

Thursday, 15 May 2025

1
2 (10.00 am)
3 **LADY HALLETT:** Ms Cartwright.
4 **MS CARTWRIGHT:** Good morning, my Lady.
5 The gentleman by the witness box is Sir Paul Nurse.
6 Could I ask, please, for him to be sworn.
7 **SIR PAUL NURSE (affirmed)**
8 **Questions by LEAD COUNSEL TO THE INQUIRY FOR MODULE 7**
9 **MS CARTWRIGHT:** Could I ask you, please, to provide your
10 full name to the Inquiry.
11 **A.** Of course. Paul Maxime Nurse.
12 **Q.** Thank you. With your permission, I'd like to refer to
13 you throughout your evidence as Sir Paul.
14 Could we first of all identify the witness statement
15 you've provided. There should be a copy brought up on
16 the screen in front of you. It's INQ000587302. Could
17 we turn to page 44, please, of that statement which is
18 dated 9 April 2025. And can I ask you first of all to
19 confirm, are the contents of that statement true to the
20 best of your knowledge and belief?
21 **A.** Yes, it's true to the best of my knowledge and belief
22 thank you.
23 **Q.** Now, it's correct, isn't it, Sir Paul, that the
24 statement has been provided to effectively represent the
25 corporate position of the Crick Institute?

1

1 physiology?
2 **A.** I was. Physiology or medicine.
3 **Q.** Thank you.
4 So, moving on from your time at the Imperial Cancer
5 Research Fund, it's right, isn't it, you left in 1988 to
6 chair the Department of Microbiology at the University
7 of Oxford?
8 **A.** I did.
9 **Q.** You continued your work on cell cycles there and also
10 new research areas in genomics?
11 **A.** I did.
12 **Q.** In 2003 you were president of The Rockefeller University
13 at New York City?
14 **A.** Yes, I was.
15 **Q.** In 2010, and this brings us, I think, to what you're
16 going to speak about today, you became the first
17 director and chief executive of the Francis Crick
18 Institute in London?
19 **A.** I did, and I still am.
20 **Q.** Thank you. And it's right, isn't it, that for five of
21 those years you've been president of the Royal Society?
22 **A.** I was.
23 **Q.** And in fact you will be returning to the role, I think
24 in December of this year, to be president of the Royal
25 Society?

3

1 **A.** That's correct, yes.
2 **Q.** And for completeness, is it also right to identify --
3 and we don't need to go to it -- that you also
4 contributed to a statement that Module 7 has received
5 from the Microbiology Society?
6 **A.** Absolutely correct too.
7 **Q.** Thank you. Sir Paul, before we deal with the Crick and
8 what the Crick is, and the importance of what the Crick
9 did in the pandemic, could we first of all identify
10 yourself and your professional background and
11 qualifications and then we'll move to the detail,
12 please, of the Crick.
13 It's right, isn't it, that you have a degree in
14 biology from the University of Birmingham?
15 **A.** I do.
16 **Q.** That in 1979 you set up your own laboratory at the
17 University of Sussex?
18 **A.** I did.
19 **Q.** In 1984 you joined the Imperial Cancer Research Fund?
20 **A.** I did.
21 **Q.** Which became Cancer Research United Kingdom in 2002?
22 **A.** I did.
23 **Q.** And you have done an awful lot of work in respect of
24 genes, and it's right, isn't it, that, for your work
25 generally, you were awarded, in 2001, the Nobel Prize in

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1 **A.** I will be doing so.
2 **Q.** That's only a snapshot of your knowledge and experience.
3 Is there anything else about you, sir Paul, that you'd
4 like to identify that's going to be relevant to anything
5 we're going to talk about in respect of test and trace?
6 **A.** No, except I'm not a clinically trained researcher; I'm
7 a biological researcher.
8 **Q.** Thank you.
9 Can I then turn to you to what us what the
10 Crick Institute is, but also the significance of the
11 skills and experience and equipment that is held at the
12 Crick Institute that is relevant to test, trace and
13 isolate, please.
14 **A.** Yes, I'm delighted to do so.
15 The Francis Crick Institute was founded just
16 ten years ago, moved into its new buildings next to
17 St Pancras. It is funded by three biomedical funders:
18 Cancer Research UK, Medical Research Council, government
19 one step removed, and the Wellcome Trust. It is a large
20 institute, around 1,300 permanent scientists, 200 or 300
21 visitors, so it's the biggest biomedical research
22 institute under a single roof that I'm aware of, and it
23 covers a whole, wide range of fundamental science into
24 biology and biomedicine. A total of 120 research
25 groups.

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1 It has rapidly established its reputation. Of those
2 120 -- a good reputation. Of those 120 research group
3 leaders, four are Nobel laureates, two are emeriti and
4 two who are still active, and I believe about 27, 28
5 Fellows of the Royal Society, so a very high
6 concentration of talent.

7 Q. Thank you.

8 A. It is also a very well-equipped institute, reasonably
9 well funded, and covers a wide range of research
10 activities with a wide range of different technologies.

11 Q. Thank you.

12 You've identified the Nobel laureates and I just
13 want to identify another one of them by name because it
14 will become relevant to some of the correspondence we
15 look at together. Is it right that one of the four that
16 you'd identified is Sir Peter Ratcliffe, who is
17 the Director of Clinical Research but he is also a Nobel
18 laureate?

19 A. He is. And I should say he is probably the most
20 distinguished clinical researcher in the UK today.

21 Q. Thank you.

22 Now, you've given an overview about the skills and
23 expertise, but when we look at the statement, and the
24 statement will be published, it's clear that in terms of
25 the expertise that exists, it's expertise from an

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1 something completely different from what we would
2 normally do. We're a research activity; we're not an
3 NHS support facility. But we realised we had the skill
4 set and the people. And of course, very rapidly, they
5 were sent home or on furlough, or would have been sent
6 home on furlough, and we realised that we would be able
7 to contribute to the testing facility in a limited way,
8 locally, but very rapidly.

9 And we perhaps realised rather quickly that the
10 plans to establish very large testing facilities -- the
11 Lighthouse laboratories -- would take many months to get
12 properly functioning, for both scientific and logistic
13 reasons, yet we would be able to get something in place,
14 to deal with the more vulnerable individuals in society
15 and healthcare situations, much more rapidly, in
16 a matter of weeks.

17 So we started planning to do that from early
18 February onwards.

19 Q. Thank you. Can I ask you, then, to provide the details
20 of the Crick Consortium because it's right, isn't it,
21 that partnerships were entered into including with local
22 NHS trusts as part of the thought process around what
23 you've just described for getting some testing up and
24 running?

25 A. Yes, we set up a Crick Covid Consortium, we called it

7

1 international perspective. I think you tell us that
2 there's individual experts from over 80 countries that
3 work within the Crick?

4 A. Yes, we are very international. We have approaching
5 80 different nationalities working there. We are able
6 to recruit the best from the world. When we actually
7 search for a new group leader, we get nearly 500
8 applicants from around the world.

9 Q. Thank you. Unless there's anything else you want to say
10 about the Crick, the full details are in the statement,
11 but I'd like you to assist her Ladyship with when the
12 pandemic happened, and certainly around January time,
13 the relevant steps that the Crick were taking when they
14 identified that something significant had to be done in
15 respect of testing, please?

16 A. Yes, when we saw the pandemic coming, we have about
17 20 clinically trained group leaders who came to see me,
18 or a subset of them, to say that this was likely to be
19 a very significant pandemic. And we looked very quickly
20 at whether the Crick Institute could assist the country
21 in dealing with that. We rapidly realised that we would
22 be able to assist with testing, because the equipment
23 and skill sets were very well represented at the Francis
24 Crick Institute.

25 We'd never done routine testing before, so it was

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1 CCC for short. And just to summarise it logistically,
2 really, what we did is we plugged our testing facilities
3 into pre-existing pipelines into hospitals and
4 eventually into care homes, so that there were already
5 in place, if you like, embryonic logistics, that could
6 be put rapidly into a more rapid and larger testing
7 facility if they had, at the front end, the ability to
8 test.

9 So we provided the ability to test and connected it
10 to local hospitals and care homes.

11 Q. Thank you. And can we just ensure we've identified
12 those in the partnership. It's right it was University
13 College London Hospitals, NHS Foundation Trust, care
14 homes, but also you had the input from the health
15 services laboratories and a UK Accreditation
16 Service-recognised clinical diagnostic laboratories.
17 Can you just provide the details as to why they were
18 important to be in the partnership, please?

19 A. They were really critical because, if you like, they
20 gave the, sort of, legal cover and the accreditation
21 that we, as a research laboratory, wouldn't have. And
22 that's really what I was trying to emphasise, is that we
23 stepped up the ability to do the lab work connecting
24 with pre-existing legal support and facilities that then
25 would connect into the hospitals. That was what was

8

1 special about this.

2 **Q.** Thank you. I'm going to briefly display a document that

3 just helps identify the hospitals and community

4 hospitals that the pipeline then provided with testing.

5 It's, please, INQ000587047. That's INQ000587047.

6 **A.** Yes, I think that I -- I haven't that in front of me.

7 **Q.** So whilst -- it is being displayed, and if it can't be

8 displayed, there's no issue, but it's right, is it --

9 thank you -- could the bottom be expanded, thank you?

10 **A.** Ah yes, I have it now.

11 **Q.** -- that essentially the pipeline provided testing to

12 the 13 acute hospitals listed there and five community

13 hospitals?

14 **A.** Absolutely correct, all in, essentially, mostly in north

15 London, yes.

16 **Q.** Thank you. I don't think that's a complete picture of

17 what was supported because if we look over the page,

18 although they're not listed, we know that it went

19 to 200. You can see at the top of the page, additional

20 locations included care homes, mental health facilities,

21 crisis centres, GPs and medical centres?

22 **A.** Absolutely correct.

23 **Q.** Thank you. That can be removed, please.

24 You've already mentioned what could be achieved

25 because of the local connections, can you perhaps expand

9

1 being tested and having the results available?

2 **A.** Absolutely. So you would give your sample, you would

3 know the answer within 24 hours, and nearly everything

4 we did was within that timescale.

5 **Q.** Thank you. Now it seems an important observation point

6 you wish to make around the speed of turnaround and the

7 importance --

8 **A.** Yes.

9 **Q.** -- for the obvious reason you've given, but why are you

10 wanting particularly draw that to our --

11 **A.** I want to bring that to attention because even when the

12 Lighthouse labs, which had to be put in place -- I mean,

13 we needed mass facilities -- they were counted as

14 working well if they had a seven-day turnaround, and

15 seven days is a very long time when you're dealing with

16 vulnerable people in vulnerable healthcare situations,

17 for all sorts of reasons which I think will be obvious.

18 24-hour turnaround is really important in this

19 situation, if you are to provide the appropriate

20 protection of patients and other vulnerable individuals.

21 **Q.** Thank you. Perhaps if I identify this as a theme, we'll

22 perhaps come back to on the chronology when we look at

23 Lighthouse laboratories. I think you have been

24 referenced by myself in opening but also in the press at

25 the time where you describe, essentially, that there's a

11

1 upon the benefit of how the Crick was able to operate

2 because of it being part of a local infrastructure?

3 **A.** Yes, I can. It's really a sort of sticking plaster

4 approach, if I may use that metaphor. Because it was

5 local and because we knew many of the people involved,

6 or rapidly got to know them, when there were

7 difficulties, when there were issues, when we lost

8 samples, when the IT didn't quite work, we could

9 literally get on a bicycle and sort it out. I remember

10 one case that a GP needed a test within hours. We

11 managed to get it to them in hours. That happened

12 frequently.

13 That's really difficult in the big Lighthouse labs,

14 because it has to be like that. If you are in

15 Milton Keynes and doing testing for Staffordshire

16 a couple of hundred miles away, you cannot solve

17 problems with sticking plasters. But that we could, and

18 it's one reason we were so effective.

19 We never could work at the same scale, but we could

20 provide a service that gave -- and we did -- a 24-hour

21 turnaround from the very beginning. And if you are

22 dealing with a pandemic, that sort of speed is

23 absolutely critical to protect vulnerable people.

24 Absolutely critical.

25 **Q.** And when you say the 24-hour turnaround, that is from

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1 need for the small boats of organisations like the Crick

2 to operate?

3 **A.** Yes. I stole a metaphor from Dunkirk of course with the

4 big ships and the small boats. I stole it from my wife,

5 actually, who suggested it when I was going on the Today

6 Programme the night before, but I think it is a good

7 metaphor, it is a good analogy. We needed the big ships

8 but we had to appreciate that they would take time to be

9 put in place and that we had to do something before they

10 could get in place, and they would probably always be

11 a bit slower.

12 The little boats, on the other hand, such as the

13 Crick, could produce, as I've explained, much more rapid

14 turnover in getting the data back, and would be very

15 essential at the beginning of a pandemic because if you

16 don't know where the infection, is you can't actually

17 take any ways of preventing it. So it's absolutely

18 critical.

19 **Q.** Thank you. And we'll look together in a little time at

20 an article that one of the members of the Crick

21 Consortium wrote where, I think, if we have the

22 lighthouses, they described what laboratories like you

23 and others were doing as "the lifeboats"?

24 **A.** Yes, that's another good metaphor. Yeah.

25 **Q.** Now, at a very high level, can we just deal with the

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1 logistics and the infrastructure you had at the Crick.
 2 And, particularly, we know that the gold standard test
 3 at that time early in the pandemic was PCR machines, and
 4 just from a logistical point of view, can you give her
 5 Ladyship, please, some idea about how many PCR machines
 6 the Crick held?

7 **A.** Yes, so we had the machines and we had the expertise,
 8 just to make that critical. We had about 50 PCR
 9 machines operating in the building. We also needed
 10 containment facilities and we had good containment
 11 facilities, I mean, the sort you would find in a local
 12 hospital, but we had about 20 of them. And those were
 13 critical -- both of those items were critical.

14 **Q.** Thank you. And just pausing there because I've
 15 introduced the containment levels and how initially the
 16 pathogen of the coronavirus was being treated as
 17 a containment level 3 virus before then the HSE and the
 18 ACDP downgraded it to a level 2. So, just to be clear,
 19 is it correct that when you gave those figures, that
 20 there were -- certainly you had 20 PCR machines and
 21 facilities that could operate at containment level 3?

22 **A.** Not PCR machines --

23 **Q.** Sorry --

24 **A.** -- we had the containment facilities that could operate
 25 at containment level 3 very effectively, yes.

13

1 scanned, so it can enter into the IT system. I mean,
 2 that's the starting point. This means, of course, you
 3 have to have IT that can deal with this.

4 **Q.** Just pausing there, we'll look at the article, but you
 5 did have the IT systems --

6 **A.** We did. We had to modify it, of course, but we had the
 7 skill set to be able to do that rapidly. I want to
 8 emphasise, we don't normally do this sort of thing at
 9 all, so we had to do it from scratch, and so we had to
 10 modify what we had, the IT facilities, to be able to
 11 deal within that.

12 That means we had a sample and we could know
 13 where -- the patient or the person producing it, who it
 14 was, and -- it was anonymised, of course -- and who it
 15 had to go back to. It was then opened in a safety
 16 cabinet which --

17 **Q.** Which is the next part.

18 **A.** Which is the next one.

19 **Q.** And I think this is where, with the containment
 20 levels -- because it's essentially a hood, isn't it?
 21 And is it the circles that we see, essentially that's
 22 where your hands would go in as you're handling the
 23 virus?

24 **A.** Yes, exactly. It's a containment facility. You put
 25 your hands into those two holes there, into gloves, and

15

1 **Q.** Thank you.

2 **A.** And the PCR, 50 PCR machines that could service them,
 3 yes.

4 **Q.** Thank you.

5 So can I just understand, because the distinction
 6 you were making about the different PCRs, is that
 7 dependent on where they were being used in the
 8 containment levels?

9 **A.** No, the PCR machines are a machine that allows you to
 10 detect the presence, in this case, of the virus. So
 11 that is a piece of kit that, with the right people
 12 running it, could tell you whether the virus was present
 13 in a sample.

14 The containment facilities were important for safety
 15 purposes, essentially to kill the virus before you
 16 actually did the analysis.

17 **Q.** Well, I think perhaps to best show this, can we use your
 18 witness statement, please, where we've got the
 19 description of that.

20 It's your statement, please, INQ000587302, at
 21 page 13. You've helpfully extracted from the article
 22 I referenced a moment ago the process. So if we could
 23 expand the image at the top.

24 **A.** Yes. Yes, this is very useful what you can see here.

25 We have to take a sample, and that has to be bar coded,

14

1 that means you can manipulate the sample safely.

2 And, as you rightly said, initially at containment
 3 level 3 and then subsequently at containment level 2.

4 That would allow inactivation of the virus so it then
 5 became safe. It then had to be plated out. You see
 6 a 96-well plate. So this allows us to analyse samples
 7 at scale, so we could do 96 individual tests
 8 simultaneously in that particular plate.

9 We had to extract the RNA --

10 **Q.** And just pausing there --

11 **A.** You pause me.

12 **Q.** -- I think a little bit of help about RNA and what this
 13 in the virus, and how that is important in identifying
 14 whether someone has got positive for Covid, please.

15 **A.** Indeed, I am happy to explain that now.

