. With
 17 the Global Health Security Index, it was a very specific
 18 form of evaluation that overemphasised technological
 19 preparedness, the capability to sequence and rapidly
 20 respond to outbreaks, but didn't accurately take into
 21 account the overall baseline capacities of health
 22 systems and public health systems in these countries.
 23 There is also an issue here at the international
 24 level with experts being drawn primarily from English
 25 and American settings, going to the same public health

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1 that you draw in your report, I'd just like to ask you
 2 about the Global Health Security Index, about which
 3 the Inquiry has already heard, and the United Kingdom's
 4 ranking in the category "Rapid response ... and
 5 mitigation of the spread of an epidemic".
 6 Professor Mark Woolhouse has told the Inquiry that,
 7 in scoring considerably higher than any other nation,
 8 with the US coming in second in this category, there is
 9 a danger of a risk of complacency, that the government
 10 could reasonably claim that it was well prepared for
 11 a pandemic, citing that independent evaluation. Do you
 12 agree with that concern?
 13 A. I think there's a risk involved there.
 14 Q. Okay, but secondly, he went on to say that though the
 15 criteria used by the index seemed to be sensible, it
 16 proved a very poor indicator of outcomes in the face of
 17 an actual pandemic, not only for the UK and the US, but
 18 for other countries as well, and perhaps that indicates
 19 that we should not confuse preparedness and defined by
 20 the Index with vulnerability, and that the global health
 21 community needs to re-evaluate the relationship between
 22 the two.
 23 He told the Inquiry that until that is done, it will
 24 be difficult for any government to make an objective
 25 assessment of either. Do you agree with that?

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1 schools, and then perhaps evaluating quite
 2 a technologically -- according to quite
 3 a technologically-based paradigm health systems
 4 performance.
 5 So what you see with the Global Health Security
 6 Index was a simplification of what preparedness consists
 7 of, and it's very much in keeping with this line of
 8 thought that I've described emerging from the 1990s
 9 onwards, this focus on upstream, top heavy epidemic
 10 intelligence, but it leaves out of the equation what
 11 happens when these centres of excellence are
 12 overwhelmed, when they fail.
 13 So that was too reduced. Nonetheless, within the
 14 EU, when the UK was still a member, you had regular ECDC
 15 ratings of preparedness, and regular talking through of
 16 public health systems' performance. Those were useful
 17 and they taken on board by the UK Government, some of
 18 the ratings there.
 19 So international comparisons matter but we shouldn't
 20 be overly focused that they actually paint a completely
 21 accurate picture.
 22 Q. All right.
 23 Now to your conclusions. You say in your report
 24 that the past offers no simple and timeless solutions
 25 for the future of public health across the

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1 United Kingdom, but, having analysed eight decades of
2 evolving infection control, you see that there are four
3 central challenges going forwards.

4 First, declining attention.

5 Second, administrative misalignment.

6 Third, emergency priorities.

7 Fourth, what you describe as selective memory.

8 So just dealing with each of those individually,
9 please.

10 First of all, declining attention. Is there
11 a perceived problem that you have identified and you can
12 now acknowledge as a problem going forwards that most
13 UK citizens don't perceive infectious disease as
14 a significant threat to life?

15 **A.** That is true.

16 **Q.** Right. Why is that a problem?

17 **A.** It's multifaceted. Most UK citizens within their family
18 have lived memories of multiple pandemics, including
19 here, by the way, also the HIV/AIDS pandemic, which
20 spread in the 1980s, and yet over the years we have seen
21 a consistent decline of societal attention for
22 infectious disease threats.

23 There are multiple connected reasons for this. The
24 overall reason is obviously that the primary cause of
25 death in this country has increasingly shifted towards

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1 To layer on to that, the final thing, if we then
2 broaden the remit of the public health agencies that we
3 task with protecting public health, more and more and
4 more to cover more aspects, we will inevitably find that
5 persistent lobbying for the protection of these baseline
6 infrastructures will be drowned out by other issues over
7 time.

8 So it's a multi -- it's a staggered problem in many
9 ways, but what needs to be done is to increase
10 a permanent advocacy for the maintenance of baseline
11 capabilities that protect you when technology isn't
12 available to curb an outbreak.

13 **Q.** By doing that, visibility will be maintained and
14 possibly even increased?

15 **A.** Ideally, yes, but we shouldn't expect that societal
16 memories of Covid-19 remain stable. History indicates
17 otherwise. History indicates that forgetfulness will
18 set in and that alternative priorities will come. So
19 what you need is a persistent independent lobbying and
20 protection of resources within government, and also
21 within the profession.

22 **Q.** What about the central challenge that you describe as
23 "administrative misalignment"?

24 **A.** One of the leading historians of medicine always
25 describes global health as essentially local. Nothing

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1 non-communicable diseases. Paralleled with this,
2 however, is a problem of investment and protecting the
3 infrastructures that have allowed this decline to take
4 place in the first place.

5 So the reason my report goes back to the 1930s is to
6 showcase how these baseline infrastructures function.
7 They run quite smoothly most of the time, when it comes
8 to decreasing overall disease pressures on society.
9 Ironically by functioning so smoothly attention for
10 their maintenance declines, and this we can see with
11 investment levels when it comes to protecting core
12 capabilities such as local public health laboratories,
13 local public health specialities, et cetera.

14 There is also, interlinked with this, the other
15 issue of advocacy. So when we go, again, back to the
16 beginning of this period, public health was very much
17 focused on infectious disease control, but what we see
18 now with public health is a very broad multidisciplinary
19 family of approaches that focus on health improvement,
20 prevention, et cetera, and infectious disease control,
21 this core original capability, is no longer necessarily
22 at the forefront of this thinking. We see it with the
23 recruitment but we also see it with problems of advocacy
24 within the public health community when it comes to
25 protecting and prioritising infectious disease control.

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1 at the global level really matters if it can't be put
2 into action locally effectively. So public health
3 continuously has a challenge of aligning health systems'
4 responses with public health surveillance and other
5 local responses and integrating it nationally into
6 a complete holistic picture and intelligence-led
7 approach to public health.

8 What we've seen in the UK, already before devolution
9 but accelerating after devolution, is an increasing --
10 I lack the word -- diverse set of administrative
11 structures, at the local level and at the national
12 levels in the devolved administrations.

13 This is complicated by the fact, in my opinion, that
14 UKHSA is de facto an English public health
15 administration, yet has obviously UK-wide remits. Other
16 countries -- I'm German -- for example, have a federal
17 system that is fully federal, where you have
18 an administration that then navigates between individual
19 state-led public health systems.

20 But in the UK this results in -- the fact that we
21 have a kind of hybrid system results in very difficult
22 alignment processes. We see the evidence of this in the
23 tabletop exercises and also in the very telling
24 Department of Health review from 2017, where it said
25 that people within Public Health England didn't

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1 necessarily know who even to call or when to call
2 devolved administrations. And if I'd looked in the
3 devolved administrations, I'm sure I might have found
4 similar references with regards to who is responsible
5 for what within Colindale.

6 **Q.** So ensuring a clarity as to role and responsibility
7 would assist in terms of what you describe as
8 administrative misalignment?

9 **A.** There is no optimal solution. All of the devolved
10 administrations have experimented with different
11 systems. We also see, historically, different systems
12 in the UK. But I think what would help would be to
13 avoid reformism, so to avoid changing everything up
14 every ten years --

15 **Q.** And changing the name of structures and organisations?

16 **A.** Which is interesting, because it seems to happen after
17 crises, which seems to draw artificial lines after
18 things.

19 So there is a clear need to either stabilise
20 arrangements and make them work better, or to have
21 a more participant-led discussion about how to
22 structure, UK-wide, things going forward.

23 I draw here on the selective memory because at the
24 moment most of the memories that are always drawn on are
25 English memories when it comes to restructuring public

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1 perspectives and local alignment seems to be one of the
2 most sticky issues when it comes to preparedness.

3 So ensuring a representative participatory form of
4 memory capture that draws on the DPH, the infection
5 control nurses, the specialists at the local level seems
6 absolutely central, and to add to this capturing in
7 great detail the experiences of the devolved
8 administrations, and -- I think in the Inquiry this has
9 come out repeatedly -- capturing data that is comparable
10 across devolved administrations is absolutely key to
11 ensuring a more robust base of evidence moving forward.

12 **Q.** Your final challenge going forwards you describe as
13 emergency priorities. How can we best prepare ourselves
14 for what might come next in terms of our emergency
15 priorities?

16 **A.** I think there's a philosophical dilemma here, because if
17 you prepare for one emergency in a range of multiple
18 emergencies, devoting all of your resources towards
19 these specific scenarios might actually end up weakening
20 your core baseline capacity.

21 So what we see from the 1990s onwards is a shift
22 towards this top heavy upstream mode of epidemic
23 intelligence and preparedness -- this is not limited to
24 the UK, it's also in other countries -- amidst a decline
25 of the bread and butter public health capacity that you

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1 health systems. So it needs to be, in my opinion,
2 a more representative, a more diverse process, that is
3 not just led from Westminster but has more active
4 involvement of the devolved administrations.

5 **Q.** Well, drawing upon your movement into the selective
6 memory challenge, as well as what you've just told
7 the Inquiry in terms of the devolved administrations and
8 the UK-wide memory needing to be captured, is it also
9 your view that there needs to be a proper representative
10 amount of memory coming from different layers of public
11 health?

12 **A.** Memory capture has been a formal part of pandemic
13 planning since the 1990s, and yet while reading these
14 enormous amount of reports as a historian since this
15 time, I've been repeatedly struck at how narrow some of
16 the capturing has been. Often enough it's national
17 institutions capturing memories that focus on national
18 responsibilities that then results in new organisations
19 being created or responsibilities shifted around between
20 different ministries, but rarely have I seen memory
21 capture exercises that actually have ample evidence from
22 the local level.

23 I think this is something that relates to the key
24 identified repeated weaknesses in the UK pandemic
25 preparedness that comes out of the reports where local

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1 need when the centre fails.

2 This is, I think, a core theme especially in the
3 case of England that is quite prominent from around 2000
4 onwards, and we saw it playing out with Covid-19 but we
5 saw the warnings earlier about the repeated capacity
6 problems and the fact that global reviews of the
7 UK systems focused on these centres of excellence but
8 perhaps might neglect the baseline hinterlands capacity
9 of preparedness that I referred to in the *Giants on Clay*
10 *Feet* article.

11 **Q.** Yes.

12 Finally groupthink. The Inquiry has heard varying
13 views on this and whether or not it existed and caused
14 any difficulty in some of the scientific organisations
15 and groups that were either permanently set up or stood
16 up for an incident such as Covid-19.

17 As a historian, what is your view of groupthink and
18 have you seen it present in some of the groups that
19 you've looked into?

20 **A.** I think at the scientific level there is no evidence
21 whatsoever of groupthink. There's such a diverse
22 planning landscape, and we see it with the WHO in 2018
23 putting Disease X formally onto pandemic planning
24 landscapes. We see it with the planning for all kinds
25 of high-consequence infectious diseases. We see it with

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1 the fact that the UK had a SARS plan, it had a MERS
2 plan, there was planning across multiple pathogens. The
3 fact that it still remained an influenza-based
4 framework --

5 **Q.** Yes.

6 **A.** -- I agree here with Jenny Harries' assessment, is that
7 influenza was the most realistic disease to plan for.

8 **Q.** Why was that?

9 **A.** We have the most robust data of pandemics based on
10 influenza and they occur regularly. It's not just 1918,
11 the UK had a pandemic in the 1950s, in the 1960s, there
12 was a major scare in the 1970s, another major scare in
13 the 1990s, and a major scare -- or an actual pandemic
14 in 2009. So it's realistic to see influenza as the most
15 likely respiratory pathogen that can occur and that can
16 spread.

17 There were obviously failures to update the plan for
18 new knowledge emerging around asymptomatic transmission
19 and aerosolised transmission, but it doesn't mean that
20 this amounts to groupthink. And I come back to the
21 point I made earlier in my hearing, that a legal
22 document is not necessarily representative of a very
23 diverse ecosystem of thinking about pandemics. Again,
24 we only need to look to popular culture, where actually
25 there's a huge amount of pandemic scenarios already

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1 communication pathways had not been addressed,
2 et cetera.

3 So yes, we dealt with Covid-19 as a novel pathogen.
4 Would the UK have performed so much better had it been
5 a classic, still novel, influenza strain? I have my
6 doubts.

7 **MS BLACKWELL:** Thank you very much, Dr Kirchhelle.

8 My Lady, you've provisionally provided permission
9 for Covid Bereaved Families for Justice Northern Ireland
10 to ask questions on a topic. May that now be done?

11 **LADY HALLETT:** Mr Lavery.

12 **Questions from MR LAVERY KC**

13 **MR LAVERY:** I think that's working now, my Lady.

14 **LADY HALLETT:** It is.

15 **MR LAVERY:** I think I'm jinxing the system.

16 Dr Kirchhelle, my name is Lavery, and I represent
17 the Northern Ireland Covid-19 Bereaved Families for
18 Justice, and as you're aware her Ladyship has permitted
19 me to ask a couple of questions about your report and
20 about your evidence.