16 Every virus has a genome. We have genomes too. Our
 17 genome is made of DNA, that's deoxyribonucleic acid.
 18 Viruses can be DNA or RNA, which is just
 19 ribonucleic acid. In the case of coronavirus, it was an
 20 RNA virus. So, if you like, encodes the genes that make
 21 the virus work.

22 If you can extract the RNA out of the virus, which
 23 is what we did next, then you can use the PCR machine,
 24 I'll come to that in a moment, to determine whether that
 25 RNA comes from the Covid virus.

16

1 So then, after RNA extraction, you go to the
2 PCR machine. PCR means polymerase chain reaction. It's
3 just a technique which allows us to detect the -- what
4 sequences are present. And we know the signature
5 sequences of the Covid virus, so that allows it to be
6 tested to see if it is positive or negative.

7 Then, of course, you have to go back through the
8 logistics, right to the beginning again, to actually get
9 that information back to the patient or the person
10 giving the sample.

11 And we aimed at doing all of this process and
12 getting back to the patient -- the logistical issue,
13 which can be slow -- in less than 24 hours.

14 When necessary, we could do it in eight hours.

15 Q. Thank you.

16 Just dealing with -- we've dealt with PCR, but can
17 you just explain again, at a high level, what the RT,
18 the reverse transcription, means, please.

19 A. Oh, I can! It gets a bit more technical, of course.

20 Q. Well, perhaps a very high-level --

21 LADY HALLETT: Slowly then, please.

22 A. Very high, at very high level.

23 We have RNA, which is essentially a molecule made up
24 of different letters, chemical letters. And these
25 chemical letters can connect to other chemical letters

17

1 standardised. But we could put into the testing regime
2 all the machines that we had.

3 Q. Thank you. And can I ask you, just because it may be
4 relevant also, how were the Crick -- to do this process
5 you also need reagents; is that correct?

6 A. Yes.

7 Q. And how were the Crick making or getting their reagents
8 to be able to do the PCR testing phase --

9 A. Well, this is interesting you should bring it up,
10 because in fact, as you could well imagine at this time
11 that sourcing these reagents became quite difficult
12 because they were in demand across the world. But being
13 a research institute, it was rather trivial for us to
14 set up a line that could make the reagents that we
15 needed. That would be more difficult in a conventional
16 testing lab, but we were able to do that. So that when
17 we were lacking a particular reagent, we just made it
18 ourselves.

19 Q. So that was possible at the Crick also: you could make
20 the reagent to do the testing?

21 A. We could make it at the Crick, but also there would be
22 many other academic-type research institutions and
23 universities which would be able to do it. It's
24 relatively trivial but it wouldn't be, if you like, the
25 sort of thing that a company would normally do in

19

1 that we can construct, so that it allows us to detect,
2 if you like, the presence of a particular sequence of
3 letters. And that's what this process is going.

4 And essentially, what happens is that we copy the
5 molecule and then we copy it again, and again, and
6 again, maybe 20 times. So it turns from being one
7 molecule, which is infinitesimally small, into many
8 millions, and then we can detect that in the assay that
9 we do.

10 MS CARTWRIGHT: Thank you.

11 Now, I think, just with looking at an example of
12 a PCR machine, which is the machine at the end, that
13 identifies whether someone is positive for the Covid
14 virus for negative, I think there were a number of
15 manufacturers of PCR machines, and are you able to give
16 us any idea as to the PCR machines that the Crick had or
17 was it a mix of manufacturers of the machines?

18 A. It was a mix of different manufacturers. We'd actually
19 inherited them from our -- or we merged three institutes
20 to make this one. The equipment was actually quite old,
21 it worked quite well. We had some new equipment, some
22 old equipment, some large, some small, all of which
23 could be used in this particular process.

24 Of course, if you were doing a Tali(?) testing lab
25 you would have the same machine and it would be more

18

1 a normal testing laboratory.

2 Q. Thank you. Now, the way you repurposed the Crick, it's
3 right to say that you weren't being paternalistic or
4 protective of it, you shared your standard operating
5 procedures, they were accessible on your website, but,
6 essentially, what you'd achieved could be copied or
7 mirrored at places that had the equipment and
8 facilities?

9 A. Absolutely. We made that a priority. Once we'd sorted
10 out how to do it, we also worked out how a conventional
11 research laboratory like the Crick could be rapidly
12 repurposed in a couple of weeks into quite an effective
13 small testing facility. I say small, I mean we were
14 doing, in the end, 3,000 to 4,000 tests a day, we
15 started off with around 1,000 but nearly -- there would
16 be many places in the UK, academic institutions, maybe
17 some other small companies, that could be rapidly
18 repurposed to produce that sort of output.

19 Q. Now, we'll look at the correspondence, you do identify
20 a figure that you could get to, I think the 3,000 to
21 4,000 but I think there's also an indication that had
22 there been more money and more facilities, that the
23 Crick could have increased that figure again to what
24 would have been possible at the Crick by way of daily
25 turnaround of testing. Are you able to, and if you're

20

1 not, please don't speculate, but are you able to give us
2 some idea of what could have been possible for volume
3 testing at the Crick with more investment or money?

4 **A.** Yes, because we were using our research money, of
5 course, for this purpose. So, I mean, we were somewhat
6 restrained by money. We weren't restrained by numbers
7 of workers, because we had many who were skilled.

8 I think we could have scaled up to around 10,000 in
9 a month if we'd had the money. And given what I've
10 already said, there's nothing that special about the
11 Crick except we were prepared to do it and to do it very
12 quickly. That could have been rolled out, using our
13 protocols, to 30, 40, 50, maybe more places in the rest
14 of the UK. I'm guesstimating there, I haven't actually
15 counted them, but I'm thinking of research universities
16 and other research institutions.

17 So if you just do the simple maths there, you can
18 see that, within a month or two, we could have had
19 100,000 to 200,000 tests which would be turned around
20 every 24 hours, locally set up. And that, I think,
21 would have been a very effective way of dealing with the
22 early days of the pandemic.

23 **Q.** Thank you. And so, I just want to be sure that we're
24 clear about the timeline and the volume, I think you'd
25 indicated you think it would have taken the Crick

21

1 maybe in peacetime you would really have to take
2 seriously, but in wartime perhaps you could be a little
3 bit more bold about.

4 I think the Crick was in a special situation that we
5 controlled our own finances. We were bold, we got
6 things working. What surprised me was that that wasn't
7 taken up centrally. When -- with that support
8 centrally, then I think we'd have given confidence to
9 the universities, who might have been perhaps a little
10 more timid than we were, to actually roll this out.

11 So I think it needed -- boldness in the political
12 leadership centrally would have made a very significant
13 difference.

14 It's my opinion, of course, because we did not do
15 that.

16 **MS CARTWRIGHT:** Thank you.

17 Can we then look to the correspondence that you and
18 others at the Crick entered into. Can we start, please,
19 first of all, with INQ000587053. Thank you.

20 So here we have, 10 March, your email to
21 Patrick Vallance, with Chris Whitty on copy.

22 **A.** Yes.

23 **Q.** Perhaps if I read it just to contextualise, we've got --
24 attached to it was the "Crick work to support COVID-19
25 research", which we'll look at in a minute briefly, but

23

1 a month to get to a potential ability to have, then,
2 10,000 tests a day?

3 **A.** I'm -- I'm estimating. We'd need to do a proper study
4 of that, but yes, I think that would be reasonable.

5 **Q.** Thank you. And you --

6 **LADY HALLETT:** Sorry to interrupt.

7 Did you discuss with your colleagues -- obviously
8 you all discuss things at different times, did you
9 discuss with your colleagues who headed these other
10 institutes as to what their plans were and what they
11 could do or couldn't do?

12 **A.** We didn't discuss -- we sent it all out and there were
13 informal discussions. There was a great deal of
14 interest in doing it, I have to say, but there seemed to
15 be many obstacles. Some of the obstacles were a lack of
16 interest from, if you like, the central -- both
17 government and maybe the testing services, who were
18 totally focused on big Lighthouse. So there was a lack
19 of -- there was a real lack of interest. I think that
20 was one problem.

21 I suspect also, but this is hearsay, so I'm afraid
22 I'm not sure about this, there might have been a certain
23 reticence or reluctance in some institutions. You know,
24 did we have the right insurance? Were we legally in the
25 right position? All the usual sorts of things that

22

1 you say as follows:

2 "Dear Patrick

3 "In view of the current situation with COVID-19

4 I thought you might like to be aware of what work the
5 Crick is currently undertaking to support the research
6 endeavour. I have attached a short summary. If there
7 is anything in this summary you would like us to
8 prioritise please let me know.

9 "The Crick obviously only has certain expertise but
10 I would like to offer any support we have that might be
11 useful to you. For example, we could use volunteer
12 laboratory staff if needed for diagnostics, or offer use
13 of our high-quality containment of our general lab
14 facilities.

15 "Please do let me know if there is anything else you
16 feel the Crick can do to support the overall effort
17 against COVID-19."

18 Then over the page, please, to page 2. This the
19 attachment to the e-mail. Thank you.

20 We can see, I'm not going to read it, but it will be
21 published. It essentially summarises --

22 And go to the next page, please.

23 **A.** Yes, this is -- sorry, yes.

24 **Q.** Sorry, thank you.

25 **A.** Keep going.

24

1 Q. And over again.
 2 Essentially was giving the detail of what could be
 3 achieved and what was being offered.
 4 And then I'm going to take us on to the next page,
 5 please, page 8 -- sorry, over again, because -- sorry,
 6 it's page 7, I do apologise, because then we'll pick up
 7 the correspondence from that point.
 8 So when that was sent, can you assist about the
 9 response you had back to that offer of what could be
 10 achieved at the Crick?
 11 A. Well, I'm trying to recall. I think Chris,
 12 Chris Whitty, responded positively. And what we were
 13 offering there, just to be clear, was everything we
 14 could do, which was testing -- which we've spoken mostly
 15 about, and which of course is what you're looking at
 16 here today -- but also research activity, which we could
 17 repurpose from what we normally do to a focus on the
 18 coronavirus.
 19 So we did have a response, you see there, from
 20 Chris, who I'm sure was extremely busy at this time, but
 21 I don't think this was picked up centrally to be able to
 22 turn these offers -- and at this moment they were
 23 perhaps a little vague -- into a more comprehensive
 24 local testing.
 25 I mean, that was where we eventually ended up in
 26

1 I then want to take you, please, if we follow the
 2 chronology, to you taking up the mantle again on
 3 19 March, which is our internal page 6.
 4 Can you give us a sense now, we've -- the initial
 5 contact was the 10th. We're now at 19 March, where you
 6 are now emailing Mr Warr, who was at that time special
 7 adviser to the Prime Minister for health, social care,
 8 life sciences and technology, and minister Nadhim Zahawi
 9 and Greg Clark.
 10 Can you help us as to why you were sending this
 11 email and why you were going to these individuals in
 12 particular, please.
 13 A. Yes, I think what we decided at this point is that we
 14 told the science and medical advisers, Patrick and
 15 Chris, but we thought that we needed to try to persuade
 16 government to take this seriously, and this was our
 17 first attempt to do so. And we sent it to Mr Warr who
 18 was, I believe, adviser to the Prime Minister. Again,
 19 previously summarising what we could do, and indicating,
 20 as you see there, that when we -- within 24 hours of
 21 asking our staff, we had 300 who volunteered, they would
 22 come in, and remember, not being paid because they were
 23 already furloughed, and so at no cost, in fact no extra
 24 cost. We only needed money for reagents and maybe for
 25 new equipment, just to indicate at the highest level, at
 26

27

1 fact in only a few weeks, but we weren't so specific at
 2 this stage, I would say.
 3 Q. Thank you. So I'm going to start at the bottom of this
 4 page, then, as to the next piece of correspondence,
 5 please. 17 March, Peter Ratcliffe, who we've already
 6 identified from the Crick, one of the Nobel laureates.
 7 Going over the page, you say:
 8 "As you may know I am the Clinical Research Director
 9 at the Francis Crick Institute."
 10 Again, a follow-up saying that "We're here to help",
 11 essentially:
 12 "At present I am contacting heads of NHS labs in
 13 London and Oxford to determine if they can deploy extra
 14 personnel -- as the easiest first step."
 15 And then also saying:
 16 "We will also scope out methods, reagents
 17 equipment ..."
 18 Then if we can go back a page to, please, page 6 --
 19 sorry, page 7, I apologise.
 20 We can see that Mr Whitty responded on 18 March to
 21 thank Peter, and say that:
 22 "I am ccing my government address ... and will
 23 discuss with the team there."
 24 So an acknowledgement and the fact that it was to be
 25 discussed.

26

1 the level of the Prime Minister, what was possible at
 2 the Crick, and then, of course, subsequently, what would
 3 have been possible had it been rolled out across the
 4 country.
 5 Q. Thank you. So as you already indicated, this is you
 6 indicating that the support to scale up diagnostic
 7 testing was being offered, that you were aware of
 8 a significant diagnostic bottleneck with PCRs, that you
 9 had that large number of qualified volunteers ready to
 10 help, nearly 300, and as we can see in the next
 11 paragraph, that:
 12 "The Crick also has significant capacity that could
 13 be turned over to testing, including 20 class B fume
 14 hoods in Containment Level 3 labs, and a very large
 15 number of lab spaces that are ready to be turned into
 16 a Containment Level 2 space."
 17 And we can see the offer that you were prepared to
 18 quickly turn significant resources over to that work.
 19 A. And, of course, we did turn most of it over. I mean,
 20 not quite at the scale, as I've already indicated, that
 21 perhaps we could have done, but we did turn it over
 22 quite quickly.
 23 Q. And we will see that, then, in the next piece of
 24 correspondence, please, moving along in the same
 25 document, please, to page 9.

28

1 We're now at 1 April 2020. Can I ask you, in
2 response to the email that you sent of 19 March, did you
3 have any response?

4 **A.** We didn't get any response from William Warr or the
5 Prime Minister to that letter, no. We did not.

6 **Q.** Now, we next see your letter of 1 April, now on
7 Crick-headed paper, from 1 April, at this point now
8 updating on the progress that the Crick had made,
9 supporting the national testing. You obviously
10 reference that email by saying:

11 "On March 19, we informed 10 Downing Street through
12 the Prime Minister's adviser William Warr that the Crick
13 had decided to turn significant institute resources over
14 to PCR testing, to help support the national Covid-19
15 testing effort."

16 And the email was provided.

17 And then you indicated the progress that had been
18 made, that:

19 "We are now in a position to scale up, starting with
20 around 100 tests a day later this week, moving to 500
21 a day by next week. Subsequently, we are aiming for at
22 least 2000 a day. Our objective is to have results
23 within 24 hours, as this will help return healthcare
24 staff rapidly to the front line, which is our initial
25 priority.

29

1 contemplated giving us some support, and of course
2 nor -- and you may get to that a bit later -- was it
3 being considered that what we were doing could be rolled
4 out.

5 **Q.** Thank you. I'm going to just turn over the pages of
6 this document because it's a detailed document. It had
7 obviously been given a great deal of thought, because it
8 set out strategic operation on specific testing issues
9 within the document.

10 Can we move over to page 13, please. Thank you.
11 And on to 14. And into page 15, please, 16 and 17.

12 So the letter will be published. I don't have the
13 time to deal with each aspect but I think it speaks for
14 itself as to things that have been identified but
15 solutions that the Crick had found, but also the real
16 benefit it was having on the ground locally for those
17 that you were providing testing to.

18 **A.** Yes, and if I could just add, together with Sam Barrell,
19 who was a COO, Sonia Gandhi and Charles Swanton were two
20 of the three leaders who actually drove this on the
21 ground. I just want to acknowledge them.

22 **Q.** Thank you. Can we, just briefly, on the asymptomatic
23 turn to page 13, because we will look together very
24 briefly at an article that was published. So if we go
25 to page 13, please, we can see in this letter it was

31

1 "In addition to testing in the building, we also
2 have many expert volunteers on standby to support Public
3 Health England to scale up their testing laboratories."

4 And in response to that letter, did you have
5 a response?

6 **A.** I don't recall a response, no.

7 **Q.** Thank you. Now if we turn over the page again, please,
8 we can see that a further update was given from -- this
9 is actually internally in the Crick -- from Sam Barrell
10 to yourself, but attaching a document which we then see
11 on the next page, please, at page 11, which was
12 a document that had been provided to the call that had
13 taken place the day before with the Department of Health
14 and Social Care, so on 18 May.

15 Are you able to give any further details about that
16 contact and input in the sharing of the opportunities to
17 increase throughput in the testing pipeline document
18 that we see that starts on page 11?

19 **A.** Yes, so we -- we were now, and as you see we were doing
20 2,000 a day tests. We were reporting that. We could
21 increase to 4,000. We didn't have the resources, as
22 I said, so we were using our research resources. But
23 I think it was at this stage that we realised that we
24 could go to 10,000 if we had the resources.

25 I was a little surprised that nobody even

30

1 identifying:

2 "There appear to be no national PHE Guidelines
3 regarding the testing of asymptomatic [healthcare
4 workers]."

5 And referencing Sam Barrell speaking to Duncan
6 Selbie on 20 April with Charlie Swanton and
7 Peter Ratcliffe:

8 "... and discussed the importance of testing
9 asymptomatic HCWs as there is evidence to indicate that
10 they are almost a source of cross infection."

11 **A.** This is a very important point, I think, for you.
12 Asymptomatic healthcare workers who are dealing with
13 vulnerable patients can, of course, spread the disease.
14 Nobody knows they have the disease, but they could
15 spread it.