21 The first question I want to ask you about is about
22 Operation Cygnus, which you referred to in your report,
23 and there's a section in that which is about the
24 four nations' response and one of the lessons
25 identified, lesson 4, says that:

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1 embedded, with board games with multiple pathogens, and
2 all of these things around.

3 So my point here is influenza is a realistic
4 framework to base pandemic planning around, it's there
5 regularly. Moving forward it might be useful to perhaps
6 have more generic names and prepare more generically for
7 airborne pathogens, but I don't subscribe historically
8 to the argument that groupthink delayed preparedness.
9 In 2019, December, we have the first phase one clinical
10 trial of a MERS coronavirus vaccine, starting in Oxford
11 and then in Saudi Arabia. This is physical evidence
12 that groupthink was not present. The UK was preparing
13 for multiple high-consequence infectious diseases with
14 pandemic potential.

15 **Q.** But going forwards there needs to be a flex, doesn't
16 there, there needs to be an ability to adapt whatever
17 preparedness follows from this Inquiry and in the days
18 forwards, there has to be an element of adaptability?

19 **A.** Yes. I mean, while writing the report I asked myself
20 the one counterfactual question: would the UK have
21 performed better had it been the classic influenza
22 pandemic that hit the country in 2020? And I think
23 there were serious doubts about the ability to handle
24 that. The PPE levels had fallen precariously low. The
25 resourcing at the local level was not there. The

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1 "Meetings of the four health ministers and CMOs
2 should be considered best practice and included as part
3 of the response 'battle rhythm'."

4 And the report also notes that:

5 "... the Devolved Administrations reported that they
6 felt that they had been left out from some key decisions
7 taken during the exercise, such as the decisions around
8 activating the Relenza stockpile."

9 Do you agree that the lack of formal involvement of
10 the Northern Ireland Executive had a negative impact on
11 the Executive's ability to prepare for the pandemic?
12 First, in relation to that, the first part is about
13 whether meetings between the four health ministers and
14 CMOs of the four nations, formal meetings, should be
15 considered.

16 **A.** I mean, it's always difficult to judge from an absence
17 what the likely reaction would have been. It is
18 remarkable that more formal meetings didn't necessarily
19 take place. I believe the Inquiry has already heard
20 evidence that representatives of the Welsh public -- and
21 also of the Scottish public health system were on
22 committees like NERVTAG more in the function of their
23 expert qualifications rather than as a formal part of
24 the process.

25 I think as a historian it struck me as remarkable

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1 that there's no more formal representation of devolved
2 administrations there. I can't comment on how that
3 affected performance in Covid-19.

4 **Q.** Because in your evidence earlier you talked about the
5 value of informal relationships, in particular within
6 the devolved nations, and would you agree that if there
7 were more formal structures there and contact that that
8 might lead to informal relationships?

9 **A.** So the informal relationships are extremely important
10 between the public health establishment, and in all of
11 the oral history witness seminars that I've attended
12 participants have stressed that that is extremely
13 important to overcome administrative misalignment in
14 crisis situations.

15 I have, however, no doubt that more formal
16 discussions at the administrative level would also
17 improve co-ordination between all four nations. The
18 more one talks about common challenges the better the
19 solutions will be that come out of them.

20 **Q.** Would you agree, then, that -- you complained about this
21 being Westminster-led, the preparedness, that if there
22 was such a formal arrangement that it might be less
23 likely to be Westminster-led?

24 **A.** That is a decision for the UK populus to make, how they
25 want to organise living together between the

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1 I come back to the one point that is very important
2 here, it's that learning lessons also requires
3 comparable data, and that is a big problem.

4 **Q.** Well, in that context, the next question I wanted to ask
5 you was: you noted at paragraph 138 of your report that
6 there were very few exercises which were UK-wide in
7 scope, so is that part of the impact of that, or what
8 was the impact of that?

9 **A.** Again I wish I'd had more time for the report and for
10 the archival investigation. The devolved
11 administrations have lots of tabletop exercises
12 themselves. Pathogens cross borders without thinking of
13 them. So obviously any UK-wide health threat, even
14 a small outbreak, will probably trigger some kind of
15 wider UK response. So it seems logical, and I'm
16 thinking here of Sir Oliver Letwin's evidence to
17 the Inquiry, to formalise UK-wide preparedness planning
18 going forward.

19 **Q.** Then also, well, at paragraph 139 you referred to:

20 "... the difficulties UK planners faced in moving
21 from tabletop exercises ..."

22 Which you discussed earlier in your evidence:

23 "... and influenza plans to creating and sustaining
24 the real physical infrastructures, staffing levels, and
25 regulatory alignment necessary for an effective pandemic

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1 four nations in the UK. I think that there is,
2 historically speaking, a bias towards English
3 experiences in the memory capture and that that memory
4 capture has informed pandemic planning moving forwards,
5 and I think that's all I can say there. I think it --
6 necessarily more diverse views will likely create more
7 resilience within the system when it comes to thinking
8 through how the same crisis can have different impacts
9 in different territories of the UK.

10 **Q.** And that England might even learn from the devolved
11 administrations? I think you said that there were some
12 ambitious initiatives from Northern Ireland which
13 foundered because of a lack of government there?

14 **A.** Northern Ireland is a very, I think, specific historical
15 case, in terms of the overall political environment, in
16 which health systems reforms have been attempted.
17 I think that the UK almost provides a natural experiment
18 for different forms of public health systems, with each
19 devolved administration having slightly different
20 approaches towards public health, and I think that
21 the UK might profit from looking in more detail at how
22 public health can work as an NHS-only operation or
23 within the Northern Ireland context of an integrated
24 health and social care system. Lessons can be learned
25 from every case study.

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1 response."

2 Does the fact that similar concerns about the UK's
3 pandemic preparedness were repeatedly raised throughout
4 the relevant period indicate that a stated commitment to
5 pandemic preparedness was not reflected in the action
6 taken by government in the public health sector during
7 the relevant period?

8 **A.** I think there is a mismatch between public warnings
9 about pandemics and structural permanent reforms that
10 are put in place.

11 **Q.** You talked about the need to adapt but also about the
12 need for resources. Was the position similar throughout
13 the UK or did it vary across Northern Ireland, Scotland,
14 Wales and England?

15 **A.** I'm not sure I follow the question.

16 **Q.** Well, your concerns about -- during the relevant period,
17 that the pandemic preparedness was not reflected in
18 action, tabletop exercises were not reflected in real
19 physical infrastructure, staffing levels and regulatory
20 alignment?

21 **A.** Yes, so I mean, again, as I said earlier, you know, it's
22 one thing to have a tabletop exercise, it's another
23 thing to have consistent policy implementation focus,
24 either at the UK level or within the devolved
25 administrations. Some devolved administrations clearly

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1 pay more attention to this than others, and again we
 2 come back to the point about diversity and perhaps
 3 a lack of a whole UK-wide approach to these issues.
 4 **Q.** Finally, then, Dr Kirchhelle, what was the impact of
 5 austerity policies on this? Ms Blackwell in your
 6 evidence earlier put to you the declining funding of
 7 public health, and I think you described it as
 8 a yo-yo effect, reacting to different situations. Was
 9 there an impact of austerity on these?
 10 **A.** I'm very sure that austerity and, I think, the
 11 overwhelming body of evidence collected by this
 12 committee speaks to that -- or by the Inquiry speaks to
 13 it, that there was a negative impact on public health
 14 levels. The King's Fund has published data also
 15 measuring life expectancy changes during this time,
 16 changes in developments of life expectancy.
 17 So I think there is quite a large body of evidence
 18 with which I would agree that austerity certainly didn't
 19 have positive impacts on pandemic preparedness. The
 20 yo-yo effect is an interesting one. Often after health
 21 emergencies you get high levels of very targeted but
 22 often very short-term funding for public health, and it
 23 comes back to the point about that this funding rarely
 24 builds what Philip Mortimer was already warning about in
 25 2003, the long-term capacity in the system, because it

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1 Dr Kirchhelle, you kept saying several times if you'd
 2 had more time to do more research, you've done a huge
 3 amount in the time you've had. Thank you very much.

4 **THE WITNESS:** Thank you very much.

5 **(The witness withdrew)**

6 **MR KEITH:** My Lady, the next witness is Professor
 7 Sir Michael McBride.

8 **PROFESSOR SIR MICHAEL McBRIDE (sworn)**

9 **Questions from LEAD COUNSEL TO THE INQUIRY**

10 **MR KEITH:** Good afternoon. Could you give the Inquiry your
 11 full name, please.

12 **A.** Yes, Michael Oliver McBride.

13 **Q.** Sir Michael, thank you for the provision of the two
 14 witness statements that you have given this Inquiry.
 15 They are INQ000187306, dated 12 May, and INQ000203352
 16 dated 6 June. You've signed both of them and provided
 17 statements of truth.

18 Sir Michael, you are currently the Chief Medical
 19 Officer for Northern Ireland. You were appointed to
 20 that post in September of 2006. Before then, were you
 21 medical director at the Royal Group of Hospitals from
 22 August 2002?

23 **A.** That's correct.

24 **Q.** Have you also during that period been the chief
 25 executive of Belfast Health and Social Care Trust,

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1 goes away after a while and it's often too selective to
 2 build this core baseline capacity.
 3 **Q.** In your summary you say that in Northern Ireland there
 4 was, if you like, a double whammy impact of fiscal
 5 pressures and sustained and regular periods of breakdown
 6 of government, Stormont stalemate?
 7 **A.** I draw here on the secondary literature, so this is both
 8 from the European Health Observatory but also from
 9 social scientists assessing it, to describe
 10 Northern Irish health policy in between the sitting of
 11 Stormont as managerial drift, and it's very difficult to
 12 prepare for the future as a public health agency if
 13 you're faced with significant political uncertainty,
 14 both about your own administrative arrangements within
 15 Northern Ireland and then, obviously, in the
 16 Northern Irish case specifically, also the pending exit
 17 of Britain from the EU, which in the annual reports also
 18 causes consternation.
 19 **Q.** Together with fiscal pressures?
 20 **A.** Together with fiscal pressures, yes.
 21 **MR LAVERY:** Thank you, my Lady.
 22 **LADY HALLETT:** Thank you, Mr Lavery.
 23 **MS BLACKWELL:** My Lady, that concludes the evidence of
 24 Dr Kirchhelle.
 25 **LADY HALLETT:** Thank you very much indeed for your help,

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1 a position you held from December 2014 to February 2017?

2 **A.** Yes.

3 **Q.** So you were fulfilling that task whilst you were also
 4 Chief Medical Officer?

5 **A.** That's correct, yes.

6 **Q.** I'd like to start, please, if I may, with the position
 7 of the Chief Medical Officer for Northern Ireland and
 8 the Chief Medical Officer Group, in the general scheme
 9 of things, in Northern Ireland.

10 May we have, please, our organogram, INQ000204014 at
 11 page 14. You will see there, in the middle of the page,
 12 the "First Minister and Deputy First Minister, The
 13 Executive Office", and, towards the bottom of the page,
 14 the blue box, "Department of Health", bottom right-hand
 15 corner, "Chief Medical Officer Group" and "Chief Medical
 16 Officer".

17 It is obvious that the Chief Medical Officer is part
 18 of the Chief Medical Officer Group, which is part of the
 19 Department of Health. Could you please give us
 20 an overview of the Chief Medical Officer's functions as
 21 part of the Department of Health?

22 **A.** Yes. As Chief Medical Officer my main role is to
 23 provide independent advice to the permanent secretary,
 24 to the minister, on professional technical matters and
 25 on scientific matters, and I'm supported in that role by

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1 a number of professional colleagues.
 2 I also have responsibilities in heading up the Chief
 3 Medical Officers' Group for, particularly, Population
 4 Health Directorate, which you see in the box.
 5 Population Health Directorate is headed up by the
 6 director of population health, who reports through to
 7 the Deputy Chief Medical Officer and in turn through to
 8 myself.

9 The Population Health Directorate has responsibility
 10 for a number of policy areas which are of relevance to
 11 the Inquiry, namely health protection, including
 12 screening and vaccination, and also emergency
 13 preparedness and response in terms of relevant policy
 14 and guidance.

15 It also has responsibility for health improvement
 16 policy, so that would be in relation to departmental
 17 policy on alcohol and drugs, on suicide prevention, and
 18 a range of other pertinent areas -- you know, with
 19 respect to reducing health inequalities.

20 **Q.** That's quite a lot.

21 **A.** That's quite a lot.

22 **Q.** The CMO Group obviously, therefore, discharges functions
 23 beyond the individual functions of the Chief Medical
 24 Officer, so from what you've said it appears to be
 25 concerned with health protection policies, vaccination,

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1 civil contingency planning and preparedness, emergency
 2 planning, and that area?

3 **A.** It does. I mean, I can expand if that's helpful, but
 4 yes.

5 **Q.** The Emergency Planning Branch doesn't report, however,
 6 directly to you as the CMO, does it?

7 **A.** Ultimately it reports through to me, yes.

8 **Q.** Ultimately to you?

9 **A.** Yes.

10 **Q.** But does it report through, in fact, your deputy, the
 11 Deputy CMO?