16 Now, there was ample evidence, actually from very
17 early on with studies in China, Hong Kong, Italy, the
18 cruise ship, that asymptomatic transfer of the virus
19 from asymptomatic individuals was taking place.

20 Now, once you realise that, then you realise you
21 have a problem in a healthcare situation. Because what
22 that means is that you may well have healthcare workers
23 looking after vulnerable patients who are spreading the
24 disease to those vulnerable patients so it becomes
25 a very critical issue. What was happening at the time

32

1 was that testing was only being made available to those
2 healthcare workers who had symptoms.

3 Now, that's a sensible start, because sometimes
4 viruses are only spread from people who have symptoms,
5 but there was really good evidence that in this case of
6 Covid, it was possible to spread it from people without
7 symptoms. And this meant that you had to simply test
8 all healthcare workers.

9 Now, that wasn't happening, and I think it wasn't
10 happening, and again, I'm guessing here -- you may want
11 to find out -- but I suspect that the testing capability
12 at this stage simply could not test all healthcare
13 workers. However, had they followed a month or two
14 earlier what we were proposing with the Crick out across
15 the country, that would have been possible because it
16 was possible with the testing we were doing locally to
17 the Crick.

18 So I do think this will have contributed to the
19 spread of the virus amongst patients at this time as
20 a consequence, and subsequently, of course, it became
21 clear that there were indeed high levels of healthcare
22 workers who definitely had the virus and were
23 potentially spreading it.

24 Q. Thank you. We'll look briefly in a moment at what the
25 research identified and perhaps, so we're clear, the

33

1 workers and the need for asymptomatic testing?

2 A. It clearly identifies that as a major issue.

3 Q. Now we can see that the starting point for this letter
4 was the evidence that had been given to a Select
5 Committee on 6 April, and it says as follows:

6 "We followed the Committee's debate on the adequacy
7 or otherwise of the testing capacity within the NHS, but
8 were surprised that as far as we could hear, no mention
9 was made in that assessment of the need to test
10 asymptomatic or oligo-symptomatic individuals ..."

11 Pausing there, what is oligo-symptomatic?

12 A. A limited number -- in this context, a limited number of
13 symptoms.

14 Q. Thank you.

15 "... be they healthcare workers or patients. This
16 is of great concern in view of the emerging evidence
17 that a high proportion of infections are asymptomatic,
18 obviously entraining a high risk of transmission between
19 and among healthcare workers and patients.

20 "We assume this has already been debated amongst
21 Her Majesty's government advisers and you might feel
22 appropriate responses have already been considered.
23 However, there are several reasons for our concern and
24 for writing to you directly in this way. These are as
25 follows:

35

1 testing that the Crick provided into hospitals and the
2 research that was being done, had clearly identified
3 that locally in London, asymptomatic transmission was
4 taking place, because on the testing that the Crick was
5 doing of those healthcare workers in hospitals, and care
6 homes, there was clear evidence of asymptomatic people
7 but who were positive for Covid?

8 A. There was clear evidence confirming the earlier studies
9 that I referred to.

10 Q. Thank you. And then we've looked at May and the
11 document provided to the DHSC, but I want to now deal
12 with a letter -- we're going back in the chronology.

13 A. Yes.

14 Q. It's your, letter, please INQ000587060, which was the
15 further letter on Crick-headed paper. So we've looked
16 together at the earlier letter in April but we're now at
17 the one that you, Dr Barrel, and Sir Peter Ratcliffe
18 sent on 14 April, and this time directly addressed to
19 the Secretary of State, and can you just confirm, was
20 that the Secretary of State for Health, Mr Hancock?

21 A. Correct, it was Matt Hancock, yes.

22 Q. Thank you. And we'll look at the terms of the letter
23 because as well as identifying what you could do at the
24 Crick, would you agree that this letter clearly
25 identified the concerns around asymptomatic healthcare

34

1 (i) our perception is that, at present, there is
2 reticence about doing more widespread testing of
3 healthcare workers. It will clearly be expensive and
4 yet another challenge for hospitals that are already
5 under pressure. Some have privately expressed their
6 concern that making a positive diagnosis in asymptomatic
7 healthcare workers who might otherwise continue to work
8 will deplete staffing levels at a time of need. Whilst
9 perhaps understandable, these concerns are not
10 productive in terms of the overall goal of controlling
11 the epidemic. Rather, it will result in recurrent
12 problems of seeding fresh outbreaks with staff absence
13 and the potential for infecting non-Covid patients in
14 the healthcare environment. Importantly, we consider
15 that these concerns can only be overcome by a clear
16 central directive from you as Minister."

17 Is there anything else you want to expand on, the
18 terminology and what is being said seems pretty clear,
19 but is there anything else you would like to add,
20 Sir Paul, to that?

21 A. I think it, frankly, couldn't be clearer.

22 Q. The letter then goes on:

23 "The operational issues in setting up systems for
24 systematic and repeated testing for healthcare workers
25 are very substantial, even apart from the tests

36

1 themselves. We are concerned that this may not have
 2 been fully appreciated. To avoid delays, it is
 3 essential that this is done in parallel with the
 4 development of testing capacity itself."
 5 Is there expansion you want to make to the point?
 6 **A.** No, it just emphasises the importance of immediately
 7 increasing testing capacity and, as could have been done
 8 locally, had the same model been followed.
 9 **Q.** You go on:
 10 "The most accurate interpretation of testing results
 11 is only likely to be achieved by systematic repeat
 12 testing in vulnerable groups. Such data collections
 13 will be essential for accurate assessment of whether and
 14 for how long a particular titre of antibody against
 15 a particular viral antigen is indicative of protective
 16 immunity."
 17 **A.** Yes, it is a little bit more complicated, but it
 18 indicates the importance of correct interpretation of
 19 the data.
 20 **Q.** And it goes on:
 21 "Even when the current wave of the epidemic has
 22 passed, there will be a continuing risk of re-emergence
 23 with a strong likelihood that this may originate, and be
 24 at its most damaging within the healthcare sector. So
 25 the need for systematic surveillance will be ongoing for

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1 This is the -- thank you -- the letter that was sent
 2 on 6 July. The name of the individual, being a more
 3 junior individual, has been redacted. But would it be
 4 fair to say that one of the major issues being flagged
 5 was the issue of asymptomatic need for testing?
 6 **A.** Yes, and I think I described this letter as anodyne, if
 7 I recall correctly.
 8 **Q.** Well, let's just look at the response that was given to
 9 the letter. Obviously, a:
 10 "Thank you for your correspondence of 14 April to
 11 Matt Hancock, co-signed by sir Peter Ratcliffe and
 12 Sir Paul Nurse, about the novel coronavirus. I have
 13 been asked to reply and I apologise for the delay in
 14 doing so.
 15 "I understand your concerns and hope these are now
 16 resolved. I trust the information below is helpful
 17 nonetheless.
 18 "Testing is a key part of the UK's response to
 19 COVID-19 and, following the publication of the
 20 Government's strategy, capacity has rapidly expanded.
 21 Anyone in England who has symptoms of COVID-19, whatever
 22 their age, can now be tested for the virus. Further
 23 information can be found at [various websites] ... and
 24 about getting tested."

25 Now, obviously, that's flagging the fact that anyone

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1 the foreseeable future.
 2 "We therefore advise you to action an initiative
 3 that all NHS trusts and healthcare providers should be
 4 required to set up surveillance systems for the regular
 5 testing (both virological and serological) of all
 6 healthcare workers and patients with immediate effect.
 7 "Our concern is that if this is not done, the
 8 current initiative to expand testing itself will not
 9 achieve the desired effect and the 'breathing space'
 10 potentially achieved for the NHS by the 'lockdown' will
 11 not have been used effectively."
 12 **A.** Yes.
 13 **Q.** Now, we have looked at the chain of correspondence that
 14 had not had a substantive response. Did you receive
 15 a response to this letter of 14 April from the Secretary
 16 of State for Health?
 17 **A.** We did receive a response in July, if I recall
 18 correctly, but it wasn't from the Secretary of State; it
 19 was from a civil servant.
 20 **Q.** Well, we can look together at that response, at the July
 21 letter. I just wanted to clarify, there was nothing
 22 before the letter of 6 July?
 23 **A.** No, there was not.
 24 **Q.** Can I then have displayed, please, INQ000587061. Thank
 25 you.

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1 with symptoms can be tested but you had flagged the
 2 concern and issue as to asymptomatic testing.
 3 I'm going to go to the next page because it allows
 4 the full context of the letter to be seen -- thank you.
 5 And it doesn't seem, from my reading of it, that there
 6 was any addressing of the concern around asymptomatic
 7 transmission in healthcare workers or testing. Is that
 8 your reading of the letter?
 9 **A.** That is my understanding. I think we also have to be
 10 disturbed by the fact that it took three months even to
 11 get this letter. I'm a yeast geneticist, so I can
 12 understand I was ignored. Peter Ratcliffe, as I said,
 13 is a very prominent clinical researcher, but for the
 14 Secretary of State to ignore a letter from two Nobel
 15 Laureates in physiology or medicine for three months is
 16 a little surprising, I would say.
 17 **Q.** Thank you. Now, you've already commented upon what you
 18 believe would have been possible if local testing had
 19 been put in place sooner. Is there evidence that you
 20 wish to say about your views about what should have been
 21 happening sooner in respect of it being clear and
 22 necessary for the view of the Crick that there needed to
 23 be testing of healthcare staff even that didn't have
 24 symptoms?
 25 **A.** It was absolutely clear that was essential. The fact it

40

1 was not put in place was a limitation on testing
 2 capacity, because I suspect they felt they couldn't do
 3 it, and rather than acknowledge that they couldn't do
 4 it, because that would have indicated a mistake in their
 5 overall strategy, they remained silent upon it. But
 6 I will repeat, in my view at least, that had they rolled
 7 out in March, April, a copycat of the Crick across many
 8 publicly-funded research places what we had been doing,
 9 I think they would have easily managed to get the
 10 capacity to do that, and I repeat, that would have led
 11 to protection of vulnerable patients.

12 **Q.** You referenced protection of vulnerable patients but
 13 does the same principle apply also to protection of
 14 healthcare workers?

15 **A.** Also for them as well.

16 **Q.** Thank you.

17 Now, can I just ask some follow-up questions in the
 18 context of those letters and what had been identified.
 19 The concerns raised in your second letter did not seem
 20 to have been acted upon because it's been identified
 21 that asymptomatic testing was delayed until
 22 November 2020. Did you ever receive a later response or
 23 any further input from anyone in the rest of that year
 24 in respect of the concerns the Crick had raised about
 25 asymptomatic transmission in testing?

41

1 research around asymptomatic transmission concerns that
 2 were raised in April, the surge in cases that we know
 3 happened in the autumn of 2020, do you have any views as
 4 to whether the delay in systemic screening of healthcare
 5 workers and asymptomatic testing may have played a role
 6 in the spike in Covid cases in the autumn and winter of
 7 2020?

8 **A.** I don't have any view about that. It is possible,
 9 I suspect, but you need to talk to a real expert.

10 **Q.** Thank you. Can I ask you, we know that you raised these
 11 issues with the government of the United Kingdom. Do
 12 you know whether the Crick made any similar approaches
 13 to the devolved nations' chief medical officers or
 14 scientific officers or their governments?

15 **A.** I don't think we did. I'm not absolutely certain of
 16 that, but I don't think we did.

17 **Q.** Thank you.

18 Can we then, just for the last portion of my (sic)
 19 evidence, just identify a number of the recommendations
 20 that you and the Crick have detailed within your witness
 21 statement.

22 Can we display on the screen, please, it's --
 23 thank you -- INQ000587302, but it's the internal
 24 page 21, please. Thank you.

We can see at paragraph 2.4 you set out

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1 **A.** No, I certainly didn't get any formal response. There
 2 were one or two informal situations in media, which may
 3 have been touched upon, but no formal response.

4 **Q.** Thank you. Can I also ask you, you have noted within
 5 your evidence the prevailing policy in July of 2020 of
 6 survey sampling level of testing healthcare facilities
 7 was preferred to systemic, regular testing to address
 8 staffing shortfalls from Covid-positive test results.
 9 Do you have any comments as to whether it's likely that
 10 survey sampling contributed to Covid spread in
 11 healthcare settings from transmission to healthcare
 12 worker to patients and vice versa?

13 **A.** I'm not an expert in this area but I think it is likely.

14 **Q.** Can I ask you whether you've any views as to whether the
 15 delay in testing healthcare workers with immediate
 16 effect, as recommended in your letter of 14 April 2020,
 17 contributed to increased spread and, invariably, deaths?

18 **A.** Again, I don't have data on it and I'm not an
 19 epidemiologist, but I think that is likely. I should
 20 emphasise, I think it was probably recognised somewhere
 21 that that was the case, but they just simply didn't have
 22 the capacity to test following the strategy of total
 23 investment in large central laboratories which were
 24 still not operating sufficiently effectively.

25 **Q.** Thank you. Can I ask you also, given the Crick's

42

1 recommendations. If we go to the bottom of that page,
 2 please, we can see -- you give the detail and
 3 underpinning evidence, but you and the Crick recommend
 4 that the United Kingdom should have a standard stockpile
 5 of standardised reagents and/or resilient domestic
 6 manufacturing capacity.

7 **A.** Yes, we have that in this -- at the bottom of the page
 8 there, 2.4.1. That has to be combined with what is
 9 further up, which is the establishment of a plan for
 10 local testing that could be implemented very rapidly.
 11 So those two things have to be combined together. We do
 12 need a stockpile, or at least national ability to
 13 produce rapidly, but that has to be combined with the
 14 second point of a network of local testing facilities,
 15 which is a bit further up the page.

16 **Q.** Thank you.

17 Can we then turn over the page, please.

18 I'm afraid, Sir Paul, I'm dealing with the
 19 highlights in bold --

20 **A.** Yes.

21 **Q.** -- because of the time, just to capture them.

22 **A.** Understood.

23 **Q.** We can see that you recommend that:

24 "There should be a clear roadmap for the development
 25 of new assay in the early stages of a pandemic (bearing

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1 in mind there is likely to be restricted access to
 2 control standards or consumables), or a scheme for
 3 continual pre-evaluation of emerging technologies as
 4 scalable and fast testing platforms."
 5 **A.** Yes, and I think this only requires planning. It
 6 requires planning of identifying where the resources are
 7 most needed. That would be, of course, hospitals, care
 8 homes and the like. And then just ensuring that you can
 9 put something in place with everything here, with
 10 control standards and consumables, all which could be
 11 planned beforehand. And this means you don't have to
 12 hold something in place in -- which would be expensive,
 13 you know, in big laboratories. You simply have a plan
 14 for repurposing pre-existing facilities, pre-existing
 15 laboratories, and make sure that they have a plan that
 16 would allow it to be rapidly implemented.

17 So I think that is all that's required. It wouldn't
 18 even cost very much.

19 **Q.** Thank you.

20 I'm going to summarise, to go through, you've also
 21 recommended that the government should maintain an
 22 up-to-date register of the nation's network of research
 23 and clinical laboratories where large amounts of
 24 equipment are housed and relevant expertise is available
 25 for rapid repurposing in a pandemic.

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1 presented via Application Programme Interfaces ... to
 2 allow for key patient data to be shared with, and
 3 updated by, approved non-NHS organisations."

4 This is basically stating: solve the IT problems
 5 up front.

6 **Q.** Thank you. Then further you go:

7 "[The] NHS must invest in technology professionals
 8 and skills development system-wide, and dramatically
 9 reduce reliance on external contractors and restrictive
 10 managed service arrangements."

11 **A.** I think that's critical. And I want to add something
 12 else. What we were doing was almost an example of
 13 public duty rather than simply relying on commercial
 14 organisations to produce these tests. And I think
 15 insufficient attention was paid to the public duty
 16 aspect here.

17 People wanted to help. They volunteered to help.
 18 They weren't allowed to help because all that was being
 19 thought about were commercial solutions rather than
 20 exploiting the great opportunities we had with our
 21 publicly funded institutions.

22 **Q.** Thank you. And then over the page, please, to 25, in
 23 the context of clinical testing you recommend:

24 "A pre-pandemic plan should include a list of
 25 favoured or approved sites for quick mobilisation, to

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1 I think that speaks --

2 **A.** That's exactly the point I'm making, thank you, yes.

3 **Q.** There's the point about the reagents, then, that you
 4 recommend there should be coordination of production of
 5 reagents and testing across the nation's network of
 6 research in clinical laboratories?

7 **A.** Exactly, yes.

8 **Q.** Over the page, please:

9 "An up-to-date register of staff training across all
 10 aspects of testing should be maintained."

11 **A.** Yes.

12 **Q.** "... prior planning for sample collection
 13 standardisation in a readily automatable format."

14 **A.** Which is important, because often there's IT issues
 15 here, and you just need to solve those up front.

16 **Q.** The Crick make recommendations in respect of data,
 17 namely that:

18 "Urgent action is required to develop common
 19 'platforms' for patient care and data management,
 20 procured, managed and integrated system-wide, not at
 21 individual trust/body level."

22 **A.** Yes, clearly vital, yeah.

23 **Q.** Over the page to page 24, please, that:

24 "Patient data has to be consolidated across
 25 platforms into a single platform record which can be

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1 help prioritise distribution of limited test material,
 2 potentially scarce consumable resources, and rapid
 3 integration into the reporting system."

4 **A.** Two words: proper planning.

5 **Q.** Thank you.

6 **LADY HALLETT:** Everything in this Inquiry comes back to
 7 proper planning, I'm afraid, Sir Paul.

8 **A.** Yes.

9 **MS CARTWRIGHT:** Just finally for my purposes, Sir Paul,

10 I know your statement deals with much wider issues,
 11 including a concern you had about what was being said by
 12 the government about the extent of testing and tests
 13 from a news --

14 **A.** Yes.

15 **Q.** Can you briefly address that before I --

16 **A.** Yes, I would like to, because actually, first of all, we
 17 have to have some sympathy. This is a, then, very
 18 difficult situation to deal with, very difficult to
 19 communicate quite complex things to the public, but the
 20 government did no favours to itself by trivialising
 21 communication.

22 I mean, a particular thing that irritated me was the
 23 100,000 tests by, I think, the end of April that was
 24 being put up. And then, when it wasn't reached, poor
 25 old Grant Shapps was put out to protect a claim that

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1 100,000 had been reached when in fact over half of them
2 or thereabouts was actually in the post.

3 And when that actually emerged, and I mean -- you
4 know, my eight-year-old grandsons would realise that's
5 nonsense. I mean, when that emerged it actually
6 undermines the public confidence. That if a government
7 can say they are meeting 100,000, when 50,000 of them
8 are in the post, what else are they meant to believe?

9 This is where communications and PR is simply
10 overwhelming truth and engagement and truthful
11 communications with the public. I think it was
12 outrageous.

13 **Q.** Thank you. Then just to finally end the evidence, it
14 seems right, you having identified the volunteers that
15 gave of their time and expertise, could I briefly
16 display INQ000587069, internal page 5.

17 And the full article here essentially sets out in
18 detail what the Crick did and achieved, but if we look
19 on the last page of this article, we can see there: the
20 Crick Covid-19 Consortium and the names of a great many
21 of those that were part of the consortium that worked
22 for the public good that you've described. And I think
23 it's appropriate in my questions to end with displaying
24 the names of those individuals.

25 **A.** I'd just like to identify all my colleagues here who
49

1 are formally embedded into future pandemic testing
2 protocols, particularly when addressing the needs of
3 underserved communities?

4 **A.** I think -- I don't have any specific and special
5 knowledge of this particular area, I have to admit, but
6 I think it is very difficult to achieve equity unless
7 you have the capability to deliver the, in this
8 instance, the testing that was required. And in that
9 situation, all communities will suffer, of course, but
10 including marginalised communities.

11 So what we see here is the failure to produce the
12 appropriate testing, and we've just been discussing
13 that, and as a consequence of that, communities will
14 suffer, including marginalised communities. So we need
15 the capability, in short.

16 **Q.** Well, that leads me on to my second question, which is,
17 if you can assist us, who in your view should be held
18 accountable for ensuring that these ethical and
19 equitable considerations are adhered to, particularly
20 when designing the testing, especially when it comes to
21 safeguarding the interests of marginalised and minority
22 ethnic communities?

23 **A.** I think what's critical here, as in times, all times of
24 crisis, is proper political leadership. Leadership
25 which leads to the confidence of the nation and all
51

1 were working long shifts, no extra pay, of course, they
2 were on furlough. But they did it, I repeat, out of
3 a feeling of public duty.

4 **MS CARTWRIGHT:** My Lady, those are my questions. There are
5 questions from the Core Participants.

6 **LADY HALLETT:** I think Mr Thomas is first.
7 Mr Thomas is over there, Sir Paul.

8 Questions from PROFESSOR THOMAS KC

9 **PROFESSOR THOMAS:** Good morning, Sir Paul.

10 **A.** Good morning, good morning.

11 **Q.** I'm representing FEMHO, that's the Federation of Ethnic
12 Minority Healthcare Organisations.

13 Sir Paul, as we reflect on the response of the
14 pandemic, I would like us to address the role of ethics,
15 accountability, and inclusion in the decisions that were
16 made in and around the testing, in particular trying to
17 understand how equity was integrated into the design and
18 implementation of the TTI system, especially how it
19 impacted on marginalised communities.

20 So with that in mind, my questions are aimed at
21 trying to explore those issues.

22 So the first question is this: Sir Paul, in your
23 experience, with your insight into both the scientific
24 and the logistical barriers faced during the pandemic,
25 how can we ensure that ethical and equity considerations
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1 parts of the nation that the very best is being done to
2 deliver an appropriate outcome.

3 So the key issue for me is good political
4 leadership. It is not enough to simply say, for
5 example, we will identify a company who will do it and
6 put it off to somebody else and not take responsibility
7 for actually getting a proper delivery of the
8 appropriate outcome.

9 **Q.** Thank you. As we reflect on the systemic failures of
10 the TTI system, particularly in respect of minority
11 ethnic communities, how do we -- how do you assess the
12 role of cultural competence in the initial design and
13 implementation of these services?

14 **A.** I think critical here, and I'm not sure I'm fully
15 addressing your question, is appropriate communication
16 of all aspects of the issues around these particular
17 problems and deliveries, and I think why I emphasise
18 communication is that those who come from different
19 communities have different needs for appropriate
20 communication and you have to make sure that the
21 communication, which is critical, is actually tailored
22 in such a way that it is appropriate to all parts of the
23 community. I think that would be the only comment
24 I could make about it.

25 **Q.** Communication being key?
52

1 A. Yeah.
2 Q. And finally, this is my final question, looking back,
3 what could have been done to ensure that the TTI system
4 was both culturally competent and equitable in its
5 outreach and provision of services, especially for
6 vulnerable and at-risk communities?

7 A. I think it's having people in charge who care.

8 **PROFESSOR THOMAS:** My Lady, thank you.

9 **LADY HALLETT:** Thank you, Mr Thomas.

10 Ms Munroe.

11 Ms Munroe is there, Sir Paul.

12 **Questions from MS MUNROE KC**

13 **MS MUNROE:** Good morning, my Lady.

14 Good morning, Sir Paul. My name is Allison Munroe.

15 I ask questions on behalf of the Covid Bereaved Families
16 for Justice.

17 Sir Paul, thank you for your evidence this morning.

18 Just two questions on behalf of our families that we
19 would welcome your views on. Both in your oral evidence
20 and indeed in your written evidence you've emphasised
21 the key workers, both symptomatic and asymptomatic,
22 should have been the focus of early testing and
23 especially healthcare workers. My question is this:
24 notwithstanding the high infection and mortality rates
25 of TfL workers, in the first wave, they were not

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1 any future pandemic.

2 Q. Thank you, Sir Paul.

3 My second and final question. To an extent you have
4 answered it in answer to Mr Thomas King's Counsel, but
5 Sir Paul, you note that the Crick Consortium were
6 staffed by volunteers who, as you say, would otherwise
7 have been furloughed and at the outset the testing was
8 focusing on NHS staff and families, but the work from
9 the Crick later included collaboration with clinicians
10 at UCLH, and other hospitals, local hospitals, and
11 programmes to test, for example, homeless individuals
12 residents and staff at care homes, locally, and staff
13 and users of mental health units.

14 So looking at those particular vulnerable groups in
15 society, would you agree that that outreach testing,
16 such as was carried out by the Crick and its partners,
17 was perhaps more suited than digital apps for certain
18 vulnerable groups within the population such as the
19 mentally unwell, those with mental disabilities,
20 elderly, and those who were unsupported and unable,
21 perhaps, to be, for want of a better word, less
22 digitally literate?

23 A. Yes. I'm no expert in this area, as I said I'm a yeast
24 biologist, but there's no doubt, I think, that when you
25 have an initiative that is local, by its very nature,

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1 prioritised for Covid testing following the government's
2 suspension of community testing on 13 March 2020.

3 In your view, should TfL workers and other key
4 workers such as teachers and domiciliary workers have
5 been prioritised for testing as were the healthcare
6 workers?

7 A. So what I think here is that we need to look at our --
8 at our community across the board in our appropriate
9 planning, and I said "proper planning" a few minutes
10 ago. Because you're quite right, there are a variety of
11 different key workers, not just healthcare. We
12 emphasised healthcare because of the spreading amongst
13 vulnerable patients, but there are others which should
14 have a protected status. I want to emphasise something
15 that that we haven't mentioned. We managed, of course,
16 to protect the Crick by testing individuals at the Crick
17 and this meant that we allowed people to do research
18 into Covid in the Crick.

19 Now, the principle you're talking about there
20 applies to other essential activities, and different
21 workers that you've mentioned. This needs proper
22 planning as to where you need the testing and to make
23 sure you have the capability of doing the testing
24 through the sorts of, in my view, the sorts of
25 recommendations that we've made to mimic the Crick in

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1 that will focus on the needs of the local environment
2 which I have a feel will include exactly the sorts of
3 things and people that you mention.

4 We got a lot of advice back and a lot of proposals
5 back from the community about where testing should be
6 applied, and we did our best to actually satisfy it when
7 it's requested.

8 I think this naturally comes from more local testing
9 by its very nature.

10 **MS MUNROE:** Thank you very much, Sir Paul.

11 Thank you, my Lady.

12 **LADY HALLETT:** Thank you very much, Ms Munroe.

13 That completes all the questions we have for you,
14 Sir Paul. I'm sure I'm not the only one who when we
15 heard just part of your CV, I felt extremely humble. So
16 thank you very much to you and to your colleagues for
17 all that you did, and tried to do, to protect people
18 during the pandemic. Obviously I can't reach any
19 conclusions until I have heard all the evidence, but,
20 I have to say, I share your astonishment that when two
21 Nobel Laureates write to important people, that you
22 don't get a response.

23 It makes one wonder if they realised who you were,
24 but it's on the letter, in fact, I think --

25 **THE WITNESS:** I think it was on the letter, yes.

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1 **LADY HALLETT:** Yes. So thank you, again, for what you did
 2 during the pandemic, and also thank you for your help to
 3 the Inquiry.
 4 **THE WITNESS:** Thank you for listening to me. Thank you.
 5 **LADY HALLETT:** Very well, I shall return at 11.35. Thank
 6 you.
 7 (11.17 am)
 8 (A short break)
 9 (11.35 am)
 10 **LADY HALLETT:** Ms Cartwright.
 11 **MS CARTWRIGHT:** My Lady, please could Professor McNally be
 12 sworn.
 13 **PROFESSOR ALAN MCNALLY (affirmed)**
 14 **LADY HALLETT:** I hope we told you you weren't first on,
 15 Professor?
 16 **THE WITNESS:** Yes.
 17 **LADY HALLETT:** Thank you.
 18 **Questions from LEAD COUNSEL TO THE INQUIRY FOR MODULE 7**
 19 **MS CARTWRIGHT:** Could you please tell the Inquiry your full
 20 name.
 21 **A.** Yes, my name is Alan McNally.
 22 **Q.** Thank you. Professor McNally, you provided a witness
 23 statement to the Inquiry. It's 31 pages.
 24 Could we go to page 31, where we see the date of
 25 your statement being 27 March this year, and can I ask

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1 Microbiology Society?
 2 **A.** I am, yes.
 3 **Q.** And it's right, isn't it, that you have collaborated and
 4 contributed to the microbiology statement authored by
 5 Peter Cotgreave that --
 6 **A.** Yes, I did.
 7 **Q.** -- the Inquiry also have. Thank you.
 8 Significantly though, I'm going to come on to deal
 9 with the fact that you were part of the team that set up
 10 the Milton Keynes Lighthouse laboratory in March 2020?
 11 **A.** Yes, I was, yes.
 12 **Q.** And I think also of significance, that we're going to
 13 come on to deal with in a minute, that you have
 14 previously done post-doctoral research at what was VLA,
 15 now the Animal and Plant Health Agency in Surrey?
 16 **A.** Yes, I did perform post-doctorate research on avian
 17 influenza and diagnostics for that virus.
 18 **Q.** Thank you. Now can we first of all identify, it may be
 19 obvious from your qualifications, but it's right, isn't
 20 it, you have a wealth of relevant experience that is
 21 pertinent to test, trace and isolate?
 22 **A.** I think so, yes. Certainly from my post-doctoral work
 23 on avian influenza. I've also had several funded
 24 projects to develop rapid diagnostic tests over the
 25 years.

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1 you to confirm that the contents of your statement are
 2 true to the best of your knowledge and belief.
 3 **A.** I can confirm they are true.
 4 **Q.** Thank you.
 5 Professor McNally, could we together identify your
 6 relevant knowledge, experience and expertise.
 7 It's right, isn't it, that you are professor of
 8 microbial evolutionary genomics and inaugural head of
 9 the School of Infection, Inflammation and Immunology in
 10 the College of Medicine and Health at the University of
 11 Birmingham?
 12 **A.** I am, yes.
 13 **Q.** Can you assist us as to how long you have been
 14 a professor at the University of Birmingham, please.
 15 **A.** I've been a professor since 2019. I've been at the
 16 university since 2016.
 17 **Q.** Thank you. And I think, is it right, that before that
 18 time you were formerly at Nottingham Trent University?
 19 **A.** Yes, I was. Yes.
 20 **Q.** Thank you. It's right, isn't it, that you are also
 21 a consultant for Prenetics?
 22 **A.** Yes, I was. I acted as a consultant to advise them on
 23 their testing to resume the football Premier League.
 24 **Q.** Thank you.
 25 You are also a trustee and member of council of the

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1 Most of my research now is actually not relevant to
 2 that, but I do have -- and also, at the time of the
 3 pandemic, I was the head of one of the most prestigious
 4 microbiology institutes in the country, so I had quite
 5 a bit of insight to give, I felt.
 6 **Q.** Thank you. Now I'm going to start, please, with you
 7 looking at the beginning of January 2020 and can I ask
 8 for your assessment at that time about what you thought
 9 was likely going to happen and what was needed?
 10 **A.** Yes. I think myself and many other, sort of, senior
 11 microbiology colleagues across the country were watching
 12 what was happening in China, I also have very close
 13 collaborators in China that I was speaking to, and it
 14 was clear that this wasn't -- it wasn't going to be
 15 a localised outbreak of respiratory disease, it looked
 16 like it had the potential to be a pandemic. And then,
 17 as it spread into Iran, Italy, other parts of Southeast
 18 Asia, I think my colleagues and I were all discussing
 19 the absolute probability that this was going to be
 20 a significant pandemic.
 21 And then, from my own expertise, the thing I started
 22 to worry about was whether or not we as a country would
 23 be able to cope with the influx of that disease,
 24 particularly around diagnostics and testing.
 25 **Q.** Thank you.

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1 Can we together just identify what ability the
 2 University of Birmingham had in January of 2020 --
 3 **A.** Yes.
 4 **Q.** -- to make PCR tests, please.
 5 **A.** Yes. So, as January unfolded, myself and some
 6 colleagues in the university, Professor Andrew Beggs,
 7 Professor Alex Richter, working with our head of
 8 college, Professor David Adams, we started to think
 9 about how we might contribute efforts to control the
 10 virus, and that was specifically around testing.
 11 **Q.** I'm just going to ask you to slightly slow down for our
 12 stenographer, but thank you, continue.
 13 **A.** So we looked at the equipment that we had in the medical
 14 school of the university. We had sufficient PCR
 15 machines, maybe around a dozen. We had containment
 16 level 3 facilities which we could employ to help. And
 17 we had sufficient expertise and knowhow to perform
 18 testing.
 19 Unlike Sir Paul, who was on previously, we don't
 20 have a core research budget that we could divert to, but
 21 what we did was have everything set up, we identified
 22 staff that we could train and who could help, and we got
 23 ourselves in a position where we felt we could very
 24 quickly redeploy efforts to offer somewhere between
 25 3,000 and 5,000 PCR tests per day if it was needed.