12 **A.** It would report through the director of Population
 13 Health, and then in turn to the Deputy CMO and
 14 ultimately to me, so I would have overall
 15 responsibility.

16 **Q.** All right. So in truth you are two stages removed: the
 17 reporting goes through the director of population
 18 health, a Ms Redmond, and then, through her, to the
 19 Deputy CMO and then to you?

20 **A.** Correct.

21 **Q.** With the terrible travails of Covid behind you, is that
 22 a structure which worked, in your opinion, or would you
 23 say that the Emergency Planning Branch, given the
 24 importance of the matters which it addresses, should be
 25 closer connected to you, the CMO, in a more direct

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1 infectious disease prevention and control, and health
 2 improvement generally.

3 Where, within that structure, that's to say the CMO
 4 Group structure and the Population Health Directorate
 5 structure, does the specific issue of emergency planning
 6 in the health field come in?

7 **A.** Yeah. I should add, if I may, before answering that,
 8 that there are a number of other policy area
 9 directorates within CMO Group and that includes the
 10 pharmacy directorate, which is headed up by the Chief
 11 Pharmaceutical Officer and also --

12 **Q.** Chief Dental Officer?

13 **A.** Chief Dental Officer.

14 **Q.** And Quality, Safety and Improvement Directorate --

15 **A.** Indeed, indeed.

16 **Q.** All right.

17 **A.** The responsibility for the area that you mentioned
 18 resides within the Emergency Planning Branch within CMO
 19 Group.

20 **Q.** Do we have that in the blue box under Department of
 21 Health?

22 **A.** That is correct.

23 **Q.** Does the Emergency Planning Branch have day-to-day
 24 responsibility for that part of the Department of Health
 25 that's concerned with the budgets for pandemics and

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1 reporting structure?

2 **A.** I think the span of that area of work within population
 3 health was too large, I think I would absolutely
 4 acknowledge that. Since that organisational structure
 5 there we have subsequently carried out a review within
 6 Chief Medical Officer Group, we have established
 7 a separate Health Protection Directorate, and also,
 8 again to use that acronym again, the -- a separate
 9 directorate for emergency preparedness, resilience and
 10 response, which is headed up by another director.

11 So we have, in essence, expanded those particular
 12 areas and reduced the responsibilities of the Director
 13 of Population Health accordingly. And appropriately,
 14 I would add.

15 **Q.** So to be clear about this, following Covid you in fact
 16 commissioned a review --

17 **A.** Yes.

18 **Q.** -- in 2021 as to whether or not the current structure of
 19 the CMO Group was appropriate, in terms of its ability
 20 to prepare for emergencies and addressing civil
 21 contingencies, and that review recommended a new
 22 directorate which is not a subdivision of the director
 23 of Population Health Directorate --

24 **A.** Correct.

25 **Q.** -- it is now its own directorate, the Emergency

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1 Preparedness, Resilience and Response Directorate?
 2 **A.** That is correct.
 3 **Q.** So may we take it from that that it now has a greater
 4 prominence and importance in the general scheme of
 5 things structurally within the Department of Health?
 6 **A.** It's certainly always had a prominence and importance.
 7 It certainly has now greater resource aligned to it, and
 8 I think that is -- you know, it's a distinction but,
 9 I mean, I think your point and the premise of your point
 10 is well made and I accept it.
 11 **Q.** It's a change that you wouldn't have recommended and put
 12 into place unless it had intrinsic worth?
 13 **A.** That's correct.
 14 **Q.** Right.
 15 In your statement you say that the CMO Group is the
 16 sponsor branch for the Public Health Agency in
 17 Northern Ireland. What does that mean? What is the
 18 sponsor branch?
 19 **A.** Yes. The Department of Health has a number of what we
 20 refer to as arm's length bodies. Those arm's length
 21 bodies are established in statute, so the Public Health
 22 Agency is established in statute. There are a series of
 23 agreements in place in terms of objectives, business
 24 plans, priorities which are set on an annual basis, in
 25 agreement with the PHA, which are set against their

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1 now heard, the Public Health Agency, but my Lady's heard
 2 evidence that in the civil contingencies part of the
 3 Northern Irish government, the CCG(NI), there is a hub,
 4 there is also an emergency operational centre within the
 5 Department of Health, all of which would be expected to
 6 carry out operational responses.

7 So where does the PHA's operational functions come
 8 in the general scheme of things?

9 **A.** The Public Health Agency will lead on the vast majority
 10 of outbreaks of infectious diseases. I mean, if I could
 11 give, for example, coming out of Covid we had a number
 12 of unfortunate occurrences where we saw higher than
 13 normal rates of infection. If you recall, we saw
 14 scarlet fever in young children occurring more
 15 frequently, and indeed in older people. We had
 16 an increase in a type of hepatitis, non-A, non-E
 17 hepatitis, again, which the PHA was leading the
 18 Northern Ireland response.

19 In both those cases the PHA was plugged in, as it
 20 were, to the wider UK response, so the UK Health
 21 Security Agency established an incident management team
 22 at a UK level, and then the Public Health Agency would
 23 manage the response at a Northern Ireland level but
 24 liaising with the UK Health Security Agency.

25 So in the day-to-day management of outbreaks,

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1 annual allocation in terms of their budget.

2 As the CMO Group and head of CMO Group, we meet with
 3 the PHA on a very regular basis through what are called
 4 sponsorship review meetings, so those are an opportunity
 5 from a fixed agenda for the PHA to raise issues that
 6 they have in relation to meeting their objectives, any
 7 resourcing pressures that they may be encountering, or
 8 areas where they require us to support them in engaging
 9 with other parts of the department, given that their
 10 responsibilities, particularly around health
 11 improvement, are cross-cutting and impact on a number of
 12 other policy areas within the department.

13 So those sponsorship review meetings meet -- occur
 14 very regularly, and then they also feed into the
 15 mid-year and end of year accountability review with the
 16 permanent secretary, which I also attend, along with the
 17 chief executive of the PHA, Public Health Agency, and
 18 the chair of the board of the Public Health Agency.

19 **Q.** All right. We are, of course, concerned with the
 20 responses of the various bodies and the planning done by
 21 them in the context of infectious disease outbreaks. In
 22 the Northern Irish Department of Health structure, which
 23 body is primarily responsible for operational response
 24 in the face of an infectious diseases outbreak?

25 I ask because we have in this structure, and we've

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1 whether that's food-borne, for instance, they would work
 2 with local councils in supporting the management of that
 3 outbreak, it would be the Public Health Agency. When it
 4 gets to a scale where it's beginning to impact at
 5 a population level, then it's at that point we make
 6 a decision within the department whether we continue to
 7 keep a monitoring brief or we need to lean in to support
 8 the PHA and the -- in the wider response.

9 **Q.** Which you'll then do by triggering the arrangements at
 10 a national level by virtue of the CCG(NI) Hub, by the
 11 operational centre within the Department of Health,
 12 where of course the emergencies are regarded as a -- as
 13 requiring that sort of national response?

14 **A.** Certainly at the extreme end, yes.

15 **Q.** Escalation?

16 **A.** But there is a sort of in between level where the Public
 17 Health Agency may determine, for instance, look, this
 18 outbreak is now impacting on the health service, and
 19 they may say to colleagues in what was the Health and
 20 Social Care Board, "We need the resources of the health
 21 service to support us in managing this outbreak". So
 22 a good example was Mpox recently, where the Health and
 23 Social Care Board had to come alongside the PHA to
 24 support the vaccination of those that were at
 25 significant risk.

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1 At a further escalation, the PHA, the Public Health
2 Agency, the Health and Social Care Board may decide to
3 activate silver, and in that case we really at that
4 stage would be thinking: look, this is perhaps something
5 which is getting to the stage where it may be affecting
6 the Northern Ireland population. Then we as
7 a department would seek to support, provide strategic
8 direction, provide advice and support. And if it really
9 got to the level where it became a civil contingency
10 emergency at that scale, then that's what you would see
11 the triggering of the Northern Ireland Hub --

12 **Q.** The national arrangements?

13 **A.** The national civil contingency management arrangements,
14 et cetera.

15 **Q.** All right.

16 In your witness statement, there are references to
17 two other groups that I want to ask you about. The
18 first is the Northern Ireland Pandemic Flu Oversight
19 Group. This appears to be a group that was established
20 by you in 2018 to lead on health and social care
21 preparedness and response, and one of the areas that it
22 was addressing was the promulgation of guidance for
23 surge capacity and also triage work by healthcare
24 settings.

25 It seems to have been established by the Emergency
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1 in the nomenclature, was it the Pandemic Flu
2 Northern Ireland subgroup?

3 **A.** Yes.

4 **Q.** Right.

5 That body, so the first one I mentioned, the
6 Northern Ireland Pandemic Flu Oversight Group, was
7 therefore formed to ensure that the workstreams, the
8 recommendations, the learning from Exercise Cygnus were
9 properly implemented, and it led to an additional group
10 being formed called the Task and Finish Group, which
11 I think you asked the Public Health Agency and the
12 Health and Social Care Board to establish, and that was
13 then put into place the following year in 2019; is that
14 correct?

15 **A.** Yes. Could I take a moment maybe to clarify that,
16 because -- in case we're confusing each other.

17 **Q.** Yes. Please.

18 **A.** So there was the Civil Contingencies Group, which was
19 plugged into the Pandemic Flu Readiness Board, so that
20 was overseeing all five workstreams, which the director
21 of Population Health was also chairing, but the
22 Department of Justice, TEO, were members of that.

23 Then beneath that was a health-specific group, which
24 was the Northern Ireland Pandemic Flu Oversight Group,
25 again chaired and established by the director of

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1 Planning Branch, the body to which you referred a few
2 moments ago, and it was chaired by the director of
3 Population Health.

4 What was the need for that body? Why was it set up
5 in 2018, shortly?

6 **A.** Well, in short, this was following on from
7 Exercise Cygnus. It was identified at a UK level that
8 there was a need for surge plans right across health and
9 social care but with particular reference to secondary
10 care and social care. There were five workstreams set
11 up at a UK level in the summer of 2017. All of the
12 devolved administrations were part of that work. To
13 ensure that Northern Ireland played its full part in
14 ensuring that we worked within that structure, we
15 established a CCG -- sorry, Civil Contingencies Group,
16 a pandemic flu group, which over -- to overlook those
17 five workstreams. I'll not go into the detail of those,
18 but --

19 **Q.** This pandemic flu oversight group?

20 **A.** Beneath that then sat the Northern Ireland Pandemic Flu
21 Oversight Group, with a specific purpose of developing
22 surge plans in relation to secondary care and
23 social care. As you say, it was chaired by the director
24 of Population Health.

25 **Q.** I'm going to take the liberty of suggesting a correction
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1 Population Health, established in March, and you're
2 quite right that beneath that again --

3 **Q.** Is that a subgroup?

4 **A.** Yes, that was a subgroup of the group I've just
5 mentioned.

6 **Q.** Then there was a task and finish group as well?

7 **A.** We -- yes, that group, the oversight group, comprised
8 the department, senior executive directors within the
9 Public Health Agency and the Health and Social Care
10 Board.

11 I wrote personally to the then chief executive of
12 the board asking them to establish a Task and Finish
13 Group --

14 **Q.** All right.

15 **A.** -- looking for the PHA to develop the said guidance.

16 **Q.** That was in 2019?

17 **A.** November 2018 was the date of my letter and the group
18 was established in 2019.

19 **Q.** Yes. An important function of that Task and Finish
20 Group was to review and update health and social care
21 influenza pandemic surge guidance, but, as events
22 transpired, Sir Michael, although a draft was drawn up,
23 it was decided by officials in these relevant bodies
24 that further work was required, but that work never came
25 to pass because of, of course, the impact of the

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1 preparations for a no-deal EU exit and then of course
2 Covid itself.

3 So the majority of the work that was due to be done
4 by that Task and Finish Group, despite its title, was
5 never completed, and therefore one may suppose that the
6 structure of having a Northern Ireland Pandemic Flu
7 Oversight Group, then a subgroup, and then a Task and
8 Finish Group, alongside all the other groups, largely
9 failed, at least in relation to that particular purpose?
10 **A.** I think -- well, it's absolutely correct to say that
11 that work wasn't finished, for the reasons that you've
12 outlined, both at a UK and at a Northern Ireland level
13 because resources were diverted to EU exit planning.
14 The work was incidentally picked up again in January of
15 2020, but of course then events overtook us.

16 **Q.** Of course.

17 **A.** In the end, further work was carried out in February and
18 we did have surge plans in place for the first wave of
19 the pandemic. But, again, we'll be looking at that in
20 later modules.

21 **Q.** Indeed.

22 **A.** I think it was -- I'm not certain that I would
23 necessarily agree that it's a structural issue in terms
24 of complexity of the structures. You know, I think it's
25 actually all about function and structures matter less.

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1 they interrelate, no.

2 I have to say for those working in the system, who
3 need to know how those structures work, we know how
4 those structures work and how they interrelate, and
5 I can explain, for instance, the various -- the Joint
6 Emergency Planning Board, the Joint Emergency Planning
7 Team and how it supports the board. But I suppose
8 really I absolutely appreciate from those looking in
9 from the outside, it's a reasonable question to say: is
10 there a simpler way of doing this?

11 I think we structure the work in such a way that we
12 get the work done, and we put around it organisational
13 arrangements to ensure, in as far as we possibly can,
14 notwithstanding that there are always other pressures,
15 other demands and priorities, that we get the work done
16 in as effective a way as we can.

17 **Q.** That's the point, isn't it? I mean, the overall worth
18 of a system is surely not to be determined solely by
19 whether or not its participants understand what they're
20 doing, it must also be determined by the outcome and the
21 output, and --

22 **A.** Correct.

23 **Q.** -- there are significant areas in which the work which
24 was meant to be done by some of these committees, groups
25 and entities didn't come to fruition?

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1 There are some structures that matter -- work better
2 than others. We did, however, make significant progress
3 in a number of areas: the preparation in the terms of
4 the pandemic flu plan, there was significant progress
5 made on that, but again it wasn't completed. I think
6 it's fair to say --

7 **Q.** We will come back to the planning a little later.

8 **A.** Okay.

9 **Q.** Just remaining on the structures, the Inquiry is aware
10 from your witness statement and other material that
11 there were -- I don't know whether they are still in
12 existence -- a number of other bodies: the Health
13 Emergency Planning Forum, the Critical Threats
14 Preparedness Steering Group, the Joint Emergency
15 Planning Board, the Joint Emergency Planning Team.
16 There may be an appearance here of an overcomplexity or
17 duplication of function or perhaps, to put it more
18 charitably, a rather diffuse structure.

19 Has the structural system in Northern Ireland
20 relating to healthcare been the subject of any type of
21 overall analysis or rationalisation since Covid?

22 **A.** Certainly there is ongoing work in relation to review of
23 the emergency response plan. There has been reviews of
24 the business continuity plans across the system in terms
25 of the structural elements that you've described and how

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1 **A.** I think in the specific examples that you've mentioned,
2 yes, however there are other examples where significant
3 work was progressed and did come to fruition, and that
4 work is ongoing on a, you know, daily, weekly, monthly
5 basis. So, on those specific elements that you've
6 mentioned, yes, where there was significant progress
7 made. In some areas more than others there were aspects
8 which certainly were not completed.

9 **Q.** All right.

10 Turning to another major issue in Northern Ireland,
11 the collapse in the power-sharing arrangements. It is
12 obvious, Sir Michael, from the evidence of Mr Swann last
13 week and from the material before the Inquiry that the
14 lack of an Executive, particularly between 2017 and
15 2020, had an adverse effect on, to use Mr Swann's words,
16 the preparedness of the health and social care system.

17 In terms of staffing, it led to inadequate staffing
18 levels, because key decisions simply couldn't be taken
19 by ministers in the absence of a power-sharing
20 arrangement, and the loss of strategic political
21 oversight led to, to use the words of the
22 permanent secretary, stagnancy on the part of the
23 civil service.

24 To what extent, from your vantage point as the CMO
25 within the CMO Group, did the collapse in the

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1 power-sharing Executive have an adverse impact?
 2 **A.** Maybe could I answer that in maybe three parts. I think
 3 there's sort of general context which I think is
 4 relevant. I think there is absolutely no doubt that the
 5 absence of ministers did have a significant impact on
 6 our ability to initiate new policy, develop new policy.
 7 We were not in a position to develop any relevant
 8 legislation, either primary or secondary legislation.
 9 And given that all of the work on what's referred to as
 10 the "Programme for Government", which is the
 11 cross-cutting work approved by the Executive where
 12 government departments put to ministers an agreed
 13 programme of work for government, we missed out and lost
 14 out on that -- the benefits of that cross-government
 15 approach.

16 I think specifically in relation to health there is
 17 no doubt that the -- it has been a very challenging
 18 resourcing situation over the last decade, and
 19 particularly so in Northern Ireland over the last
 20 five years, compounded by a reliance on annual budgets.
 21 So we were making decisions in terms of trying to live
 22 within budget allocations --

23 **Q.** So just to pause there so that we may be clear about
 24 what you're saying, one of the consequences of the
 25 absence of ministerial oversight is there is nobody in

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1 **Q.** -- resourcing every year, year-on-year?
 2 **A.** You know, a gap between what we needed and what we had.
 3 So the resulting position was that we were having to
 4 make decisions which were not necessarily decisions that
 5 should be made but decisions that had to be made.

6 **Q.** In addition, the Inquiry's heard evidence that the
 7 keynote report by Professor Rafael Bengoa, the Basque
 8 Country minister, he led, I think, an expert panel --

9 **A.** That's correct.

10 **Q.** -- review in 2016 called *Systems, Not Structures:*
 11 *Changing Health and Social Care*, which was I think
 12 envisaged to provide a framework for a significant
 13 reform in the Northern Irish health and social care
 14 system, that report couldn't be put into place either?

15 **A.** That's partly true. We were fortunate in that that
 16 report had been published prior to the collapse of the
 17 Executive, and in October 2016 the then health minister
 18 approved the *Health and Wellbeing 2026: Delivering*
 19 *Together*, which in essence gave the political mandate
 20 and the direction of travel for the transformation of
 21 health and social care services in Northern Ireland.

22 So we had a mandate within health, and we took
 23 forward, within the limitations of that mandate,
 24 a number of areas of work. So we developed a mental
 25 health strategy, we developed a cancer strategy, we

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1 position who can say, "Well, you can be permitted to
 2 move outside your budgetary constraints, we can take
 3 a different decision here in relation to resourcing or
 4 staffing levels because you've made a persuasive case
 5 that there ought to be a change", so in essence you have
 6 to simply live within your means, and those means were
 7 determined, of course, before the collapse in the
 8 power-sharing arrangements?

9 **A.** Yes, I mean, at that time there was limited ability for
 10 permanent secretaries to make those sort of decisions
 11 that you've alluded to, and that was guided by relevant
 12 court rulings and the Executive Formation and ...
 13 Functions Act, so you didn't have that same ability to
 14 move resources around and align them to priority.

15 That certainly impacted on decisions within health
 16 where we had to make savings, and obviously there's
 17 limited opportunity to make savings in health,
 18 particularly where you have got inflationary pressures
 19 of 6% per year because of technology and ageing
 20 population and their needs, and we had in that -- the
 21 five years running up to 1920 something in the region of
 22 a 2.90% growth on baseline each year, leaving a gap of
 23 3% every year on year for five years.

24 **Q.** Meaning a deficit in your --

25 **A.** Yes.

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1 published an elective care framework, we undertook
 2 a major review of unscheduled care services such as in
 3 accident & emergency departments, and that's now going
 4 through to the first phase of implementation --

5 **Q.** Just pausing there, I'm sorry, Sir Michael --

6 **A.** No, you're okay.

7 **Q.** -- there is obviously a gap between planning and having
 8 mandates and reviewing the position, and of course
 9 implementation, which will depend, necessarily, on
 10 resourcing, and you've agreed that, of course, during
 11 the hiatus there was no ministerial direction on
 12 resourcing?

13 **A.** I completely concur with that, and it was the point
 14 I was about to make, which is that we put together the
 15 building blocks, we did some very good work in terms of
 16 what we would need to do, but there were clearly
 17 elements of this that required ministerial decision, and
 18 those areas that required a ministerial decision we were
 19 not possible -- it was not possible for us to progress.

20 There was progress made, and I could give some
 21 examples, but I'm happy to expand if that would be
 22 helpful.

23 **Q.** The sum of that, Sir Michael, is that although progress
 24 was made and reviews and plans and guidance were drawn
 25 up, because, as you say, you had a mandate, overall

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1 there was a negative impact from the collapse in the
2 power-sharing agreement because of the lack of resources
3 and the sheer inability to be able to implement both
4 that report and the other reforms and resourcing changes
5 which were deemed necessary; that was the sum outcome,
6 if you like, of the absence of ministerial oversight?

7 **A.** I think it had an impact, I don't think there's any
8 question of that. Had we had ministers, I think it's
9 a reasonable question to ask whether we would have been
10 able to take further all of that work any more quickly,
11 because the work still needed to be done to inform
12 ministerial decisions. But absolutely, we -- there were
13 significant elements of it that we could not implement
14 without a ministerial decision.

15 **Q.** May I ask you about the Department of Health department
16 risk registers?

17 **A.** Yes.

18 **Q.** Is that a process in which the CMO plays a significant
19 role?

20 **A.** I certainly sign off on it. It's developed by
21 colleagues within CMO Group, the relevant policy areas,
22 and certainly would be brought to my attention, and
23 I would see the details of that, I would have
24 an opportunity to ask any questions, seek any
25 clarification, and ultimately, as the risk holder, would

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1 by participating in the Pandemic Flu Readiness Board,
2 leading the CCG(NI) subgroup, and -- over the page --
3 work in relation to the contribution to the UK Draft
4 Pandemic Bill, the development of pan flu guidance for
5 Northern Ireland incorporating primary, secondary and
6 social care, delivering a work programme to include
7 training, testing and exercising, and then -- at the
8 bottom of the page -- management of health
9 countermeasure stockpiles.

10 Can you recall, Sir Michael, to what extent the
11 identification of that risk was debated within the CMOG
12 or the Department of Health in 2018, particularly from
13 August, which is when I think that was published or made
14 available?

15 Was there a significant level of concern that that
16 risk identified in the left-hand side of the page was
17 required to be mitigated and, in essence, things had to
18 be done on quite a number of fronts in order to make
19 sure that the risk could be properly mitigated?

20 **A.** I mean, I can't recall the specific discussions at that
21 time. What I would say is that, certainly going back as
22 far as when I took up post in 2006, pandemic flu and the
23 risks associated with it has always been on the
24 departmental risk register.

25 The normal process whereby that would be assessed

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1 approve that to be considered by the top management
2 group and subsequently by the departmental board.

3 **Q.** May we have, please, INQ000185379, which is the
4 2018/2019 Department of Health department risk register.

5 This is page 24 of the version, Sir Michael, so that
6 you can get your bearings in relation to it, and it
7 shows a particular risk, row DR6, in the bottom
8 left-hand corner:

9 "The health and social care sector may be unable to
10 respond to the health and social care consequences of
11 any emergency (including those for which the [Department
12 of Health] is the lead government department) due to
13 inadequate planning and preparedness which could impact
14 on the health and wellbeing of the population."

15 Now, that, of course, doesn't reflect the reality,
16 it is the identification of a potential risk.

17 If we go back up, please, to page 24, the rating
18 given for the residual risk and the risk once it has
19 been treated, that is to say once it has been mitigated
20 or thought has been given to how the risk may be reduced
21 by a response, the ratings are assessed to be high and
22 medium, both for impact and likelihood in both cases,
23 that's to say current and treated, and then a number of
24 actions are identified: developing and reviewing
25 strategic frameworks, developing a pan flu preparedness

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1 would involve my receiving the assessment of the risk,
2 as I said, have an opportunity to engage with the team,
3 it would then being discussed on more than one occasion
4 in its development by the top management group of the
5 department, which includes the perm sec in respect of
6 policy leads, including myself, and in due course would
7 be approved. It would be considered then by the
8 departmental board, who would have an opportunity to
9 interrogate it, ask questions, ask for further work or
10 assurance --

11 **Q.** Then it is brought together and finalised?

12 **A.** Then in due course it would be reviewed on a quarterly
13 basis by the risk holder, ie me, by TMG, by the
14 departmental board, and then by -- separate to that
15 again, by the departmental audit risk and assurance
16 committee, which basically provide assurances to the
17 permanent secretary if there are any gaps in the risk
18 register or in the controls within the risk register
19 about which he should be concerned.

20 **Q.** So were you the risk owner for this risk, DR6?

21 **A.** Yes. These are all corporate risks, departmental risks,
22 but the approach at that time was there had to be one
23 nominated risk holder, and I was the nominated risk --

24 **Q.** Is that why your name appears in column 4 under SRO, for
25 senior responsible officer?

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1 A. That's correct, yes.

2 Q. Why is the column "Actions completed, completion date
3 and owner" blank on this 2018 to 2019 risk register?
4 For this risk. Not, I should say, for other risks, but
5 for this risk.

6 A. Yeah, because what we have here is a template for
7 completion, as opposed to a completed template.

8 Q. But there are other risks identified on this document,
9 for which there are completed actions?

10 A. Yes, but the point is that this is a living document and
11 it's updated on a quarterly basis, so that column to the
12 extreme right, which is the action completed, would
13 inform the column that you've highlighted in blue in
14 terms of what progress had been made or why there had
15 been no progress made in a particular area.

16 Q. So at the date of the making available of this variant
17 of the risk register, this form of the risk register,
18 there were no actions completed and therefore nobody
19 could write into that column anything by way of actions
20 completed, completion date or ownership?

21 A. No, I don't think that's a reasonable conclusion.
22 I think that this -- I mean, there will be completed
23 documents where these actions are completed, and I'm
24 sure they can be provided to the Inquiry, for any
25 particular date. So, as I say, it's a living document

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1 the departmental --

2 A. The departmental --

3 Q. -- emergency operational centre?

4 A. Correct.

5 Q. That was in the context, was it not, of
6 Operation Yellowhammer?

7 A. It certainly would have been related to that, but again
8 it was also related to preparation for pandemic flu. It
9 so happened that Yellowhammer was going on in the
10 background as well in terms of EU exit preparation.