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1 inputted into medical records?
 2 **A.** Yes, yes, we believe so, yes.
 3 **Q.** Thank you. Now, we've just touched upon one medical
 4 school at one university in the United Kingdom. Are you
 5 able to assist us as to how many medical schools and
 6 similar-calibre universities have a similar type of
 7 resource in the UK in January 2020?
 8 **A.** Yes. It's a guesstimation, it's not an accurate
 9 summary, as a guesstimation. But there are around 40
 10 medical schools in the United Kingdom, so that's across
 11 England, Wales, Scotland, Northern Ireland. All of
 12 the -- the vast majority of those are research-intensive
 13 universities, they would have the equipment, the
 14 expertise, the staff, and the vast majority of them
 15 would already be doing research projects that would
 16 allow them to share data with the local NHS trusts.
 17 **Q.** Thank you. So the same data sharing ability and
 18 flexibility --
 19 **A.** Yes.
 20 **Q.** -- of testing and inputting of records?
 21 **A.** Yes.
 22 **Q.** Now that's the mainstay medical schools in the UK, but
 23 is there a different cohort of universities that also
 24 have the laboratory centres and the laboratory equipment
 25 that aren't the classical core 40 medical schools,

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1 **Q.** Thank you. So that's 3,000 to 5,000 PCR tests per day
 2 at the University of Birmingham from what time period?
 3 Would it have been possible in January?
 4 **A.** Probably planning in January, with us being able to do
 5 that from mid-February.
 6 **Q.** Thank you.
 7 Can I perhaps explore what might be an obvious
 8 point, but the University of Birmingham and your medical
 9 school, does it have a direct sharing of data through
 10 hospital records, because of the nature of the medical
 11 school -- (overspeaking) --
 12 **A.** Yes, it's one of the benefits that we have as a medical
 13 school, is we have some research laboratories. And we
 14 also have some, sort of, semi-research, semi-service
 15 laboratories which already perform tests for the NHS,
 16 and therefore report those results into the NHS data
 17 reporting system. So that's the major hurdle for
 18 university labs in being able to offer diagnostic
 19 testing, but most medical schools have labs that do that
 20 and therefore that obstacle does not exist.
 21 **Q.** Thank you. So, again, in terms of what was possible, in
 22 February 2020, would it be local testing at the
 23 university using the university laboratory, but also the
 24 ability that the data across and the recording of that
 25 positive or negative test could have been directly

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1 please?
 2 **A.** Yes, absolutely. There are research universities,
 3 research -- pockets of research intensively(?) in
 4 universities up and down the country. So you could
 5 easily add another 30 or 40 laboratories that could
 6 have -- that had the equipment and the knowhow that
 7 could have contributed. They probably would not have
 8 that normal day-to-day seamless exchange of data with
 9 NHS but that would be the only obstacle to them also
 10 standing up and supporting.
 11 **Q.** But certainly having the correct PCR equipment?
 12 **A.** Yes.
 13 **Q.** The relevant expertise?
 14 **A.** Yes.
 15 **Q.** And ability to perform testing quickly?
 16 **A.** Yes.
 17 **Q.** Now, in terms of other existing infrastructure that
 18 existed in the United Kingdom, I highlighted, when
 19 I dealt with your past experience, the Animal and Plant
 20 Health Agency?
 21 **A.** Yes.
 22 **Q.** The Inquiry has already heard some evidence about
 23 zoonotic diseases and viruses. Can you assist with your
 24 informed knowledge about what laboratory structures and
 25 availability existed through the Animal and Plant Health

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1 Agency, please?

2 **A.** I would argue that the APHA, the Animal and Plant Health

3 Agency lab in Weybridge and the large virology research

4 lab in Purbright were almost certainly the two

5 facilities that would have needed absolutely zero

6 support in beginning Covid testing immediately. The

7 APHA was a European reference lab for avian influenza,

8 for rabies virus, for lots of different viruses, so it's

9 already performing diagnostic tests at the very highest

10 level, the same PCR tests for viruses, similarly with

11 Purbright, and there are other facilities like the

12 National Institute for Biological Standards in

13 Hertfordshire, they're doing testing for high

14 containment level pathogens on a regular basis.

15 **Q.** Thank you. And I've sought your help to try to

16 understand infrastructure. On top of that, can you

17 assist, just so we've got a proper context of your

18 informed view about what existed. You touch upon it in

19 your statement but it's just to make sure there's no

20 confusion about what existed. We've heard about the

21 Virology Network --

22 **A.** Yes.

23 **Q.** -- and the virology laboratories.

24 **A.** Yes.

25 **Q.** Can you just assist as to where they sat? And

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1 idea about the existing infrastructure.

2 **A.** Yeah, I can't give you a fully informed answer to that.

3 Many laboratories, as hospital labs and public health

4 labs were rejigged pre-pandemic, many of them became

5 a hub and spoke model. So the example I gave you, when

6 that happened I was in Nottingham, was that a hospital

7 in Chesterfield reduced its capability to do PCR testing

8 but would have used Nottingham as a central hub in order

9 to do that type of testing. But the majority of

10 hospital laboratories are able to do a PCR test. Many

11 of them have now moved over to black box cartridge

12 systems but there are dozens and dozens of labs that can

13 do PCR testing for viruses.

14 **Q.** Now, other than being able to tell us what you think was

15 achievable on a daily basis in Birmingham, I'm not going

16 to ask you to even attempt to estimate, but can you just

17 solidify again what you say would have been possible in

18 Birmingham in February?

19 **A.** In Birmingham, again, by mid-February I think we could

20 have run 3,500 to 5,000 tests per day, and speaking to

21 colleagues in other medical schools, Leeds, Nottingham,

22 they were saying identical things. They could have

23 stood up to 3,500, 5,000 tests per day, so 40 medical

24 school labs, 5,000 tests per day each is 200,000 tests.

25 **Q.** Thank you. Now, we know that -- in fact you started to

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1 obviously, that's quite separate as to how that then

2 factors into also what was available?

3 **A.** Yes, so those are the network of, if you like,

4 hospital-based laboratories that have the

5 infrastructure, expertise and equipment to perform

6 relatively high throughput molecular tests, PCR testing

7 for viruses. They were part of the old Public Health

8 England network of labs, around about 40 or so. As the

9 pandemic emerged, 12 of those were stood up to provide

10 testing for the UK, but there is that network.

11 Then there's also further clinical microbiology labs

12 with PCR machines and obviously the expertise to turn

13 over to viral PCR testing.

14 **Q.** Thank you. So just to be clear, I dealt in my opening

15 with the fact that when PHE commissioned 12 of the PHE

16 labs, your evidence and knowledge is that, sitting

17 outside that, there are other PHE laboratories that also

18 could have been stood up for testing?

19 **A.** And clinical microbiology laboratories.

20 **Q.** Thank you. And then, separately again, in terms of

21 laboratories that existed in hospitals up and down the

22 country, are you able to assist at all as to how many

23 laboratories they would have had also additionally?

24 I know a lot of their testing would have been

25 contributing to the effort but, again, just to get an

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1 take steps with the view to thinking that was exactly

2 what you would be doing on the ground in Birmingham?

3 **A.** Yes, yes. I'd been doing a lot of press work in my, you

4 know, prominent microbiology role, I've been doing a lot

5 of press work suggesting that we weren't prepared for

6 the level of testing that would be required to stay

7 ahead of the virus. And that led to a lot of

8 conversations with colleagues across the country and

9 that's when we started to look at exactly what we could

10 do and, as I say, we'd started to localise equipment, in

11 a number of labs that were better suited, so if we were

12 doing proper diagnostic testing, for example one of the

13 labs, the Clinical Immunology Service Lab, which has

14 already -- feeds data into the NHS.

15 So we were being very strategic about where we were

16 placing resources. We were starting to identify staff

17 that could be trained or were already trained and that

18 could help us with the testing. Some of them were

19 starting to be furloughed and so on. So we had, what we

20 felt, everything in place. We turned the containment

21 level 3 labs over to complete -- just would be used for

22 purposes if needed. As I said, unlike Sir Paul, we

23 didn't have a core research budget so we weren't able to

24 actually start any testing, but we felt we were in

25 a position where we had everything ready to go if the

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1 support was given to us to start.

2 **Q.** Thank you. Can I ask you, you just said that you didn't

3 have any specific budget as a university. The Inquiry

4 has already heard some evidence about the successes in

5 Germany --

6 **A.** Yes.

7 **Q.** -- and what Germany was able to do.

8 **A.** Yes.

9 **Q.** And can I ask you in terms of how Germany's universities

10 are utilised, whether there's any relevant evidence you

11 have about the funding of Germany universities?

12 **A.** Yes. I mean, this is the point I was making over the

13 whole of January and February is that in Germany they

14 have a rather wonderful system, it's a federated lab

15 system where they use a mixture of university

16 laboratories, commercial laboratories, veterinary

17 diagnostic laboratories, and essentially what they do is

18 they apply to be part of that network. They are then

19 sent some samples to test, to check if they're up to the

20 job. They have staff that are trained and on a register

21 of staff that can do that testing if required, and they

22 essentially sit on standby ready to completely divert

23 their activities to diagnostic testing if it's required,

24 which is why Germany was able to start testing in

25 January, February of 2020.

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1 lab.

2 **Q.** And can you assist as to what time frame that you'd been

3 shared that information of £150 million?

4 **A.** That was over the first three months when I was there to

5 help set it up.

6 **Q.** I think we'll perhaps come on to deal with together

7 that, essentially, the Lighthouse laboratory network has

8 completely gone and been lost?

9 **A.** Yes. Yes, it's a bit of a tragedy that none of it

10 exists anymore. The equipment was sold off, and the

11 staff have all returned back to what they do, and there

12 is nothing remaining of the Lighthouse lab network.

13 **Q.** Thank you.

14 Now, I'm going to please take you to -- actually,

15 before I do that, I'd just like your views. You were

16 plainly watching what was emerging in January and

17 February, giving thought about what was possible, and so

18 I'd like your views with the relevant expertise you do

19 have as to if that resource was stood up, in February of

20 2020, what that could have meant for stopping or

21 reducing, mitigating the pandemic?

22 **A.** Yes.

23 **Q.** And that's only if you're able, and if you're not,

24 equally --

25 **A.** No, I think I can answer that. As Sir Paul said

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1 The cost of that, again, this is a guesstimate,

2 a very back-of-the-envelope calculation on my behalf

3 would be half a million pounds per lab per year to

4 sustain that, 20 labs, you're looking at maybe £10-15

5 millions pounds per year budget for that to be

6 sustained.

7 **Q.** So the Government of Germany, as part of this scheme,

8 invest that portion of money into the universities that

9 are able to, essentially, have that facility ready to

10 devote to testing?

11 **A.** Yes, and it's controlled by state -- basically the state

12 infectious disease lab, the Robert Koch Institute, so

13 they have overall responsibility for it and they

14 maintain it and oversee it.

15 **Q.** Thank you. Now, I am going to ask you this question

16 because I know you were involved in the set-up of the

17 Milton Keynes Lighthouse lab. So you've contextualised

18 the £10-15 million annual figure in Germany for that

19 facility at the universities. Can you contrast that

20 with how much it cost for the initial set-up of the

21 Milton Keynes Lighthouse lab, please?

22 **A.** Yeah, I mean, again, I must stress I do not have

23 anything in writing, but, you know, you're talking of

24 a facility, the number I heard was somewhere in the

25 region of £150 million to establish the Milton Keynes

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1 earlier, I think we needed the large lab network,

2 Lighthouse labs network, because at some point you are

3 going to have to perform 250-500,000 tests per day, and

4 so we needed those large central labs, but I believe in

5 January, February, March, university labs, research

6 institute labs could have been stood up in a couple of

7 weeks and that would have created that, sort of, holding

8 capacity of tests such that you could have slowed the

9 growth of transmission and the growth of the pandemic in

10 the early part of 2020.

11 It would not have stopped the pandemic from

12 happening, but it could certainly have slowed the rate

13 at which it happened. That would have alleviated the

14 pressure on our healthcare system, and it would have put

15 us in a much more informed path of how the virus was

16 coming into the UK, how it was spreading, hotspot areas,

17 for example that we might want to invest testing in,

18 such as healthcare facilities, places like, as an

19 example in Birmingham, there was an abattoir that saw

20 a massive outbreak, largely driven by migrant workers.

21 Having a good early testing infrastructure could have

22 allowed us to very quickly identify hotspots of

23 transmission and get slightly ahead of the virus.

24 **Q.** Could I ask if you can assist me, please,

25 Professor McNally, we know that the national position

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1 across the four nations on 12 March 2020 was to stop all
 2 community testing --
 3 **A.** Yeah.
 4 **Q.** -- and to stop contact tracing, and it appears that part
 5 of the reason for that was the lack of testing.
 6 **A.** Yes.
 7 **Q.** Do you have any views on that decision informed by the
 8 evidence you've just given about just what was possible
 9 in February, please?
 10 **A.** I think I'm on record in the press as saying I was
 11 flabbergasted. I just can't believe that decision was
 12 taken.
 13 **Q.** Can we then, please, I think we see some similarly
 14 strong language in one of the emails from 19 March. I'm
 15 going to take you there now, please.
 16 **A.** I apologise.
 17 **Q.** You don't need to be embarrassed, in fact I'll skip over
 18 the word, but if we could go, please, to INQ000582851,
 19 please. And it's, I'm afraid on the chain, we're going
 20 to have to move to the next page because it works
 21 backwards, so let's start at page 2, please. Thank you.
 22 I think we see here the decisions that are being
 23 made and what was being asked, and we'll come on to then
 24 what you'd been doing. So this is a letter that's been
 25 sent, but essentially been sent on behalf of Jeremy

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1 And there's a reference to the individual:
 2 "... at Amazon has been a great partner throughout
 3 this. And this comes with the very strongest support
 4 from across government as the only viable solution. So
 5 the extraordinary request!"
 6 Pausing there, can I ask for your comment, it may be
 7 obvious from the evidence you have already given, but is
 8 what was being asked and proposed in this email the only
 9 viable solution?
 10 **A.** I don't agree with that and I made it quite clear
 11 throughout January and February that I believed
 12 university labs and research institute labs could have
 13 been utilised.
 14 **Q.** I rather suspect that, after this email, the university
 15 network themselves shared their own views about it.
 16 **A.** Yes, yes, we -- yes.
 17 **Q.** Sorry. And again, if you're able, was there any
 18 consensus view that fitted with your view about this
 19 being the only viable solution?
 20 **A.** All of the colleagues I spoke to -- as I said, this
 21 email was received by all medical schools. All of the
 22 colleagues I spoke to in the prevailing 24 hours said
 23 the same: that it was a solution, it wasn't the only
 24 solution. Universities were ready and willing to step
 25 up.

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1 Farrar; is that correct?
 2 **A.** Yes, to all medical schools across the country.
 3 **Q.** I'm going to read it:
 4 "Dear All
 5 "Excuse the late hour and an extraordinary request."
 6 So this is 16.46 on 19 March:
 7 "You'll be very aware of the COVID-19 pandemic and
 8 the inevitable impact on the [United Kingdom]. We have
 9 been working 24/7 over a number of weeks now on this and
 10 over the last two days have been focused on increasing
 11 the UK's capacity for diagnostic testing ([healthcare
 12 worker], individual patients in hospitals, people at
 13 home, and age stratified population serology).
 14 "It is clear that whilst the NHS and the PHE are
 15 ramping up, there is no way they can meet the surge that
 16 is going to be needed.
 17 "We estimate that we will potentially need to get to
 18 200,000-300,000 tests a day at the peak of this
 19 pandemic, current capacity is [I think that means 'less
 20 than'] ~5,000 tests a day. Not only do we have to
 21 increase the speed of the tests, but also the speed of
 22 getting those tests completed from sampling, to assays
 23 to results fed back to people. All the logistics being
 24 done at scale and at speed by professional companies
 25 used to dealing with such complex issues ..."

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1 **Q.** Let's read on.
 2 "The best approach is to use in the first instance
 3 is to use the Thermo Fisher platform (others Roche ..."
 4 How do you pronounce that, sorry?
 5 **A.** Qiagen.
 6 **Q.** Qiagen, thank you very much.
 7 "... Qiagen, and others will follow) and to use
 8 these in 'dedicated diagnostic factories' in the UK.
 9 Probably three in the first instance with dedicated
 10 equipment, staff and able to work 18-24 hours a day,
 11 7 days a week.
 12 "There are no Thermo Fisher machines to buy globally
 13 (or any other platform!). Many of your Universities and
 14 Institutes have these machines.
 15 "We want to ask you to work with us all at this time
 16 a great national need to allow the machines in your
 17 Universities and Institutes to be provided to the
 18 centralised diagnostics centres. And to do so urgently!
 19 "We appreciate there are a significant number of
 20 issues to work through -- QA/QC, regulation, ownership,
 21 replacement, equipment when we eventually get through
 22 this, liability and many more. But these are
 23 unprecedented times and we cannot use by normal
 24 processes.
 25 "With the UK now on the cusp of the pandemic

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1 following the path of northern Italy and with a doubling
 2 time in parts of the UK now of 3-5 days currently this
 3 could not be more urgent. We estimate that ITU's in
 4 will be beyond capacity within 14-28 days if the
 5 measures announced over the last week fail to shift the
 6 epidemic curve.

7 "We at Wellcome have been working on this with the
 8 No10, CSO, CMO, DHSC, the Office of Life Sciences,
 9 Amazon, Thermo Fisher Roche, Qiagen, and others over the
 10 last 36 hours and are a totally committed partner to
 11 this national and global emergency.

12 "We need your help!

13 "Tomorrow the Prime Minister will write to you and
 14 add to this request, but I wanted to give you a heads up
 15 tonight. In an ideal world the army would pick these
 16 machines up in the next 24 hours -- that is the sense we
 17 believe of the urgency.

18 "Much to think through and ponder -- and we may not
 19 have all the answers today or tomorrow -- but we would
 20 hugely appreciate your partnership and urgent support.

21 "Very best wishes
 22 "Jeremy."

23 So if we go back to page 1, please. Again, we see
 24 a chain, but we see your response at 17.24.

25 "Wow. I didn't see that coming, and if you can

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1 could provide staff to voluntarily staff the labs as
 2 well.

3 **Q.** And we know you did and you went. But can I ask you,
 4 perhaps to use the personal evidence in a witness in
 5 this Inquiry, Hazel Gray talked about common sense.
 6 Have you any views on, when you had an existing
 7 infrastructure, that was ready to go, of removing the
 8 equipment from the institute that could start making
 9 these tests, essentially reconditioning it, and taking
 10 it away -- (overspeaking) --

11 **A.** It made --

12 **Q.** -- national effort?

13 **A.** It made no sense to me and to other medical school
 14 colleagues I spoke to. It made no -- a lot of them were
 15 very, very angry by that letter from Jeremy Farrar. It
 16 didn't really make any sense to me at all.