11 Q. Was there specific testing of the operational
12 arrangements, the emergency response arrangements, in
13 the context of planning or emergency preparedness for
14 infectious disease? Because I must suggest to you that
15 although it's clear that the Hub was operating for
16 Operation Yellowhammer and also the departmental
17 emergency operational centre, it doesn't appear that
18 they were operating for the purposes of readying the
19 taskforce for pandemic planning.

20 A. I mean, the EOC operates generically irrespective of
21 what the threat or hazard is. It isn't a specific
22 response mechanism or co-ordination mechanism to
23 a particular threat. In many respects --

24 Q. But -- I'm sorry, Sir Michael -- that action planned was
25 to deliver a work programme to ensure clear

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1 and this is a template for completion.

2 Q. By January 2020 and the eve of Covid, and the making
3 available of the subsequent risk register, presumably
4 for 2019 to 2020, do you know whether or not those
5 actions which are identified as being planned were
6 completed?

7 A. Some were completed, others weren't. I mean, I can go
8 through them if that would be helpful to you.

9 Q. Yes, that would be. Perhaps we can start with the
10 pandemic flu preparedness programme?

11 A. Yes, that was completed. The emergency response plan
12 was updated, signed off in January 2019 and published in
13 February 2019.

14 Q. The pandemic flu guidance for primary, secondary and
15 social care?

16 A. We've just alluded to that. That was progressed but not
17 to completion. A draft had been received but it
18 required further work.

19 Q. So it was not completed by January 2020?

20 A. That is correct, but -- progressed but not completed.

21 Q. The work programme for training, testing and exercising?

22 A. That was completed. The training was completed in
23 June 2018 with a full exercise of the emergency
24 operations centre in November 2018.

25 Q. So that was the setting up and the running of the Hub or

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1 understanding of roles and responsibilities of key
2 responders and familiarisation with key activities and
3 processes in the context of planning and preparedness
4 which could impact on the health and wellbeing of the
5 population?

6 A. Yes.

7 Q. So rather different?

8 A. No, I think that's the point I'm making, is that the
9 activity of the EOC is agnostic to whatever the threat
10 is. Its role, function, its communications in and out
11 to the department from the health service, the sharing
12 of information across government, its support to myself,
13 if it's activated, in chairing the strategic cell, is
14 agnostic to whatever the threat is. So it's about the
15 process of informing -- taking information in to inform
16 strategic decisions by myself, if I was chairing gold,
17 and sharing that strategic information out across other
18 departments and back out to the health service.

19 So in many respects it's neutral in terms of what
20 the particular threat is, so it provides a generic
21 function.

22 **LADY HALLETT:** Mr Keith, is that a convenient moment?

23 **MR KEITH:** Yes, my Lady, it is.

24 **LADY HALLETT:** I shall return at 3.15.

25 **(3.03 pm)**

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(A short break)

(3.15 pm)

MR KEITH: May we have back up, please, document INQ000185379, page 14, and a different risk this time, Sir Michael, DR1, that available financial resources are insufficient and are not deployed effectively to ensure that essential services are maintained.

The risk is identified both pre and post mitigation as high, which is why it's red. A number of actions are planned, with target dates and identification of ownership, and then, in relation to actions completed, completion date and owner, the essential position was this, wasn't it, that, as you identified in your witness statement, there was a shortfall, so resources were simply not enough to be able to meet the anticipated demands of the Department of Health?

A. Correct.

Q. In your witness statement you say that that's an acknowledged area of vulnerability for the department, and you also make the point that it was difficult then for the department to maintain readiness at a high level, in anticipation of future pandemics, and that it would be likely to remain so.

Can you just tell us, please, whether or not this position continued up to the time of the pandemic? This

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However, that was rapidly addressed.

So there is absolutely no doubt that there were very significant challenges during that period.

Q. So, in conclusion, whilst Operation Yellowhammer, the operation for dealing with the potential consequences of a no-deal EU exit, had some benefits in terms of interdepartmental training, training up members of staff who could be utilised to stand up for crisis management, benefits arising out of better developed supply chains, a better understanding of medicinal supplies and how to get medicine in the event of border problems, none of that could take away from the stark reality which was, in terms of resources and training and staff numbers, the Department of Health was in a pretty woeful position on the onset of the pandemic?

A. I wouldn't use the word "woeful", I think it was a very challenging position. I think the challenges of the pandemic were unprecedented. We had resource but we did not have the strength and depth that was required to mount what was an extremely sustained response to the pandemic.

Q. The lessons learned documentation shows there were insufficient staff numbers going into the pandemic --

A. Yeah.

Q. -- and there was a resource shortfall in the two years

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is a 2018/2019 risk register. Was it the same position throughout the entirety of 2019 and into 2020?

A. Yes, and probably has deteriorated since that time.

Q. In your witness statement, you also refer to a report from the Department of Health Emergency Planning Branch and a lessons learned review. It's dated November 2021.

It's INQ000188797, page 9, please.

Right at the bottom of the page, "Training, validating and review":

"Despite training from Operation Yellowhammer during 2019, at the beginning of the response there were insufficient fully trained staff to cope with the volume of information or the pace of the pandemic."

So there wasn't just the resourcing issue, that had fed through to an absence or an insufficiency in the correct number of fully trained staff to be able to cope with the position as the department went into the pandemic?

A. Yes, there were probably two separate aspects to that.

We had 62 staff trained, but even that, given the demands of the pandemic, initially wasn't sufficient and we had to go out for more volunteers.

The second aspect that compounded it was the remote working. We were not set up for the level of remote working that was required and that was an added problem.

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leading up to it; that is correct, is it not?

A. I think it's a fair summary, in -- but I think this was a document that was written at the time with the experience of the first wave of the pandemic.

Q. So that we're absolutely clear, Sir Michael, that paperwork shows that the pre-existing position on the onset of the pandemic was a shortfall in resources and insufficient numbers of staff. It wasn't that the demands of the pandemic revealed that there wasn't enough resources to be able to deal with the pandemic that ensued, or that there weren't enough members of staff to be able to deal with the pandemic as it developed, it was that, objectively, the department was insufficiently resourced and insufficiently manned at the moment that the pandemic struck?

A. I think it is fair to say that there were very significant staffing problems, you know, I'm not -- I would agree with that. There was capacity, there was capability, there was training, but, as we began to respond to the pandemic, even that was insufficient to mount the response that was required.

Q. Of course, because the scale of the pandemic --

A. Yes.

Q. -- was outwith anybody's imagination?

A. Yes.

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1 Q. All right.
2 Another topic, please, which is the Health and
3 Social Care Influenza Pandemic Preparedness and Response
4 Guidance 2013.

5 Is this the document which was produced largely in
6 reliance upon the United Kingdom 2011 pandemic influenza
7 strategy, which was itself based upon the learning and
8 the outcome from the H1N1 swine flu and the report from
9 Dame Deirdre Hine?

10 A. In part, yes. So there were three inputs to that
11 document. The first, as you say, was the UK strategy
12 itself; the second was the recommendations arising from
13 Dame Deirdre Hine's review; and the third element was
14 then a sort of lessons learned report that we did
15 internally within the department, and those three
16 elements contributed to that document, yes.

17 Q. We've noted that the document is very similar to the
18 Welsh variant, that is to say the Wales Health and
19 Social Care Influenza Pandemic Preparedness and Response
20 Guidance. I'm not going to torment you by asking you
21 which country prepared its guidance first, but one or
22 both of the two countries must have had half an eye at
23 least on the other one's guidance?

24 A. I think it would be normal practice. We worked very
25 closely together across the UK in terms of developing

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1 for responding to the Covid pandemic. But you're
2 absolutely correct that our guidance was based on that
3 and, you know -- as I've said in my evidence statement
4 and has been said by others -- we absolutely do need
5 a pandemic flu plan, but we also need something that is
6 more generic, that is agile enough to be scaled up very
7 quickly but then can be specific enough to be tailored
8 to the particular pathogen, the particular virus or
9 other agent, and then the particular control measures
10 put in place depending on how it's transmitted.

11 Q. And indeed the risk assessment process at United Kingdom
12 level, and also nationally now, reflects the broader
13 range of scenarios which were absent from that original
14 strategy; and it had no consideration, did it, of the
15 need for mass diagnostic testing or mass contact
16 tracing, or mandatory quarantines or self-isolation, or
17 any of the countermeasures which may have been thought
18 appropriate for a non-influenza catastrophic pandemic?

19 A. I think that's fair comment. I think it makes reference
20 to contact tracing. However, I do not believe it was
21 envisaged that contact tracing or indeed community
22 testing would be taken to the scale that we did
23 subsequently in the Covid-19 pandemic. So I would agree
24 with that.

25 Q. Northern Ireland is of course in a unique position,

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1 guidance and we will share documents with each other --
2 I mean, that I think is a strength -- and certainly we
3 did share our document with colleagues in Wales. But,
4 then again, we also benefit from colleagues in Wales and
5 Scotland and England sharing their documents with us.
6 So I think that's a strength which I hope continues.

7 Q. But all those strategies were all themselves aligned to
8 the United Kingdom approach in 2011, about which my Lady
9 has heard a great deal of evidence.

10 A. Yes.

11 Q. Does it follow, Sir Michael, that because of that close
12 alignment, the 2013 guidance may be said to have
13 suffered from the same strategic errors -- if that is
14 what my Lady finds in due course -- as the 2011
15 document: the absence of detailed consideration of the
16 variable and inherently unpredictable characteristics of
17 a pandemic, a zoonotic pandemic outbreak, an absence of
18 any debate about the consequences of differing levels of
19 transmission, of incubation periods, of viral loads, or
20 asymptomatic transmission and the like?

21 A. I mean, I think, you know, the 2011 document makes
22 passing reference to the ability to adapt the UK
23 pandemic plan. I think it's inevitably the case that,
24 with the experience that we've now all lived through,
25 that that document did not provide any effective basis

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1 because it is a separate geographic entity from the
2 United Kingdom, it shares a land border with another
3 country. Why was that -- why were those specific
4 characteristics of Northern Ireland not reflected in its
5 own 2013 guidance? There is no consideration of what we
6 may call the single island epidemiological issue. The
7 strategy and the guidance was drafted very much as if
8 Northern Ireland was the United Kingdom, but there are
9 unique circumstances prevailing there.

10 A. Again, I suppose a high level point is that there's and
11 always has been and remains very close co-operation on
12 a north/south basis in relation to a whole raft of
13 policy areas, and also --

14 Q. And we will come back to that, Sir Michael.

15 A. I think in relation to the question that you ask, there
16 are probably two main reasons for that. One is an issue
17 of scale, and the second is, if I might put it broadly,
18 a constitutional issue.

19 In terms of scale, we benefit hugely from being
20 integrated into the UK system in terms of pandemic
21 preparedness at all levels, both in terms of
22 preparedness, planning and in response. We are a very
23 small department, a very small group of departments. We
24 simply could not replicate the expertise that exists or
25 indeed the scale of work that takes place within the

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1 other jurisdictions, and we're dependent on that at all
2 sorts of levels.

3 We're dependent on it from the point of view of
4 scientific advice from SAGE and the various expert
5 groups; we're dependent on it in relation to the risk
6 assessments from the UK Health Security Agency and from
7 the National Security Risk Assessment; and we're also
8 dependent on it from the point of view of response, so
9 in terms of the clinical countermeasures, management
10 board, in terms of the procurement of PPE at a national
11 level, the procurement of vaccines, antibiotics. And we
12 benefit from it, as we discussed earlier, from all of
13 the work that was taken forward, for instance, through
14 the Pandemic Flu Readiness Board, in terms of the
15 Pandemic Flu Bill.

16 So we could not, in our own right, replicate all
17 that, and we are crucially interdependent on that work
18 that occurs at a United Kingdom Government level.

19 **Q.** Why was it not open to the Department of Health to
20 replicate that work, to take the advantage and the
21 benefit of the scientific advice, the generic thinking,
22 the guidance and the policies which had been no doubt
23 carefully thought about in London and promulgated
24 throughout the rest of the United Kingdom, and consider
25 alongside that material the obvious fact that

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1 So I think the question is probably not a technical
2 issue for myself, rather a policy decision for
3 ministers. As I've alluded to in my statement, I think
4 there is real strengths and would be much merit in
5 considering all of this at a UK and Ireland level.
6 Indeed, one would extend that across to the common
7 travel area. Because, again, pandemics don't respect
8 borders and there is freedom of movement of people
9 within the common travel areas; there should be.

10 So I did allude to exercises which test that, not
11 just at the operational level, not at just the policy
12 level, but also at the ministerial level.

13 **Q.** Let me put the question a different way, Sir Michael: it
14 is obvious, and there's no significance in this
15 feature --

16 **A.** No.