17 **Q.** Is that what happened? Did all of the University of
 18 Birmingham's PCR machines get placed into the Lighthouse
 19 network?

20 **A.** So actually later in this chain you can see that there
 21 was an agreement that we could keep some of our
 22 PCR machines, because we were in a position where we
 23 could help the local hospital and the local public
 24 health. We did provide equipment though. The army came
 25 and picked up quite a substantial amount of equipment

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1 excuse the French that's a massive 'fuck you' to the
 2 whole of UK academia!

3 "It's not the directors of travel I was sensing.
 4 The most senior of PHE colleagues were telling me the
 5 use of Uni labs for community testing was almost
 6 certainly going to happen. I was on 5 live this
 7 afternoon recommending it!!! We insured of course try
 8 and fight our corner but this feels like an absolute
 9 done deal, all testing will be in approved, validated,
 10 accredited labs.....real shame."

11 Professor McNally, does your email effectively
 12 capture your complete sense of shock with the decision
 13 that was then being communicated on 19 March?

14 **A.** Perhaps rather too clearly, yes.

15 **Q.** And then can I ask you, the practical thing that was
 16 being asked was essentially all of these universities
 17 that had the equipment, had staff that lived nearby that
 18 could operate the equipment, had the knowledge and
 19 expertise, the machines were being taken from where they
 20 could be used locally and placed in what was perceived
 21 to be needed to be created, a factory, that didn't exist
 22 at that time --

23 **A.** Yes.

24 **Q.** -- and be placed there?

25 **A.** Yes. And then, subsequently to this, a request if we

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1 from our university the next day, and from universities
 2 all across the country. The Army handled the logistics
 3 of picking those pieces of machinery up and transporting
 4 them.

5 **Q.** Thank you. We know that was what happened in terms of
 6 the proportions going, but can I ask you, just from
 7 a logistical point of view, I think you probably know,
 8 if you move a PCR machine from Birmingham to
 9 Milton Keynes, how quick can you then set it up in
 10 Milton Keynes?

11 **A.** In terms of the machines, fairly quickly. They have to
 12 be checked and recalibrated because they're very
 13 sensitive machines and movements and some things can --
 14 you know, need tweaked after that. The actual machines
 15 themselves fairly quickly, but of course it's all the
 16 other parts of the testing: installing safety cabinets,
 17 finding staff, and then creating your SOPs, your
 18 workflows, you know, which rooms you're going to do
 19 things in and so on. So there's a substantial piece of
 20 work still needs to be done at the stage after the
 21 equipment arriving in the laboratories.

22 **Q.** Can I ask you then, thought could have been given to
 23 allowing the PCR machines to stay where they were so
 24 universities could continue to use them until the
 25 infrastructure in the Lighthouse laboratory said, "We're

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1 ready for it", and then it could have been moved in
 2 a short priority with the assistance of the military?
 3 **A.** Yes, potentially. Yes, yes. Or the kind of halfway
 4 house that we reached at Birmingham, where we provided
 5 some equipment but not all of our equipment, and we kept
 6 some of our equipment.
 7 **Q.** Thank you. Can we then look at the
 8 pro-vice-chancellor's response.
 9 And it's, please, INQ000585205, page 1. Thank you.
 10 We can see that the response that came back was:
 11 "Dear Jeremy
 12 "I just received your request to set up testing
 13 factories using university capabilities and machines
 14 via MSC. Over the last 3 days our researchers here
 15 [led] by Alan McNally that have worked closely with PHE
 16 and our NHS partners to set up testing in our university
 17 laboratories. We have capacity for more than 10,000
 18 extra tests per day already set up, with 35 academic
 19 volunteers who can work on a rota to provide the
 20 testing. We are hoping to more than double this by
 21 bringing board our regional genetics lab. It would seem
 22 a shame to stand people down and relocate facilities
 23 centrally but maybe we can act as local hub as part of
 24 your greater scheme."
 25 So obviously you're being referenced to the great

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1 felt that as well. And so I was asked if I could find
 2 some volunteers from Birmingham to staff the lab in
 3 Milton Keynes. I sent an email round to the university,
 4 collated quite a substantial list of names, I added my
 5 name to the top of that list and sent it forward as
 6 these are people that are willing to come and help.
 7 I wanted to do something and I wasn't going to be
 8 doing anything in the university, so that was the not
 9 quite as great option but the next best option, I felt.
 10 **Q.** Rather than reading the emails can we just do it -- so
 11 I think it's right, isn't it, that there were requests
 12 for you anticipate in calls with, was it, John Bell and
 13 Deloitte?
 14 **A.** Sir John Bell, yes.
 15 **Q.** Sir John Bell, sorry.
 16 **A.** Representatives from Deloitte, yes.
 17 **Q.** Perhaps can I allow you, rather than me taking you to
 18 documents, just to give an idea to her Ladyship as to
 19 then who you spoke to, who was involved in the
 20 discussions, after 19 March, that then takes you to
 21 Milton Keynes.
 22 **A.** Yes, primarily by -- it was an email inviting me to an
 23 online call -- Sir John Bell was there, some senior
 24 representatives from Deloitte, some people from Wellcome
 25 and some people from the Office for Life Sciences at

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1 efforts you had made, and can I just to get an
 2 understanding, if this request had not been made for the
 3 machines, when would you have been -- the extra things
 4 you were putting in place have been put to use?
 5 **A.** It was my colleague Andrew Beggs, actually, who was
 6 really driving that effort. I was providing the
 7 oversight of it but, yeah, I mean, Andrew was -- Andrew
 8 runs a -- sorry, a cancer and disease genetics lab. He
 9 believed he was in a position where they could have went
 10 live in a couple of days.
 11 **Q.** Okay. Now, in terms of, then -- we know that you then,
 12 following requests, went to assist in setting up the
 13 Lighthouse laboratory in Milton Keynes.
 14 **A.** Yes.
 15 **Q.** Can you just help us then with plainly the shock when
 16 the pivot, as detailed in that email, happened.
 17 **A.** Yes.
 18 **Q.** So can you give some idea to her Ladyship why, then, you
 19 followed the request to go and set up the Lighthouse lab
 20 at Milton Keynes, please.
 21 **A.** I think it was -- as I said in the email, it was a done
 22 deal, and we'd lost the fight. We weren't going to be
 23 doing testing in university labs.
 24 It then, from -- personally came to the question
 25 of: can I still help? And lots of academic colleagues

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1 Number 10 -- where they made clear it is that plans that
 2 were very advanced and in place for a small number of
 3 centralised labs, including a lab in Milton Keynes.
 4 The argument that was given was that would make it
 5 easier to basically focus all of the reagents and
 6 plastic-ware required to do that sheer amount of tests
 7 in one place, so it made it easier, rather than
 8 transporting them around the country, and samples,
 9 transporting them to a small number of places, and that
 10 that was going to happen and that was all there was
 11 to it.
 12 And we could continue to try to help in Birmingham
 13 if we liked, around healthcare workers and with local in
 14 public health teams, but that was how national testing
 15 was going to work.
 16 I then received a number -- I say, sorry, I was
 17 asked if I could find some volunteers to staff the lab,
 18 which I did, and then I received a phone call on my
 19 mobile phone from -- I'm not quite sure who it was,
 20 I was led to -- I was under the impression it was
 21 someone from government.
 22 **Q.** Professor McNally, could I just ask you to slow down
 23 just a little.
 24 **A.** Yes.
 25 **Q.** Thank you.

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1 A. Yes, asking if I would go to Milton Keynes the next day
 2 and help set up the lab. So I had a brief chat with my
 3 wife and family and phoned back and said I would be in
 4 Milton Keynes the next morning, and arrived at
 5 Milton Keynes with 12 -- 11 other people the next
 6 morning to start setting the lab up.

7 Q. Thank you.

8 Obviously that was a big personal sacrifice for you
 9 and your family, to essentially uproot yourself from
 10 home to locate yourself in Milton Keynes. And obviously
 11 you managed to encourage 11 of those at the university
 12 to follow you also?

13 A. Yes. And then over the subsequent weeks and months, the
 14 Microbiology Society put out a larger call for people to
 15 volunteer to help. The Animal and Plant Health Agency
 16 was contacted and they seconded quite a lot of staff as
 17 well. So yeah, we very quickly went from a small number
 18 of staff to around about 240 staff. I would say of that
 19 240, around about 200 to 210 were probably there on
 20 a voluntary basis.

21 Q. Thank you. Let's just -- on a voluntary basis, not
 22 being paid in respect of the work in the Lighthouse
 23 laboratory other than furloughed salaries through the
 24 university?

25 A. Exactly. From a personal level, I was still being paid

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1 Oxford there. That was led by Dr Mike Hill and
 2 Dr Stewart Moffat, and a small number of their teams.

3 So they had already set up some protocols, some work
 4 flows for how they were going to do the testing. There
 5 was a small lab set up with three or four safety
 6 cabinets where samples could be processed. There were
 7 a lot of PCR machines already there and a lot of
 8 machines for extracting the RNA from samples, as
 9 Sir Paul mentioned earlier.

10 So lots of equipment, very, very few staff, and
 11 I would say the early stages of some protocols, but only
 12 the very early stages. So over the next couple of
 13 weeks, Dr Hill very quickly realised that I was a fairly
 14 senior microbiologist, he asked me to help him creating
 15 protocols, workflows.

16 More staff were coming in on a daily basis. We had
 17 to then create a system whereby we could train those
 18 people as they came in, carefully train them, supervise
 19 them and then sign them often as competent so they could
 20 start to help, and we got a rolling process of training
 21 and competence set up.

22 And within a month, as I say, we had 240 people, and
 23 we went from 500 tests a day to, at the end of April,
 24 30,000 tests per day.

25 Q. I think you've helpfully dealt with that chronology. So

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1 by the university, so I didn't see any need to seek
 2 recompense. I believe the Animal and Plant Health
 3 Agency staff were still being fully paid as agency
 4 staff, and they were seconded on a voluntary basis as
 5 well.

6 The vast majority of staff were actually
 7 post-doctoral researchers and research fellows who had
 8 been furloughed who -- their labs had been closed, they
 9 couldn't do their research, and they put their hand up
 10 to voluntarily come and work in the lab.

11 Q. Thank you. So then can you give us an impression, then,
 12 as to what was at Milton Keynes when you got there. And
 13 let's crystallise the date. What date did you go to
 14 Milton Keynes?

15 A. March 27 was my first day there.

16 Q. Thank you.

17 A. Was it? Yes, the 27th, yes.

18 Q. Can you then assist us, because we've got the benefit,
 19 through you, of a direct lived experience about what was
 20 there, what existed --

21 A. Yes.

22 Q. -- but the efforts that you took to set up the national
 23 laboratory, please.

24 A. Yes, so when I arrived that day, there were already --
 25 there was a small delegation from the University of

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1 for the period of March 27 to March 31, you identify the
 2 500 samples per day?

3 A. Yes, yes.

4 Q. On April 1, you indicate that 600 tests were performed.
 5 One week later, 1,200 tests per day?

6 A. Yes.

7 Q. And you then tell us that April 28 was when you
 8 performed 28,000 tests in 24 hours?

9 A. Yes.

10 Q. And then on 3 May you achieved what was at that time
 11 your operational maximum of 30,000 tests in 24 hours?

12 A. Yes.

13 LADY HALLETT: Can I just interrupt for a second. Going
 14 back to the point you were making about not using your
 15 labs in medical schools that were all set up and ready
 16 to go, had that policy been adapted at the same time as
 17 you say we did need the big labs --

18 A. Yes.

19 LADY HALLETT: -- when would you have seen the transfer of
 20 the skills of your staff and the machines to have the
 21 optimum effect on the small ships and the big ships, as
 22 Sir Paul calls them?

23 A. It's an excellent question. I would suggest that --
 24 I think I've said in my statement, I think Milton Keynes
 25 and the other Lighthouse labs were set up just a little

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1 bit too late to impact wave 1 of the pandemic. I think
 2 that the small ships idea would have been sufficient to
 3 slow down wave 1, help not overwhelm the health system,
 4 and have given us spring into summer to take our time to
 5 get the Lighthouse labs set up ready for what was
 6 undoubtedly going to be a much larger wave as we went
 7 into autumn and winter, as you would expect with
 8 a respiratory disease.

9 **LADY HALLETT:** Sorry, just to pursue the point. It's only
 10 because of the equipment that the Lighthouse at Milton
 11 Keynes had and the skills of the likes of you and the
 12 other people you were leading, but by the end of April
 13 you got up to 30,000 tests a day. Now, if that was
 14 replicated around the country that's a lot of tests
 15 a day.

16 **A.** Yes.

17 **LADY HALLETT:** But if you'd kept the staff and the equipment
 18 in the medical schools, you wouldn't that have got to
 19 30,000 tests a day at the Lighthouse labs, would you, by
 20 the end of April?

21 **A.** Not at the Lighthouse labs, no, but what we would have
 22 got, I would -- I guestimated earlier, I think you could
 23 have got to over 100,000 tests a day using that armada
 24 of small boats, and there were plenty of trained
 25 scientists to go around and staff those labs in medical

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1 **A.** And Cambridge as well. Cambridge used AstraZeneca's,
 2 the company AstraZeneca's lab facilities.

3 **Q.** Of course. Thank you so much.

4 If we look then and follow it through with the
 5 timing it took to bring the other Lighthouse
 6 laboratories online, we can see that obviously it
 7 continued to develop, but obviously, again, significant
 8 delays of months to establish them in 2020 through to
 9 2021. So I think we've got Newport in October 2020.

10 **A.** Yes, so the expansion of Newport and Loughborough, that
 11 occurred at the time when the Lighthouse network was
 12 expanded and the University of Birmingham had a lab
 13 incorporated into that stat. Those came online as part
 14 of that expansion programme for autumn and winter of
 15 2020. The labs in 2021, they came in as part of the
 16 then, there was a re-tendering process for Lighthouse
 17 labs, they came in as new labs in the spring of 2021.

18 **Q.** Thank you. So you've already identified so Charnwood in
 19 Loughborough in November 2020. We've then got Brants
 20 Bridge in Bracknell in March 2021 and Baltic Park in
 21 Gateshead in March 2021, and Plymouth.

22 **A.** Mm.

23 **Q.** And then we've got the Rosalind Franklin Leamington Spa
 24 mega Lighthouse lab --

25 **A.** Yes.

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1 schools as well as find trained competent staff to staff
 2 the Lighthouse labs, like the Animal and Plant Health
 3 Agency staff, for example, and lots of other university
 4 research staff who were furloughed and who were more
 5 than capable of helping. There was no shortage of
 6 skilled staff at all.

7 **LADY HALLETT:** Thank you.

8 **MS CARTWRIGHT:** Can we then, perhaps, just to look at the
 9 point of her Ladyship a little more, look at the map of
 10 the Lighthouse laboratories that gives a top line of
 11 when they were able to operate. It's INQ000587456.

12 Now, obviously, the different Lighthouse
 13 laboratories had different operators so this really is
 14 top line, but it's significant because it assists with
 15 when various laboratories were opened.

16 **A.** Mm-hm.

17 **Q.** So we know we can see, obviously, the Milton Keynes
 18 Lighthouse laboratory where you went and helped set it
 19 up, operating from April 2020?

20 **A.** Yes.

21 **Q.** We have Alderley Park in Cheshire set up, and also
 22 Glasgow in April 2020.

23 **A.** Yes.

24 **Q.** But looking at the Lighthouse laboratory network, that
 25 is it in April 2020.

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1 **Q.** -- in June of 2021. Thank you.

2 Now, I think you've already headlined alongside the
 3 laboratories that then opened in the October, November,
 4 that that fitted with when you'd gone back to
 5 Birmingham --

6 **A.** Yes.

7 **Q.** -- and the (unclear: overspeaking) you had with then,
 8 but before we deal with that next bit on the chronology,
 9 are you able to give any other reflections or comments
 10 to her Ladyship on anything that you identified in the
 11 set-up of the Lighthouse labs that you were central to,
 12 or any relevant evidence you'd wish to give, obviously
 13 there's a lot more detail in your statement but if there
 14 is anything of relevance that you wish to particularly
 15 draw to her Ladyship's attention, please.

16 **A.** I think the only thing I'd like to say, I guess, is that
 17 it was a little too late, but what we established at
 18 Milton Keynes was nothing short of remarkable, I think.
 19 We would -- essentially within a month we were in
 20 a position where we could offer a PCR diagnostic test
 21 for a notifiable infectious disease to anyone in the
 22 country that wanted it, and bear in mind, as I said,
 23 that that was all staffed by volunteer staff primarily.
 24 I think it's one of the proudest achievements of my
 25 career, just, like I say, a little too late, I felt, to

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1 impact wave 1.

2 **Q.** Thank you.

3 The image can be taken from the screen.

4 But can I ask you, because plainly there's been

5 a lot of comment and commentary around the involvement

6 of the private sector that was used to set up the

7 logistics and procure matters?

8 **A.** Yes.

9 **Q.** Obviously, you, no doubt, would have worked hand in hand

10 with consultants from Deloitte and probably other

11 procured companies. Are there any other observations or

12 insight you can provide about the role and experience,

13 good or bad, about the private contractors, please?