17 **Q.** -- it's well known that there are a number of
18 sophisticated and significant cross-border entities
19 which look at matters which cross the land border in the
20 island of Ireland. You have given examples of bodies
21 dealing with obesity prevention: the All-Ireland Food
22 Poverty Network, the North South Alcohol Policy Advisory
23 Group, the British-Irish Council workstream, there's
24 work on suicide prevention cross-border, and there is --
25 as we've heard last week -- the Cross Border Emergency

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1 Northern Ireland is part of an island --

2 **A.** Yeah.

3 **Q.** -- that no pandemic would respect a land border with the
4 Republic of Ireland, and that there were obviously
5 advantages in being part of an island and that proper
6 sensible consideration of countermeasures would pay due
7 regard to that feature, but that thinking is absolutely
8 absent?

9 **A.** I think it probably comes on to my second point.
10 I absolutely agree with you that -- the premise of your
11 question, that pandemics know no borders. The
12 constitutional reality is that we are part of the
13 United Kingdom --

14 **Q.** Of course.

15 **A.** -- and in relation to, you know, reserved matters such
16 as international travel, for instance, that was
17 an important consideration in the pandemic, that is
18 a matter which is reserved.

19 If one considers also then, as part of the response
20 in terms of the funding, the procurement of vaccines,
21 the funding of furlough, we are crucially dependent on
22 the United Kingdom Government to provide that, and when
23 the COBR is activated and the UK civil contingencies
24 arrangements are activated, Northern Ireland is part of
25 that.

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1 Management Group.

2 So there's no surprise --

3 **A.** No.

4 **Q.** -- the existence of the Republic of Ireland and the
5 southern part of the island of Ireland is an obvious
6 feature.

7 So my question to you, though, is: given all that,
8 why was there no consideration epidemiologically in that
9 guidance -- in the 2011 guidance, to the strategies, the
10 policy documents that followed, the 2013 guidance in the
11 case of the Department of Health -- to the obvious
12 feature that it is a single epidemiological island and
13 that any sensible debate of countermeasures and the
14 spread of a virus would have to take that into account?

15 **A.** Well, I think, if I may say so, I think it's broader
16 than the single epidemiological unit that is the island
17 of Ireland. It goes much further, and I think that
18 involves the UK and the island of Ireland, and I think
19 that's the point that I was making: that I think that is
20 a policy matter for respective governments to consider.
21 Although I'm well outwith my area of competence to speak
22 on the responsibility of governments, but I do think
23 that that is a matter for governments to consider those
24 interfaces.

25 Now, there are mechanisms in relation to -- you

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1 mentioned the British-Irish Council, et cetera -- there
 2 are mechanisms in place, at a very practical level, in
 3 terms of -- and answering the question about the common
 4 epidemiological approach -- at an operational level, at
 5 a Chief Medical Officer level, we did take common
 6 epidemiological approaches to the border counties where
 7 we often had hotspots one side of the border, the other
 8 side of the border, and we requested -- the Chief
 9 Medical Officer in the Republic of Ireland and myself
 10 requested the Public Health Agency and the Health
 11 Service Executive to work collectively along with local
 12 government, broadcast media, civil society, in
 13 addressing those hotspots.

14 So at a very practical --

15 **Q.** So once --

16 **A.** -- that works.

17 **Q.** Forgive me. Once the pandemic had started --

18 **A.** Yeah.

19 **Q.** -- you met weekly with your counterpart from the --

20 **A.** Yes.

21 **Q.** -- Republic of Ireland in order to address that obvious
 22 feature of your joint position on the island?

23 **A.** Sure.

24 **Q.** So that only highlights, though, the absence of any sort
 25 of debate or formalised or regular --

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1 for the future and any future pandemic preparedness.

2 **Q.** All right.

3 Chief Scientific Advisers. In Northern Ireland
 4 there is no general Chief Scientific Adviser for the
 5 Northern Irish government, for the Executive, but there
 6 are two CSAs, are there not, one attached to the
 7 Executive Office and a second attached to your own
 8 department, the Department of Health?

9 Was it apparent prior to the pandemic that there was
 10 a lacuna in the system insofar as there was no general
 11 unattached Chief Scientific Adviser for the government?

12 **A.** Just to take it back a little bit, there are two Chief
 13 Scientific Advisers, one within the Department of
 14 Health, and the second one within the department --

15 **Q.** Oh, DAERA?

16 **A.** Yes.

17 **Q.** I'm sorry, yes, you're quite right.

18 **A.** The Department of Agriculture, Environment and Rural
 19 Affairs.

20 There is a second interim sort of chief government
 21 scientific adviser that has been appointed as an interim
 22 and, as you heard from Denis McMahon's evidence, there
 23 had been a number of attempts to appoint a substantive
 24 Government Chief Scientific Adviser, but that -- I mean,
 25 your -- the point is well made that there is not

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1 **A.** Sure.

2 **Q.** -- meetings to deal with pandemic preparedness in
 3 advance of --

4 **A.** But that wasn't --

5 **Q.** -- the pandemic?

6 **A.** I mean, the point I would make is we did exactly the
 7 same in 2009 during the H1N1 pandemic. So at that level
 8 there is very good and effective co-operation, always
 9 has been --

10 **Q.** At the operational level?

11 **A.** At the operational level, supported by respective Chief
 12 Medical Officers. I think the wider question in terms
 13 of: could we -- could the improvement at
 14 a United Kingdom Government/Irish Government level,
 15 you know, I think is a matter for others. Because there
 16 are policy decisions in that space, and a good example
 17 of that was the alignment or non-alignment of
 18 international travel restrictions at various points in
 19 time.

20 I mean, I think of relevance -- if I could give
 21 an example very briefly -- was discussion at the
 22 Executive with the First Ministers of Scotland, Wales
 23 and the Chancellor of the Duchy of Lancaster about
 24 a sort of five nation, two island approach, and I think
 25 that's the sort of space that we do need to think about

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1 a central government Chief Scientific Adviser. I think
 2 that is an inherent weakness.

3 **Q.** The CSA role was, at least pre-pandemic, part-time.
 4 It's obvious that very little advice was sought from
 5 Professor Young, who was the Chief Scientific Adviser
 6 for the Department of Health.

7 **A.** No, again, I did hear that in questions and evidence
 8 provided during Robin Swann's session. It is not
 9 accurate to state that the departmental -- Department of
 10 Health Chief Scientific Adviser did not provide advice
 11 to the department. He provided it on an ongoing basis,
 12 on a number of really important areas such as the Health
 13 and Social Care Research and Development Strategy, the
 14 Northern Ireland genomic strategy, the Northern Ireland
 15 Rare Diseases strategy, but that advice was provided to
 16 the Department of Health. I think --

17 **Q.** So may not have found its way to the Executive Office
 18 and to the attention of --

19 **A.** Yes, and I think that's the point that --

20 **Q.** -- ministers there?

21 **A.** -- Professor Young was making, that he had not been
 22 asked to provide advice directly to the Executive. It's
 23 just a statement of fact.

24 **Q.** So there is a plan for the future recruitment of a chief
 25 governmental or a governmental Chief Scientific Adviser.

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1 Can you say to what extent those plans have developed?

2 **A.** I mean, that's been taken forward by the Executive
3 Office, as I understand, so I couldn't really comment on
4 the detail of that.

5 **Q.** All right.

6 Within the Department of Health, was there any
7 contribution to the issue of pandemic preparedness on
8 the part of the CSA within the Department of Health?

9 **A.** No, the contribution to pandemic preparedness, apart
10 from myself, would've involved the two Deputy Chief
11 Medical Officers, the senior medical officer for health
12 protection, who would have provided specific scientific
13 public health advice, and other colleagues within the
14 Public Health Agency as necessary.

15 So the role of the departmental Chief Scientific
16 Adviser was really in response mode, where with myself
17 he would support me in providing scientific and public
18 health advice to the health minister.

19 **Q.** And to what extent was the departmental CSA linked into
20 the UK CSA network, or to the well known committees
21 concerned with disease and emergency outbreaks,
22 for example SAGE and SPI-B and NERVTAG and HAIRS and so
23 on?

24 **A.** I mean, we benefit hugely from those expert committees,
25 and our representation on them, in whatever capacity

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1 absence due to ill health, the department was
2 represented by either himself or his deputy, because we
3 appointed a deputy for a period, at all of the SAGE --
4 well, certainly almost all of the SAGE meetings.

5 **Q.** But it's obvious, going forward, that in respect of any
6 health emergency affecting Northern Ireland, there must
7 be full participation by its officials on the relevant
8 bodies including SAGE?

9 **A.** Yes, I mean -- and I think Sir Chris covered this as
10 well -- I mean, the only person that is entitled to
11 full-time membership is the chair and obviously it
12 depends on the nature of the emergency. Certainly if
13 it's a health emergency I think -- my belief is that
14 there would be absolute requirement for us to be full
15 members from the outset.

16 **Q.** Do you know what the position is in relation to the
17 JCVI, the Joint Committee on Vaccinations and
18 Immunisations, and also the Advisory Committee on
19 Dangerous Pathogens: are they committees on which
20 Northern Ireland has observer status or full participant
21 status?

22 **A.** We have observer status on both of those committees. In
23 relation to JCVI we, from 2015, we have both observer
24 status and also an individual who is now a full member
25 of JCVI and also able to attend subgroup meetings of

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1 there, as observers or as full members. I think, as
2 Sir Chris Whitty mentioned in his evidence, a very
3 salient point, which is there is a difference in rigour
4 and co-ordination in slow time, ie not in an emergency
5 as opposed to an emergency situation such as the
6 pandemic. They worked extremely well during the
7 pandemic. I think there needs to be a further look at
8 and examination of how they are co-ordinated in other
9 times.

10 **Q.** Professor Young was able to get the benefit of SAGE
11 because of course he became a full-time attendee from
12 March 2020 onwards.

13 **A.** Yes.

14 **Q.** Prior to that time, Northern Ireland had only observer
15 status, did it not, on SAGE, and wouldn't necessarily be
16 invited to attend?

17 **A.** Certainly I attended meetings in February of SAGE,
18 a number of SAGE meetings. I think it's fair to say
19 that there were many demands for a number of meetings
20 over that period. It was often difficult to attend
21 meetings and also, I think as you've heard from other
22 witnesses, initially those were on conference calls and
23 the sound quality was not good. And certainly
24 throughout the pandemic, and particularly after the
25 return of the Chief Scientific Adviser from a period of

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1 JCVI. So we are well represented on JCVI.

2 **Q.** You, in April of 2020, established the Strategic
3 Intelligence Group, chaired by the CSA --

4 **A.** Correct.

5 **Q.** -- I presume, from your department, so the departmental
6 CSA, and including members from a number of august
7 universities and academic institutions and the PHA and
8 also, I think, members of your own department as
9 experts.

10 Why, if you were receiving sufficient scientific and
11 technical advice from the UK bodies, was it necessary to
12 set up the Strategic Intelligence Group?

13 **A.** I mean, it is good practice that the provision of
14 scientific advice is open to scrutiny, and up until the
15 establishment of the strategic intelligence group, the
16 co-ordination of that advice to ministers was being
17 provided by myself, with input from Professor Young and
18 the two Deputy Chief Medical Officers. We felt that,
19 without seeking to replicate or second-guess SAGE, we
20 felt there would be much merit in a wider group of
21 individuals considering not just the SAGE advice but
22 other publications, other evidence emerging from other
23 parts of the world, and actually to take that and apply
24 it in the context of the trajectory of the pandemic in
25 Northern Ireland.

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1 So I have to say it was very useful. It applied, at
 2 one sort of degree of remove, challenge to us in terms
 3 of our thinking which then informed our advice to the
 4 health minister.

5 **Q.** What about forecasting and modelling? Was the system
 6 pre-pandemic adequate for the purposes of providing
 7 the Executive with sufficient information about
 8 modelling and forecasting in the event of a pandemic?

9 **A.** We certainly improved it. We did have full access to
 10 Northern Ireland-specific modelling from the subgroup of
 11 SPI-M, which is a subgroup of SAGE. That was specific
 12 to Northern Ireland but it wasn't as current and
 13 real-time as we wished, so I asked the Chief Scientific
 14 Adviser on his return to establish a Northern Ireland
 15 modelling group, which he did. That continued then to
 16 provide as close to real-time modelling and various
 17 scenarios as we possibly could, and in due course
 18 I directed the PHA to build that capacity and capability
 19 into their organisation, which has now happened. So we
 20 now have that capacity within the Public Health Agency.

21 **Q.** But you ordered the capacity to be set up --

22 **A.** Yes.

23 **Q.** -- under the guidance of the CSA and then latterly under
 24 the PHA --

25 **A.** Yeah.

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1 identified following the exercise was this lesson: that
 2 operational contact tracing mechanisms with the
 3 potential for scaling up need to be developed at board
 4 and trust level. A further recommendation revolved
 5 around the fact that there appeared to be insufficient
 6 discussion heard on primary prevention to avoid spread
 7 of the assumed SARS coronavirus, and also that
 8 participants in that exercise had voiced concerns about
 9 contact tracing capacity. Indeed, in the questionnaires
 10 filed by the participants, almost every participant
 11 mentioned the absence of sufficient contact tracing
 12 capacity.

13 That was a long time before 2020, of course, but
 14 many of the aspects of the system or at least the
 15 inadequacy in terms of sufficient mass testing, mass
 16 contact tracing and the need to prevent spread at
 17 an early stage of the outbreak, can all be traced back
 18 to some of the concerns expressed following
 19 Exercise Goliath, and I wanted to know, therefore, what
 20 you knew of the extent to which those recommendations
 21 and concerns had been acted upon?

22 **A.** I'm, as I say, not in a position to answer that.
 23 I would assume that, as is normally the case, that those
 24 recommendations would have been progressed and taken
 25 forward to updates of the emergency response plan, which

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1 **Q.** -- because the provision of information that you were
 2 receiving pre-pandemic, or at least on the outset of the
 3 pandemic, was not sufficient for your purposes?

4 **A.** I wouldn't go so far as to say that. What I would say
 5 is that it was sufficient but it wasn't as real-time as
 6 we would wish it to be. What is really important, as
 7 we've heard from previous witnesses, is that we take the
 8 data that we have, which was Northern Ireland-specific,
 9 and we ensure that is as close to real-time and
 10 projecting potential scenarios as we can to assist
 11 ministers in their decisions.

12 **Q.** All right.

13 Exercises, and the outcome of SARS. Following SARS,
 14 did the Department of Health carry out a one-day
 15 exercise called Exercise Goliath?

16 **A.** Yes. I struggled to remember this earlier when you
 17 mentioned it.

18 **Q.** It was before your time, I should say, Sir Michael.

19 **A.** Well before my time, but it does take me back in time,
 20 because it was 2003. However, I was -- and did take
 21 part in that exercise. I was then the medical director
 22 in the Royal Group of Hospitals Trust, as it was then,
 23 the predecessor of the Belfast Health and Social Care
 24 Trust, and did take part in that exercise.

25 **Q.** Now, its relevance is that within the lessons that were

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1 I think was first developed in, from memory, in 2009.
 2 That is an assumption; I can't say that with absolute
 3 certainty.

4 **Q.** But it didn't provide for mass contact tracing or surge
 5 capacity --

6 **A.** Sure.

7 **Q.** -- on the level which was anticipated in the
 8 recommendations from Exercise Goliath?

9 **A.** No, and I think therein is the difference, because again
 10 this was, you know, looking at it, rightly or wrongly,
 11 through the lens of a high-consequences infectious
 12 disease with very limited potential to become
 13 a pandemic. So it wasn't looking at these requirements
 14 through: might we need this for a pandemic? It was
 15 looking at: are these needed now for this
 16 high-consequences infectious disease which has
 17 limited -- compared to coronavirus, SARS-CoV-2, has
 18 limited person-to-person risk of transmission except
 19 particularly in those who are in close contact, such as
 20 in the healthcare environment?

21 So I think that that, I suppose, leap of thinking
 22 and challenge in terms of thinking did not occur, I can
 23 only assume, in terms of whether these are capabilities
 24 that we may need to deploy in a scenario where we are
 25 dealing with a novel pandemic virus.

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1 Q. And this comes back to the original strategic error, if
2 you like, in the 2013 strategy?
3 A. I think that's a fair comment.
4 Q. What about Exercise Cygnus? Exercise Cygnus focused,
5 for the purposes of Northern Ireland, on issues
6 concerning communication with UK scientific experts,
7 communication with the United Kingdom Government, and
8 cross-border co-operation with the Republic of Ireland.

9 By the time of the pandemic, had all those issues or
10 recommendations been implemented or were there still
11 concerns, as the Department of Health saw it, by
12 January 2020?

13 A. Well, certainly, as we covered earlier, there were
14 a number of elements of work which informed the five
15 workstreams under the Pandemic Flu Readiness Board,
16 which -- some of which had been progressed further than
17 others, but certainly not all completed.

18 In relation to Exercise Cygnus, we did provide input
19 back to inform the lessons learned report that was
20 produced at a UK level, but we also developed our own
21 lessons learned report, and we identified ten key areas
22 to be progressed. Of those, six were completed. There
23 were two that we didn't complete and couldn't complete
24 because it involved -- one of them, the
25 recommendation 2, involved a review of the UK strategy

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1 A. Could we just go back, sorry?

2 Q. Yes, of course.

3 A. What was on track, sorry?

4 Q. Excess deaths.

5 A. I think while I wasn't directly involved in that work --
6 as you say, the Department of Justice is leading on
7 it -- I think significant progress was made. I'm not
8 certain whether that was completed.

9 Q. Then "Sector resilience", in the middle of the page:
10 "The Executive Office is in the process of collating
11 information for issue to departments to commission
12 resilience assessments for their respective sectors."

13 What is sector resilience?

14 A. It refers to, in simple terms, the preparation for the
15 non-health related consequences of a pandemic. So the
16 impact across broader society, the impact on the
17 economy, the impact on education, the impact on a range
18 of other sectors. Again, that area of work and that
19 co-ordination of work on the non-health pandemic
20 consequences falls to TEO to progress.

21 Q. All right.

22 Then do we take it that the first bullet point,
23 "Resilience in health and social care, the preparatory
24 work to establish a group to draw up service-facing
25 surge and triage guidance" was the work to which you

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1 of 2011. Recommendation 5 involved a completion of the
2 communications around pandemic flu. Now, we had
3 submitted our updated action in April 2018, and there
4 was one recommendation which we will never complete
5 because it's about ongoing review and validation and
6 updating.

7 Q. In relation to the health and social care system?

8 A. Yes. So we did make significant progress on the
9 recommendations that we had identified, but there are
10 a number of recommendations within Cygnus -- which
11 I think has been already covered in the evidence of
12 others -- that were not completed.

13 Q. Could we have INQ000188776, please. This is a report
14 from November 2018 concerning the delivery of the Civil
15 Contingencies Group Northern Ireland resilience
16 programme progress report, it's called a progress report
17 template.

18 You can see there by November 2018 it asserts that
19 good progress has been made on a number of areas but
20 there are, at the bottom of the page, a number of issues
21 still requiring resolution, excess deaths, and then over
22 the page, that is on track.

23 Do you know whether or not that particular
24 recommendation, that particular issue of excess deaths
25 was completed?

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1 made reference at the beginning of your evidence --

2 A. That's correct.

3 Q. -- which, due to the demands of Operation Yellowhammer
4 and then the onset of the pandemic, was never completed?

5 The risk register for the Department of Health at
6 the time, to which we looked earlier, made plain that
7 the health and social care sector might be unable to
8 respond to the health and social care consequences of
9 any emergency due to inadequate planning and
10 preparedness.

11 So may we take it from that that there was a general
12 awareness that important parts of the post-Cygnus
13 recommendations, because of the demands of lack of
14 resource and insufficient staff numbers, were not being
15 brought to fruition?

16 A. I make a sort of distinction, if I might, and I hope
17 this is clear. The purpose of a risk register is to
18 ensure that the objectives of the department are met,
19 and clearly the department has a responsibility to
20 provide health and social care services in whatever
21 circumstances.

22 So the purpose of the risk register is to delineate
23 some of the critical risks. It's not to say there's
24 a significant risk that's going to happen; it's saying
25 "This is a risk that we need to be very mindful of, this

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1 is a risk that we need to be prepared for, and we need
2 to take a range of mitigating actions to prevent that
3 from happening".

4 Those that fall to health in terms of -- which we've
5 discussed earlier -- are some of those mitigations.
6 They're not all of them, but they are some of the
7 mitigations, because it's not an exhaustive list, it's
8 some of the high level mitigations that went into the
9 departmental risk register.

10 **Q.** But not all the mitigations were put into effect, for
11 the reasons you've described?

12 **A.** Yes.

13 **Q.** So the risks of course continue to exist, because they
14 were not all met by way of the mitigating measures, for
15 the reasons you've described?

16 **A.** And the only other point I would make is that risk will
17 always remain on the risk register, because this is
18 a material risk that will continue to remain on the risk
19 register, as it has done from 2008. It is a risk that
20 we always need to be mindful of. So it's never
21 resolved, it always needs to remain as a risk and, as
22 I say, there's a need to update the actions that we will
23 take to manage the risk.

24 **Q.** Quite. But, because it was a high level departmental
25 risk register, the department at a high level was aware

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1 taken forward by the United Kingdom Government and they
2 engaged with the Irish Government, I couldn't say.

3 **Q.** All right.

4 Inequalities and data disaggregation. In your
5 witness statement you refer to the development of
6 a vulnerable people protocol --

7 **A.** Yeah.

8 **Q.** -- to define vulnerable people, and I think it was your
9 people that developed the protocol in order to try to
10 identify persons who would need particular assistance,
11 of course, in the event of a pandemic.

12 When was that protocol drawn up? It was
13 pre-pandemic, was it not?

14 **A.** From memory, it was drawn up and completed in 2013
15 following a particularly severe episode of severe
16 weather that Northern Ireland experienced at that time.
17 So 2013, from recollection.

18 **Q.** Then was it subject to variation throughout and then
19 operated, utilised at the time of the pandemic?

20 **A.** Yeah, I think it was updated in 2016. I mean, I don't
21 know if you wanted me to expand on the approach taken
22 or ...

23 **Q.** Well, I was going to ask you: was it a protocol that
24 paid attention to the clinical needs of vulnerable
25 persons, or was it a protocol that was able to identify

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1 of the risks of course and the absence, in part, of the
2 proper mitigating steps being taken to mitigate the
3 risks?

4 **A.** In part but, as I say, there are a range of other
5 mitigations that are in place that are not necessarily
6 reflected in the department's risk register but would be
7 reflected in the risk register of other organisations
8 who would be mounting the operational response. So this
9 is a very high level departmental document.

10 **Q.** One of the other pieces of learning that came out of
11 Exercise Cygnus was the need to collaborate on
12 cross-border issues and "operate a joined-up strategy
13 with the Republic of Ireland". We have debated already
14 some of the bodies --

15 **A.** Sure.

16 **Q.** -- to which you personally were party. Did the system
17 of cross-border collaboration improve after 2016 and the
18 outcome of Cygnus, before 2020, or was it in a state of
19 stasis?

20 **A.** I can only comment from my own experience and knowledge.
21 You know, from taking up post in 2006, there has always
22 been very effective working relationships between both
23 departments, but that's not really the question.

24 As to whether or not the recommendations in respect
25 of cross-government collaboration were progressed and

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1 vulnerabilities ethically and socially as well?

2 **A.** It was more of a generic document. So the approach --
3 the initial thinking of this was that we could develop
4 a list of lists, with the appropriate safeguard to data
5 protection and personal information, of vulnerable
6 people right across Northern Ireland. Obviously that
7 wasn't possible.

8 So, as it was developed, it was agreed that we would
9 develop an approach which was based on those known to
10 Health and Social Care as vulnerable. Now, that can be
11 for a variety of reasons, it doesn't necessarily relate
12 to clinical vulnerability. There can be other reasons
13 why people are socially vulnerable.

14 So those known to the health service, those known to
15 utility services -- for instance, heat, light and
16 power -- who would be on their lists as particularly
17 vulnerable. Then we had a third category, which was the
18 emerging vulnerable. Because obviously in any
19 particular emergency situation there can be people who
20 emerge, as the emergency progresses, who were not
21 immediately obviously vulnerable at the outset.

22 So that was the approach that was taken.

23 **Q.** And who may not be known to the authorities and --

24 **A.** Who may not be known.

25 **Q.** -- and who may need to be discovered?

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1 A. Yeah.

2 Q. And was that protocol of great practical utility in the
3 face of the pandemic itself?

4 A. I don't believe it was of great practical utility, if
5 I'm honest. I think the nature of the decisions that
6 were made, the speed at which they were made, the fact
7 that we were making decisions which were about saving
8 lives, protecting the health service, meant that we had
9 to make -- ministers had to make decisions based on the
10 advice that we were providing, which didn't allow us the
11 time to consider as fully as we, perhaps on reflection,
12 could have; the impacts, the disproportionate impacts
13 that some of those non-pharmaceutical interventions, the
14 restrictions on people's lives were having on those who
15 were most socioeconomically disadvantaged.

16 Q. Because of course those countermeasures, the decisions,
17 were taken at a very high, generic level?

18 A. They were.

19 Q. They applied across the nation, and it was simply not
20 possible to have regard to the particular
21 characteristics which might have underpinned a more
22 vulnerable-centric approach to social restrictions?

23 A. I mean, I would agree with that. I mean, we did,
24 whenever we reviewed the restrictions -- which we did on
25 a three to four-weekly cycle -- we did give

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1 research base in place, to make sure that we have the
2 scientific wherewithal to be able to respond to the next
3 pandemic, but also this crucially: the training of
4 a core group of individuals with transferable skills who
5 can then be used to -- to use the current
6 nomenclature -- scale up to the next health emergency.

7 Is that the nub of it?

8 A. Yeah, there are a number of issues which we need to
9 maintain capacity. I mean, the temptation is always,
10 once an emergency is over, is to move on to the next set
11 of challenges and the resourcing pressures are such that
12 there's a high risk that that will happen. Our science
13 base or research base served us extremely well. One
14 area where we are deficient, as you've heard already, is
15 around diagnostics, the ability to scale that up at
16 speed.