14 **A.** I think some of the companies like Thermo Fisher, Tecan,

15 who provided a lot of the automated liquid-handling

16 devices, they worked very hard. They were with us

17 overnight. I think I had a lot of frustration with the

18 involvement of Deloitte. They had an enormous team

19 in situ in Milton Keynes providing project management.

20 I felt at times the project management got in the way of

21 what we were trying to achieve in the laboratory. There

22 would be questions about: can we tweak amounts of

23 reagents? Can we speed up things? And there was a lack

24 of realisation that if you do that you're no longer

25 doing an accredited test, you'd have to revalidate it.

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1 Belfast were all established with equipment belonging to

2 universities and were all staffed by university

3 researchers or seconded civil service laboratory staff,

4 with many, such as myself, taking leading roles in the

5 process. In my opinion, the most confusing and

6 frustrating involvement was the reliance on a large

7 number of Deloitte consultants to project manage the

8 Lighthouse labs. As they had no expertise in laboratory

9 work, infectious disease or diagnostics, I often found

10 myself having to spend lots of time explaining concepts

11 and fact to the consultants and having to set realistic

12 expectations of what was feasible again and again. I do

13 see the importance of having exceptional and experienced

14 project managers for such a complex and important

15 project as the Lighthouse labs network but did not see

16 the need for the number of consultants I encountered in

17 my time in the network. As an example of how I was

18 often not impressed by their project management, on

19 April 2 there was a sudden realisation at [Milton Keynes

20 laboratory lab] that we did not have the logistics

21 expertise to supply the lab with the consumables and

22 reagents needed to conduct tens of thousands of PCR

23 tests every day, despite the number of consultants on

24 site and their responsible for planning. One of the

25 consultants ... had joined Deloitte from the military

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1 So at times it was very frustrating dealing with

2 colleagues in Deloitte.

3 Like I say, this project absolutely required the

4 very highest level of project management. I was

5 unconvinced that we needed quite as many of them as we

6 had in the facility. And very often, they would be

7 doing, you know, multiple people would be doing the same

8 thing.

9 **Q.** Thank you. Can I then, as a separate point, within your

10 statement you -- there's a number of times where the

11 word "frustration" appears but can I take you to

12 paragraph 38, please.

13 **A.** Yes.

14 **Q.** INQ000587245.

15 Now, you detail at paragraph 36:

16 "The narrative that was created around the

17 Lighthouse lab network was that it was a triumph of the

18 private sector working in cooperation with government.

19 This provoked frustration in me as the enormous role

20 played by higher education was often overlooked. Of

21 course the private sector was pivotal with companies

22 such as Tecan and Thermo Fisher putting huge resource

23 and focus into the testing infrastructure and capacity,

24 but also to their financial benefit. What is overlooked

25 is that MKLL, and the labs in Cheshire, Glasgow, and

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1 and reached out to contacts, and on April 3, troops from

2 the Royal Army Logistics Corps arrived on site, setting

3 up an industrial warehouse of consumables and reagents,

4 making inventories and taking complete control of stock.

5 Their involvement was transformational to [Milton Keynes

6 Lighthouse lab] and testing would have quickly ground to

7 a halt without their logistics expertise."

8 **A.** Yes.

9 **Q.** Is there anything you want to add to that or does that

10 essentially speak to --

11 **A.** I hope it speaks for itself, and I guess just to explain

12 why I didn't spot that, in a university lab you may be

13 lucky if you do a couple of hundred PCRs a week. I had

14 no idea of the scale of the exercise in running 30,000

15 tests a day, and things like waste disposal, we had no

16 idea how complex the logistics around that were going

17 to be.

18 **Q.** Thank you. Now, we know that you set it up with your

19 knowledge and experience, and I, this morning, with

20 Sir Paul, was able to capture in a very quick way the

21 names, hundreds of names of individuals in the Crick

22 Consortium. I think you yourself would actually,

23 without naming them, but by number, identify that army

24 of volunteers that assisted you in setting up the

25 Lighthouse labs?

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1 **A.** Yes, absolutely. I mean I'm sitting here today because
2 I had a leadership role in that lab, but there are over
3 200, in my opinion, real Covid heroes who gave up their
4 lives for three, four, five months to basically provide
5 testing for the UK and I'm not -- I don't feel that's
6 ever been formally recognised. I think we took for
7 granted the fact that anyone could go to a walk-in test
8 site and get a PCR test for Covid. What they didn't
9 realise was that under the bonnet of that were
10 hardworking volunteers making that happen.

11 **Q.** Now, I'm going to briefly ask you just to summarise to
12 her Ladyship because when you left Deloitte (sic), you
13 did, then, or were part of the Lighthouse network, where
14 the University of Birmingham did do some testing for
15 Pillar 2, but can you just deal with that, to her
16 Ladyship but also contextualise it as to whether any
17 other laboratory other than the University of Birmingham
18 was doing it, please.

19 **A.** Yes. Yes, so the reason that I left on 1 June was
20 I felt that Milton Keynes was running seamlessly, it was
21 running perfectly. Lots of staff had been trained to
22 a level where they really didn't need me there and the
23 university was reopening and I felt with my leadership
24 role in the university, it was important I returned back
25 to campus. I had been back on campus a month when

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1 winter, November time in 2020?

2 **A.** Yes, so essentially what we created in Birmingham was
3 exactly what Sir Paul was suggesting. We had, on one of
4 our university car parks there was a walk-in or
5 drive-through test site, so you could register for
6 a test, walk in to that car park, be tested, that test
7 would then be transported to a laboratory in the
8 university where we would test it, and we were
9 delivering results within 24 hours back to the people
10 who'd been tested. I was also the benefit of being
11 a member of the Covid Genomics UK Consortium, and we
12 were able to hand positive samples directly to my
13 colleague Professor Nick Loman, who could then do the
14 genome sequencing within another 24 hours, which meant
15 we were going from test to epidemiologically informative
16 results within 48 to 72 hours.

17 **Q.** Thank you.

18 Now, I think you have provided, attached to your
19 witness statement, essentially, the letter thanking you
20 and the University of Birmingham for your efforts, but,
21 essentially, you were stood down from 26 February 2021
22 from that effort?

23 **A.** Yes.

24 **Q.** And did you do any contribution of testing after
25 26 February?

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1 I received calls from employees at Deloitte asking if
2 I would engage with them in the process of setting up
3 a Pillar 2 laboratory at the University of Birmingham --
4 essentially what I'd been arguing we should do in
5 February. And then, between July and September of 2020,
6 we worked to establish a mini Milton Keynes in the
7 University of Birmingham.

8 A couple of other universities were bought into the
9 process. To my knowledge, to my understanding,
10 University of Birmingham was the only university lab
11 that actually ran accredited Pillar 2 tests for the
12 network.

13 **Q.** And are you able to offer any insight or observations as
14 to why the University of Birmingham outside the main
15 Lighthouse labs we can see, was stood up for a period to
16 do testing?

17 **A.** Possibly my -- my role in Milton Keynes, and there was
18 maybe a trust that we could set that up. If I could
19 offer a cynical, slightly cynical approach, is that very
20 often it's easy to keep your enemies closer. I could
21 have been seen as a bit of a fly in the ointment, but
22 I have no evidence of that, just a hunch.

23 **Q.** And you detail in your statement that essentially that
24 testing was also used for surge capacity to test
25 University of Birmingham students in, I think, the

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1 **A.** We then began a ramping down process and we ended it on
2 31 March completely.

3 **Q.** Thank you.

4 Now, the final topic before I deal with
5 recommendations. You, I think, have been quoted within
6 a number of articles about the sensitivity or the
7 accuracy around the Immensa scandal?

8 **A.** Yes.

9 **Q.** Can I just ask you to give a summary to her Ladyship of
10 what the concern was or what the issue is, from your
11 perspective, please?

12 **A.** Yes, I think, when -- when I was involved in
13 Milton Keynes, we were really, really -- we were really
14 under the microscope and UKHSA and NHS England really
15 scrutinised the quality of the provision that we were
16 providing, the quality of the test data, and whether or
17 not what we were doing could be trusted. And that was
18 also the case when I set up the lab in Birmingham. We
19 were under the gaze of UKHSA and NHS England to make
20 sure that our testing was as good as it needed to be to
21 contribute to the network.

22 Clearly what happened with the Immensa laboratory in
23 Wolverhampton, then, in 2022 -- '21 or -- '21, sorry --
24 where up to half a million test results were incorrectly
25 reported to members of the public, suggest that that

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1 strict level of oversight, something happened there,
2 because if that had happened in Milton Keynes that would
3 have been picked up on within a couple of days, and if
4 it had happened in a lab in Birmingham it would have
5 been picked up in a couple of days.

6 So I don't have any evidence, my Lady, but it does
7 suggest that that really rigorous oversight, something
8 happened to that in that timeframe.

9 **Q.** And I think you, I'm going to quote from the article
10 that you contributed to, I think you are recorded as
11 saying:

12 [As read] "In the long list of Covid disasters and
13 scandals, this is pretty near the top. You shouldn't be
14 relying on anecdotal reports to spot a problem of this
15 size. That's the unforgivable thing about this.
16 I don't think it's going too far to say that an absolute
17 failure of quality in that lab is going to lead to very
18 serious illnesses, maybe hospitalisations and maybe
19 worse."

20 **A.** And I believe there is now proper data to confirm that
21 there were avoidable deaths as a result of the Immensa
22 mistakes.

23 **Q.** Thank you.

24 **A.** Particularly in the southwest of England.

25 **Q.** And I think the anecdotal evidence that picked it up,
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1 you've given thought to, and reflection, that you would
2 indicate from your perspective with your knowledge and
3 experience that you think are lacking still now and it's
4 essential that is implemented?

5 **A.** If I may, I think the one pressing thing is that all of
6 that testing infrastructure we created no longer exists,
7 no part of it at all. It was all wound down. Equipment
8 was sold off, labs were closed, and if, heaven forbid,
9 SARS-Co-V-3 happens in December, we will be exactly
10 where we were in January, February, of 2020. There is
11 no way to scale up testing quickly.

12 I would urge that we look at the model that's
13 employed in Germany, in South Korea, the federated lab
14 model, look at how much that would cost to implement and
15 maintain, such that we have the capacity to stand
16 something up quickly, like Sir Paul did in the Crick,
17 and like we did at Birmingham. I think it's essential,
18 because we will be -- in terms of delivering tests,
19 we'll be exactly where we were at the start of 2020.

20 **MS CARTWRIGHT:** Professor McNally, those are my questions.

21 A number of Core Participants have questions for you.

22 **LADY HALLETT:** Ms Maragh?

23 **Questions from MS MARAGH**

24 **MS MARAGH:** Professor McNally, I'm Thalia Maragh, and I have
25 some questions for you in relation to your experience at
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1 I think it was actually just member of the public that
2 was, was it that was --

3 **A.** It was members of the public in the southwest of England
4 who were saying that they -- lots of test results were
5 coming back as negative but people were falling very
6 ill, and it was strange that it seemed to be co-located
7 in a particular part of the country. And then some very
8 astute scientists started to pick up and the fact that
9 a lot of this data is in the public domain, started to
10 look at it and started to see quite an alarming level of
11 negatives, way below what would be expected in any of
12 the testing labs, given the incidence at the time.

13 **Q.** Thank you. You've given a large portion of your
14 statement over to recommendations which will all be
15 carefully considered.

16 Can we go to your statement, please. INQ00058724.
17 Those lessons learning and recommendations start at
18 paragraph 40.

19 Let's move along the pages, please, so they can be
20 captured, and displaying them on the screen.

21 But then having done it in a very high-level way and
22 with the time we've got, can I ask you to, because
23 others have questions, is there any driving
24 recommendation that you would wish to commend, or
25 a number of them? Because plainly there's a great many
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1 the Lighthouse lab, and I ask questions on behalf of the
2 Covid Bereaved Families.

3 You were taken, just now, by Ms Cartwright to your
4 experience in setting up the Lighthouse lab back between
5 March and June of 2020.

6 **A.** Yes.

7 **Q.** And you've spoken of some of the challenges you faced in
8 the early stages and some of the positives, and I want
9 to ask you just a few questions about some of the
10 negative reporting of the experiences at the Lighthouse
11 lab. And I want to make reference to a report that was
12 covered in the BBC back in October of 2020 -- I'm not
13 going to bring it up on the screen, but for the records
14 it's INQ000228145.

15 And this report documented some of the experiences
16 of a virologist, Dr Julian Harris --

17 **A.** Yes.

18 **Q.** -- who described that -- the article is entitled,
19 actually "Coronavirus lab testing (sic) 'chaotic and
20 dangerous'", and that is a caption of his description.
21 And it reported Health and Safety Executive breaches at
22 the lab back in -- when he was there in July of 2020,
23 which included inadequate health and safety training for
24 staff, employees working too closely together, and other
25 workers there reported poor safety protocols, lack of
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1 suitable PPE, including a report by a PhD student,
2 presumably a volunteer as well, of being asked to wear
3 cheap disposable lab coats and plastic gloves attached
4 with parcel tape.

5 So this is the experience reported back in July.

6 Now, my question to you is, were you aware of these
7 sorts of experiences and complaints back in your time
8 there?

9 **A.** The first thing I'd like to point out is that that --
10 that report occurred after my time had ended at
11 Milton Keynes. I can say that it bears no reflection to
12 my experience while I was at Milton Keynes. There was
13 sufficient -- there were proper lab -- heavy lab coats,
14 as is a legal requirement in a containment level 2
15 laboratory. There was sufficient gloves, et cetera. So
16 not really indicative of my experience.

17 With regards to the comment -- well, there's two
18 things. The Health and Safety Executive report is in
19 the public domain. There were no major concerns,
20 actually, in that report. There were a number of
21 recommendations, which is fairly normal for an HSE visit
22 to any laboratory, but there were no major concerns,
23 which is where the HSE would say: okay, we're really
24 worried about this, you're not doing this properly.

25 I think the other thing, and I feel I need to
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1 else's.

2 So that's why -- but two people never worked in the
3 cabinet; it was only ever one person.

4 **Q.** Okay, thank you. Just to pick up on your observation in
5 relation to the Health and Safety Executive report,
6 because actually, the BBC investigation reported that
7 the findings -- so whilst there wasn't a reporting or
8 sanction, the findings of the Health and Safety
9 Executive was that there was inadequate health and
10 safety training for staff and employees; right? So that
11 was one of the findings?

12 **A.** Yes.

13 **Q.** And my final point, just picking up on something, your
14 observation, in terms of your timeline, the virologist
15 who makes the report to the BBC speaks of his experience
16 in July.

17 **A.** Yes.

18 **Q.** And we appreciate that your timeline was up to June.

19 **A.** Yes.

20 **MS MARAGH:** Thank you, my Lady.

21 **LADY HALLETT:** Thank you, Ms Maragh.

22 Mr Thomas.

23 Mr Thomas is over there.

24 **Questions from PROFESSOR THOMAS KC**

25 **PROFESSOR THOMAS:** Good afternoon, Professor McNally.
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1 address this, because in that report the gentleman talks
2 about two people working at a cabinet and how that makes
3 it unsafe. I was actually part of the team that made
4 the decision to have two people working at a cabinet.

5 There's only one person working in the cabinet. You
6 need two people to process a test. Essentially, what
7 happens is you have a 96-well plate, with a bar code.
8 That's scanned into the lab tracking system. That's
9 then placed into the cabinet. And then a sample with
10 a bar code from the testing system is scanned by an
11 operator, and he passes that into the cabinet, and what
12 happens then is that that sample is allocated a specific
13 well in the 96-well plate, so that it can be tracked all
14 the way through the lab until the result is given.

15 Now, you cannot have one person in a cabinet doing
16 that because they'd have to be bringing their hands in
17 and out, and that's not safe. So we had one person in
18 the cabinet and one person standing next to them to do
19 the scanning, and witnessing that the sample had been
20 placed into the appropriate well, which is very
21 important. And myself, Mike Hill and Stewart Moffat
22 made the call that we absolutely would have that as
23 a minimum requirement, because we absolutely would not
24 tolerate an incident where someone was given a result
25 but actually it wasn't their sample it was someone
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1 Let me introduce myself, I'm Leslie Thomas and I'm
2 representing the Federation of Ethnic Minority
3 Healthcare Organisations.

4 Just a little bit of context. The questions that we
5 seek to ask are in relation to the pandemic
6 preparedness, specifically regarding the testing
7 infrastructure and the potential for university labs to
8 support early community testing efforts.

9 So, with that in mind, let me come to my questions.
10 Professor, in paragraph 18 of your witness statement you
11 advocate for scaling up testing through smaller lab
12 consortiums in February 2020, which you believe would
13 have given us a headstart in tracking the virus.

14 Could you explain how this early initiative
15 particularly, if it had been implemented at a larger
16 scale, might have benefited minority ethnic and other
17 minoritised communities in terms of both access and
18 protection?

19 **A.** I'm not an expert in this area, and I think
20 Professor Fraser and Professor McKee on Tuesday spoke to
21 it much more eloquently and more informed than I can,
22 but, as an example, we had excellent local directors of
23 public health in the West Midlands at that time,
24 specifically thinking of Lisa McNally -- who is not
25 a relative of mine, I should add. And Lisa did
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1 a fantastic job of going out to marginalised communities
2 across the West Midlands and communicating the need to
3 test, the need to get a test result, support with the
4 isolation.