17 In relation to your question, there is a need for
18 all of government to see this as part of the day job.
19 This isn't an add-on extra that those who are experts in
20 emergency preparedness and planning response do. We
21 will need those individuals, and continue to need those
22 individuals, who have those highly specialist skills and
23 experience and they need to be acknowledged, they need
24 to be maintained. But we also need a set of generic
25 skills right across government, in all government

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1 consideration to those who would be particularly
2 adversely impacted, and there were certain mitigations
3 that we put in place to try to address that. So we
4 worked very closely, for instance, with the Department
5 for Communities to try to provide the requisite
6 financial support and other support to those who were
7 vulnerable, those that were elderly, those who were
8 living alone.

9 We worked -- we identified, for instance, that
10 school --

11 **LADY HALLETT:** I think we're moving on to response now.

12 **MR KEITH:** Yes.

13 A. Oh, okay.

14 **MR KEITH:** I was going to let Sir Michael finish that
15 particular answer.

16 Finally, one last area, Sir Michael.

17 Much of your two witness statements are devoted to
18 the important issue of lessons and, in essence,
19 summarising what you say, you appeared to say this: that
20 research capacity was of enormous utility, it was
21 a great strength in the United Kingdom, and you were
22 able to take the benefit of it in Northern Ireland.

23 For the future, the best thing that could be done to
24 ensure that we have the capacity, the generic skills to
25 be able to meet the next pandemic is to keep that

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1 departments, so that an effective response can be
2 mounted and we can dial that capacity up and dial it
3 down as the need arises. Because unfortunately we will
4 not be able to maintain the level of response,
5 responsiveness at the level that it currently is, but we
6 will absolutely need to be able to scale that up at very
7 short notice when the need arises.

8 **MR KEITH:** Thank you.

9 My Lady, you have granted permission for two broad
10 areas of questions, I believe.

11 **LADY HALLETT:** I have.

12 Ms Campbell.

13 Questions from MS CAMPBELL KC

14 **MS CAMPBELL:** Sir Michael, my name is Brenda Campbell and,
15 together with my colleagues here and in Belfast, we
16 represent the Northern Ireland Covid Bereaved Families
17 for Justice.

18 I have been granted permission to ask you questions
19 across two broad topics, and I recognise from the outset
20 that to some extent they have been covered, but I wonder
21 if on behalf of the Northern Irish bereaved I might
22 address some further issues in relation to them.

23 The first is in relation to funding for the Public
24 Health Agency or, perhaps more broadly, public health
25 services in Northern Ireland.

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1 I don't know if you listened to the early stages of
2 evidence that my Lady heard, but we heard from
3 Professors Bambra and Marmot, are those names -- you're
4 nodding --

5 **A.** Yes.

6 **Q.** -- so I'm assuming you tuned in to their evidence.

7 But in their report and in their evidence they told
8 us that the UK fell from being ranked 26th globally in
9 terms of life expectancy in 2010 to 36th globally by
10 2020, so one per year, if in fact it was not more rapid
11 at different times.

12 They went on to say that life expectancy growth
13 started to stall across the UK in 2011, something had
14 changed in 2010 and 2011, and it coincided with a new
15 government whose stated ambition was austerity. We
16 heard some evidence in relation to that this morning
17 from Dr Kirchhelle as well, and his reference to the
18 King's Fund.

19 Now, you're nodding because no doubt those
20 statistics are worryingly familiar to you in your role
21 as the Chief Medical Officer, and indeed chief executive
22 of the Belfast Health and Social Care Trust across that
23 period.

24 When it comes to Northern Ireland, I wonder if we
25 could put up, please, Dr Kirchhelle's expert report,

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1 **A.** If anything, the situation has deteriorated since and --

2 **Q.** Yes.

3 **A.** -- I say, I don't recognise the detail of those figures
4 in relation to health protection, but I'm happy to talk
5 generally about the public health budget allocation.

6 **Q.** Well, that might be for a future module. But certainly
7 where Dr Kirchhelle leaves off in 2019, the situation is
8 that the Public Health Agency has suffered from real
9 term reductions over a decade-long period, and what the
10 bereaved families really are interested in is the impact
11 of that on pandemic preparedness.

12 Did you hear the evidence last week from Mr Swann?

13 **A.** I did, yes.

14 **Q.** You did, and he told us -- and it was dealt with in some
15 terms this morning and again in your evidence -- about
16 the need for transitional funding to be available in
17 Northern Ireland, not just so that the health service
18 could keep going but so that very much needed reform
19 could take place, and you agree with that evidence, I've
20 no doubt, in relation to --

21 **A.** I do, yes.

22 **Q.** -- Mr Swann.

23 What he went on to say was that the impact of that
24 or the consequences of that were, whilst there was
25 readiness for some aspects of pandemic planning, the

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1 it's INQ000205178, and I'm hoping it's page 79, and
2 paragraph 124 which deals specifically with
3 Northern Ireland. So it's INQ000205178, and
4 paragraph 124, please. There we go. Do you see it? It
5 just goes across two pages, I think.

6 So, Dr Kirchhelle in his report notes that:

7 "Between 2010 and 2019, the provision of
8 Northern Irish public health services was subject to
9 numerous reviews whilst suffering from stagnating or
10 reduced funding and political stasis. Following its
11 creation, PHA's overall budget for health protection
12 almost halved from £8.4 million in 2009/2010
13 ([which was] 15 percent of total programme funds) to
14 £4.5 million in 2012/2013 (7 percent of total programme
15 funds) before rising back to £7.7 million ([still only]
16 10.6 percent of total programme funds) in 2014/2015."

17 He observed that:

18 "Budgets during the second half of the 2010s
19 remained relatively static with the [Public Health
20 Agency] at times resorting to voluntary redundancies to
21 save costs, which negatively impacted staff morale."

22 That chimes to some extent with the evidence that
23 you were able to give us this morning, and should we
24 understand that your evidence is that the situation has
25 not improved since?

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1 aspects where we'd actually failed to invest and reform
2 our health service had an adverse effect on how we
3 responded as a Department of Health and as a society in
4 regards to the additional supports that we had.

5 So although it was some readiness, essentially the
6 health service was ill equipped to cope with the
7 requirements of the pandemic.

8 Would you agree with that?

9 **A.** Plans and preparation are really important, but one of
10 the most crucial aspects of the ability to respond to
11 any emergency, particularly a sustained one or
12 a pandemic, is the resilience of the health and social
13 care system.

14 I think it is fair to -- say, and this is a personal
15 and professional view -- that the health service in 2020
16 was not as resilient as it even was in 2009, with
17 the H1N1 pandemic, and there are a number of reasons for
18 that. We have alluded to some of them.

19 The lack of structural change, which was compounded
20 by the resourcing situation and, as I said earlier,
21 decisions that were made to live within budget
22 allocation as opposed to decisions that should be made,
23 and as a result that resulted in decisions that were
24 short-term, and in the long-term counterstrategic and
25 likely to cost more, particularly in relation to the

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1 priority that needs to be afforded public health.

2 **Q.** Well, one practical consequence is that you've told us
3 that, certainly as a significant part of your role in
4 terms of planning, there was a recognition of a need for
5 surge plans and for surge capacity within the health
6 service and social care as well, and you'd agree with
7 that?

8 **A.** Yes.

9 **Q.** That there was a Task and Finish Group that was to
10 review and update an influenza pandemic surge guidance,
11 although that wasn't quite completed?

12 **LADY HALLETT:** Ms Campbell, I'm sorry to interrupt, but you
13 do seem to be straying somewhat from -- I think these
14 are matters that Mr Keith has already covered.

15 **MS CAMPBELL:** In fact, my Lady, I hope I'm not straying too
16 much, save to put it into the context of the evidence
17 that we heard from Mr Swann last week.

18 If I may, it's in fact the last topic under this
19 heading and it was only, if I look at the question in
20 particular, it's about how the impact was mitigated --

21 **LADY HALLETT:** Okay.

22 **MS CAMPBELL:** -- with a focus on, and just to use the
23 example of surge, given that it was both evidence from
24 last week and evidence from today.

25 The surge capacity, we were told last week, in the

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1 admin costs elsewhere. And similarly they had to absorb
2 a reduction of some 4.3% in the years running up to the
3 period in question in the programme budget. Now, the
4 programme budget is the things that you do in relation
5 to alcohol and drugs, other interventions to address
6 health inequality.

7 I can't specifically comment on the -- this figure
8 in relation to health protection. It seems odd that it
9 goes down in one year and up in the next, but again
10 Public Health Agency colleagues may be able to enlighten
11 you on that.

12 In terms of surge, I think certainly as Chief
13 Medical Officer I was leading at that point in time
14 significant elements of the Bengoa work, so I was the
15 senior responsible officer for the establishment of the
16 day elective centres to reduce the burden on the health
17 service and to have more people having their surgery on
18 an in -- you know, day case basis. That was put to good
19 effect during the surge because it meant that some of
20 the red flags, et cetera, could continue and we weren't
21 having as much of an impact on routine elective,
22 although we did significantly impact on people waiting
23 for routine elective surgery.

24 I could give other examples, but I am conscious of
25 time.

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1 event of the pandemic, had to come from re-directing or
2 standing down other services --

3 **A.** Yes.

4 **Q.** -- so what you give to Covid, you take from other areas.
5 And my question to you is this: given the recognition of
6 this as an issue, what did you do to ensure that the
7 impact was mitigated and that there was or would be
8 additional surge capacity?

9 **A.** I think my concerns about the resourcing position in
10 relation to the health service in Northern Ireland are
11 a matter of public record.

12 My concerns about the lack of structural change or
13 the slowness with which structural change had been
14 progressed are also a matter of public record.
15 I certainly raised those concerns with -- within the
16 department. There were difficult choices that needed to
17 be made.

18 You've mentioned the PHA budget. Whilst they were
19 not significant cuts per se in the public health budget
20 they had to realise savings, so there were -- they had
21 to absorb, for instance, you know, 6% additional costs
22 in their admin budget.

23 Now, when you talk about admin in the Public Health
24 Agency, that's professional staff who -- their salary
25 costs are not insignificant, so it's not the same as

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1 So I did what I could in terms of helping shape,
2 influence and provide leadership to that system change
3 to ensure that, with the resources that we had, that we
4 were restructuring the health service to ensure that it
5 was as robust as it could be to address any intended
6 pressures.

7 I have to say, however, that was largely to deal
8 with the here and now. You know, in Northern Ireland
9 the health service struggles on a day in, daily basis to
10 deliver what it should be delivering, notwithstanding
11 the additional pressures created by the pandemic and
12 surge. And you're quite right, really what we had to do
13 was turn off to a large extent all of that elective
14 capacity, which had huge impacts right across the
15 public, and people waiting excessive periods of time,
16 even longer than they were before. The worst waiting
17 times in the UK got even longer, people waiting in pain
18 and distress, and we still are not in a position where
19 we can recover that as quickly as we would wish.

20 **MS CAMPBELL:** Thank you.

21 **MR KEITH:** My Lady, I'm sorry to rise to my feet, I believe
22 Ms Campbell may have had the ten minutes that it was
23 agreed that she would have, and I'm very well aware that
24 the Inquiry, for good practical reasons, can't sit past
25 4.15 today.

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1 **LADY HALLETT:** Exactly.
 2 What I'll do, Ms Campbell, may I suggest that I ask
 3 the question that I gave you permission to ask, just to
 4 finish off? Because we are under pressure, I'm afraid,
 5 for different reasons.
 6 **MS CAMPBELL:** Yes, of course.
 7 **Questions from THE CHAIR**
 8 **LADY HALLETT:** Sir Michael, were pressures on the PHA
 9 exacerbated by uncertainty about regulatory arrangements
 10 amidst the UK's pending exit from the European Union, as
 11 described by other people including Baroness Foster,
 12 who's talked about the focus on Brexit, and
 13 Dr Kirchhelle this morning?
 14 **A.** Sorry, could you repeat that?
 15 **LADY HALLETT:** Were pressures on the PHA exacerbated by
 16 uncertainty about regulatory arrangements pending the
 17 exit from the European Union?
 18 **A.** No immediate examples come to mind. There is no doubt,
 19 however, that their capacity was deflected, as
 20 everybody's was, in terms of trying to plan and prepare
 21 for EU exit; but I can't think of specific examples in
 22 response to that.
 23 **LADY HALLETT:** Well, I think everybody's agreed there was
 24 an impact.
 25 **A.** Oh, absolutely, without any question of a doubt.

1 **LADY HALLETT:** Thank you very much indeed.
 2 **MR KEITH:** My Lady, that concludes the evidence for today.
 3 **LADY HALLETT:** Thank you very much indeed, Sir Michael,
 4 thank you for your help.
 5 **THE WITNESS:** Thank you.
 6 **LADY HALLETT:** We may meet again in Belfast.
 7 **THE WITNESS:** I think we may.
 8 **(The witness withdrew)**
 9 **LADY HALLETT:** 10 o'clock tomorrow, please.
 10 **(4.18 pm)**
 11 **(The hearing adjourned until 10 am**
 12 **on Tuesday, 11 July 2023)**
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