5 That was transformative in the West Midlands because
6 I think that that centralised message of "get a test",
7 that doesn't pervade all the way through society, and
8 the work of people like Lisa and also Justin Varney, who
9 was the Birmingham Director of Public Health, they spent
10 an inordinate amount of time and resource on trying to
11 get the message to marginalised communities. And we
12 have quite large Eastern European migrant workforce
13 communities as well. There was a huge amount of work
14 done in trying to engage those communities with testing.
15 And the university actually even helped with a lot of
16 translation materials such that the message about "get
17 a test" was got across.

18 So I don't know if I'm answering your question, but
19 I think that's how the localised set-up can help,
20 because, I think Sir Paul said, local public health
21 working with local universities, working with local NHS
22 trusts, has a far more powerful and compelling case than
23 everything being centralised.

24 **Q.** You've highlighted the untapped potential of university
25 labs in testing early in the pandemic. In hindsight,
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1 looking --

2 **A.** Yes.

3 **Q.** -- god forbid the next pandemic, what would be your
4 advice in terms of just looking forward and being
5 prepared?

6 **A.** I think -- as I've said, I think we should really
7 examine implementing the kind of lab -- federated lab
8 system that they have in Germany and South Korea. It
9 can be stood up incredibly quickly, and then it can work
10 at a federated local level, with oversight from UKHSA,
11 the DHSC providing that project oversight and making
12 sure everything is joined up.

13 But I really would strongly advocate that we need
14 the -- you said "heaven forbid"; there will be another
15 pandemic in the near future and we need to make sure
16 we're ready for it, better prepared for it than we were
17 for Covid. We got lucky with Covid.

18 **PROFESSOR THOMAS:** My Lady, thank you.

19 **LADY HALLETT:** Thank you, Mr Thomas.

20 Those are all the questions we have for you,
21 Professor McNally. You rightly praised your colleagues.
22 The more I hear of this Inquiry, the more I realise how
23 many thousands of unsung heroes there were. So thank
24 you for that, and I endorse you for your comments. But
25 also thank you for the way you stepped up, too, to help
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1 how could universities have been better mobilised to
2 improve testing access for minority ethnic communities
3 and other marginalised communities? And in particular,
4 were there any specific measures that could have been
5 taken to ensure that these institutions played a greater
6 role in community testing, particularly in underserved
7 areas?

8 **A.** Again, I'm going to give a relatively uninformed
9 response to that, but again around my own experiences in
10 Birmingham, which would be where, as I said, we worked
11 with local public health. So even though we
12 had a Pillar 2 laboratory, there were occasions where
13 the director of public health would come to us and say,
14 "We think we may have an outbreak in given a community
15 and can we give you some swabs and can you run them for
16 us?" And we could do that very, very quickly. Whereas
17 if it had been a case of them having to go a walk-in
18 test site and those tests go through the national
19 system, then you can imagine that wouldn't have worked
20 so well.

21 So I think, again, it comes back down to the
22 partnership between local public health, smaller
23 university labs, local trusts working together to
24 provide targeted testing where it's required.

25 **Q.** This is my final point. So, trying to be forward
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1 the public of the United Kingdom.

2 You could have sat in your tent and sulked when your
3 advice wasn't accepted, but you didn't. You bit the
4 bullet and you got stuck in. So thank you for all that
5 you tried to do.

6 **THE WITNESS:** Thank you.

7 **LADY HALLETT:** And all you did do! Not just tried to do.

8 **THE WITNESS:** Thank you.

9 **LADY HALLETT:** Thank you very much. I shall return at
10 1.45 pm.

11 **(12.46 pm)**

(The Short Adjournment)

13 **(1.45 pm)**

14 **LADY HALLETT:** Ms Nagesh.

15 **MS NAGESH:** My Lady, the next witness is Mr Matthew Gould.

16 Could the witness be sworn, please.

MR MATTHEW GOULD (affirmed)

Questions from COUNSEL TO THE INQUIRY

19 **MS NAGESH:** Good afternoon, Mr Gould, thank you for
20 attending today and assisting the Inquiry.

21 Just a few preliminary matters.

22 **A.** Of course.

23 **Q.** If, when you answer, (a) you could direct your answers
24 towards my Lady, and secondly, if you could keep your
25 voice up. There's a microphone in front of you. So if
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1 you speak into that then you know the stenographers can
 2 hear you for the transcript.
 3 Please do ask me to repeat anything if it's not
 4 clear.
 5 Now, Mr Gould, you've helpfully provided a witness
 6 statement to the Inquiry dated 28 March 2025; is that
 7 right?
 8 A. Yes.
 9 Q. And you're familiar with it? You have a copy with you,
 10 I believe?
 11 A. Yes.
 12 Q. Now if you take a look at the last page of that
 13 statement, page 18, can you see at the end of the
 14 statement there's a statement of truth?
 15 A. Yes.
 16 Q. And it essentially attests that all the facts within the
 17 statement are true to the best of your knowledge and
 18 belief. Does that remain the case today?
 19 A. It does.
 20 Q. Thank you.
 21 Now, Mr Gould, if we could just start talking
 22 a little bit about yourself and your professional
 23 background. You were, I believe, prior to 2019,
 24 a diplomat and a civil servant, and the director general
 25 of digital for the government?

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1 A. (Witness nodded)
 2 Q. And Simon Thompson, who we shall hear from later, was
 3 responsible for that development.
 4 A. Exactly.
 5 Q. So if, first, we can just go through briefly what NHSX
 6 was for those of us who may not be familiar. I've
 7 mentioned it was established in February 2019. It was
 8 a joint unit, wasn't it, of NHS England and Improvement
 9 and the Department of Health and Social Care?
 10 A. Yes, it was a very unusual beast, bureaucratically. So
 11 I was double hatted as a director general of the
 12 Department of Health and also a national director of
 13 NHS England, both for digital transformation.
 14 The purpose of NHSX was essentially to drive digital
 15 transformation in health and social care. We saw our
 16 role as being: to digitise, so to put in place the basic
 17 digital infrastructure; to connect, so to try to make
 18 sure that disparate data systems across health and
 19 social care could speak to each other; and then to
 20 transform, so using the digitisation and the connection
 21 to find new ways to deliver care more effectively.
 22 Q. Thank you. That summarises it perfectly, I think.
 23 I keep referring to NHSX in the past tense because
 24 it's true it was actually retired, if I can use that
 25 phrase, or amalgamated into a different directorate in

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1 A. Yes.
 2 Q. And the director of cyber security for the government?
 3 A. Yes.
 4 Q. Then in May 2019 you were appointed the chief executive
 5 officer of NHSX, following the establishment of NHSX in
 6 February that year?
 7 A. Yes, all that's correct.
 8 Q. Thank you. And you in fact remained the chief executive
 9 officer of NHSX until 31 January 2022?
 10 A. Yes.
 11 Q. So you were chief executive officer during the period of
 12 the pandemic and the period with which we're concerned?
 13 A. Yes.
 14 Q. One of your duties, and the duty that we're going to
 15 talk about today, was to direct the development of what
 16 became the first version of the NHS app, a version we've
 17 been calling "app 1"; is that right?
 18 A. Yes.
 19 Q. Because as we will hear, and as we have in fact already
 20 heard from other witnesses, there were, in the end, two
 21 versions of the NHS contact tracing app. App 1 was the
 22 first, and that was the one for which you were
 23 responsible; is that right?
 24 A. Yes.
 25 Q. And app 2 was the second?

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1 around November 2021.
 2 A. Yes. Actually at my -- with my support and to some
 3 degree at my instigation. I'd come to the view that it
 4 was best -- digital transformation was best driven,
 5 actually, as part of NHS England, so rolling NHSX, NHS
 6 Digital, into NHS England was more likely to achieve the
 7 scale of change that was required.
 8 Q. Thank you.
 9 I've mentioned we're going to go through with you
 10 the detail of the development of app 1. Before we go
 11 into that detail, I'd like to first start, if I may,
 12 with us setting out a chronology, effectively, of events
 13 over which you had responsibility, so that we can start
 14 with a clear picture of what occurred, and when.
 15 A. Of course.
 16 Q. So firstly, on or around 6 March 2020, is it right that
 17 NHS Digital were tasked to assist with identifying
 18 vulnerable people who might need to self-isolate through
 19 contact tracing?
 20 A. The request to NHS Digital was not actually primarily
 21 through contact tracing, but through -- filtering
 22 through medical records to find out those who had
 23 conditions that might cause them to be particularly
 24 vulnerable. So NHS Digital was separate from NHSX,
 25 although obviously we worked very closely together, and

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1 I was the so-called Whitehall sponsor of NHS Digital.

2 That task, wasn't, though, primarily a contact
3 tracing task; it was a data analysis task.

4 **Q.** Thank you. But the next day, then, on 7 March, you in
5 fact chaired a workshop in which you did discuss
6 proposals for a smartphone app?

7 **A.** Yes.

8 **Q.** And then it was only two days later, or so, that you
9 yourself and the Chief Scientific Adviser,
10 Mr Finkelstein, sent the Secretary of State a submission
11 outlining your plans to investigate the viability of an
12 app to support the response?

13 **A.** Yes, no, exactly. This was moving very quickly so we had
14 a very initial meeting internally about the possibility
15 of digital contact tracing on 6 March, which was
16 a Friday. On the Saturday, I convened, at DHSC, the
17 first meeting to really work through the possibilities.
18 On the Sunday, Anthony and I put together the advice of
19 the Secretary of State which was given to him on the
20 Monday.

21 **Q.** And then only about two weeks later you had the first
22 meeting of the Covid-19 Contact Tracing Board?

23 **A.** Exactly.

24 **Q.** And what was the Contact Tracing Board?

25 **A.** So this was, essentially in project management, you

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1 administrations to inform them of the work?

2 **A.** From memory, it was the first formal meeting. I think
3 it is very likely, but I don't have chapter and verse,
4 that we would have informally told them what we were up
5 to before that.

6 **Q.** Thank you.

7 Then we get to April and in April, on 10 April,
8 Google and Apple announced that they were developing an
9 application programming interface, an API, to allow for
10 contact tracing through mobile phones. And it's right,
11 isn't it, that they also approached the Department of
12 Health and Social Care with a proposal to work together
13 on creating an app?

14 **A.** Yes. So I got a call from colleagues at Google and
15 Apple to say they were doing this and suggest we work
16 together, which of course we then did.

17 **Q.** You say you worked together but meanwhile you were still
18 developing app 1 separately I think from Google and
19 Apple; is that correct?

20 **A.** So essentially -- and obviously, we'll be coming on to
21 this, but essentially what we did was, as soon as the
22 Google and Apple API -- so essentially a sort of
23 data pipe from the phone became available, we stood up
24 a separate team to develop a version of the app that sat
25 on top of the Google/Apple API. So from that point --

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1 want -- the standard model is to have a Senior
2 Responsible Owner for the project, which in this case
3 was a colleague from NHSX and a public health doctor
4 called Dr Geraint Lewis. And then sitting above the SRO
5 you'd have a steering board, bringing together key
6 stakeholders, me as the chief executive of NHSX, to
7 provide oversight and challenge and make sure the
8 project was being run properly.

9 **Q.** Thank you. There was also an oversight board, wasn't
10 there, which I think met I think two days later for
11 development of the Covid-19 app. Were you involved in
12 the Covid-19 Oversight Board as well?

13 **A.** Yeah, I think it's worth saying we had an oversight
14 board and -- which I chaired, and we had an assurance
15 board, which was a more technical group, which I wasn't
16 on, but which reported into the -- directly into the
17 oversight board, which included representatives from the
18 National Cyber Security Centre, people from Zuhlke
19 Engineering, who we had contracted to provide technical
20 assurance on the development of the app, and so forth.

21 **Q.** Thank you. 24 March is a date I'll mention because you
22 met with the devolved administrations to inform them of
23 the work on the app?

24 **A.** Yes.

25 **Q.** And was that the first time you'd met with the devolved

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1 and actually, I should say, the team, we called it
2 a technical spike team, that was -- came into being
3 three days before we had access to the Google/Apple API.
4 So as soon as we had that access, they were able to
5 start developing on top of it.

6 And essentially we had two tracks from that point.
7 We had a track that was using the Google/Apple API with
8 the technical spike, and then there was the original
9 track, which we carried on developing. Obviously the
10 one which was working on the Google/Apple API was done
11 in coordination with Google and Apple, but of course we
12 carried on talking to them about the version 1, as it
13 were, as well, not least because we were all exploring
14 a novel technology, which was the use of bluetooth, to
15 try to work out who was near you and how near.

16 And the information was very much flowing both ways,
17 so we shared, for example, quite critically, some work
18 that we had had done by colleagues at the Turing
19 Institute to identify ways that you could use bluetooth
20 to more accurately assess distance.

21 So there was a constant to and fro.

22 **Q.** Thank you. That's helpful. Now, around this time, on
23 4 May was a trial that we'll come on to talk about in
24 some detail, but it was a trial on the Isle of Wight?

25 **A.** Yes.

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1 Q. And that was a trial of effectively the prototype of
 2 app 1; is that correct?
 3 A. Correct.
 4 Q. Then, at 17 May, I think you were instructed to prepare
 5 a pre-registration scheme for app 1, so allowing people
 6 to sign up for the app ahead of its general release?
 7 A. Yes.
 8 Q. And then, by the end of May you effectively had
 9 a working prototype of app 1 and a working prototype of
 10 app 2?
 11 A. Correct.
 12 Q. Then we get to June, and it was on 15 June that yourself
 13 and Simon Thompson wrote a joint submission to
 14 Dido Harding and the Secretary of State recommending
 15 that efforts be focused solely on the Google/Apple API,
 16 so app 2?
 17 A. Yes.
 18 Q. And from, I think, three days later, 18 June, the
 19 Secretary of State accepted that recommendation, app 1
 20 was effectively stood down?
 21 A. I think from memory the Secretary of State accepted the
 22 recommendation on more like the 15th or 16th, but then
 23 the announcement was on the 18th.
 24 Q. Thank you. Some point after this, in June, you -- at
 25 some point between June and September, when app 2 was
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1 particular, what was suppressing the propagation of the
 2 virus in China, and had come to the view that the use by
 3 the Chinese authorities of an app-based contact --
 4 effective app-based contact tracing tool, had been
 5 effective as a way of stopping the virus spreading, and
 6 had contacted me to propose that we should look at
 7 technology to do the same.
 8 So that meeting was an opportunity for him and his
 9 team to meet me and my team, colleagues from NCSC,
 10 colleagues from elsewhere across government, colleagues
 11 from Public Health England, and really start to chew
 12 over what, at that point, was a seriously novel concept,
 13 as well as being a novel technology, which was, if we
 14 went down this route, what it would involve, what the
 15 issues would be, what the technological basis might be.
 16 So it was very much the sort of initial brainstorming
 17 around what digital-based, smartphone-based contact
 18 tracing might look like.
 19 Q. Thank you.
 20 Now when you move on to start developing the app.
 21 You started developing it in March, I believe?
 22 A. So the sequence of events was -- as I say, we met on the
 23 Saturday. The Sunday, Professor Finkelstein and I put
 24 together a note, which was sent on the Monday, 9 March,
 25 that asked for a week to just do a very initial
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1 launched, you stepped back, effectively, and
 2 Simon Thompson had the lead role?
 3 A. Exactly. So I stepped back very soon after 18 June. It
 4 had been a sort of phenomenally busy, stressful, trying
 5 period. So I was really happy at that point to hand the
 6 reins over to Simon, who had, for the previous few
 7 weeks, been an important part of my senior team, and
 8 I had total confidence he would then be able to take
 9 forward version 2 in a really competent, effective and
 10 professional way, which he then did.
 11 Q. So that's effectively the chronology within which we're
 12 working. If we can sort of take you back now to early
 13 March.
 14 A. Of course.
 15 Q. And particularly 7 March, which was the workshop that
 16 you chaired. That workshop, I think, included a number
 17 of members of planning, expert scientists, technologists
 18 and academics?
 19 A. Yes.
 20 Q. Now, at that stage, what was the purpose of developing
 21 an app? What was your motivation behind developing the
 22 app?
 23 A. So the purpose had really been suggested by
 24 Professor Christophe Fraser, who I know you've heard
 25 from already in this module, who had looked at, in
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1 technical test, to develop it and see where we got to.
 2 So really, the development of it started pretty much
 3 immediately after that.
 4 Q. Thank you. Now, was there much institutional
 5 accountability or oversight in the development, or were
 6 you effectively left to it?
 7 A. So I would say, actually, we had, right from the start,
 8 the sort of project oversight and discipline that you
 9 would expect for a large tech or any sort of project.
 10 So we had a senior responsible owner in a very capable
 11 public health doctor, we had an oversight board, which
 12 I chaired, which pulled together key stakeholders,
 13 Public Health England, et cetera. We had an assurance
 14 board, which I mentioned, which was a more technical
 15 oversight. We had Zuhlke Engineering -- I mean, quite
 16 intentionally commissioned separately from VM Pivotal
 17 to -- who were developing version 1, to provide an
 18 independent technical verification.
 19 We set up the ethical advisory board as well to make
 20 sure we were considering all the ethical angles. And
 21 then on top of which, all of which, as I think is
 22 demonstrated in the various notes that came from the
 23 meetings we had with the Secretary of State, all of
 24 which was, in turn, reporting to ministers as well as
 25 being overseen by Number 10 and the Cabinet Office and
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1 so forth. So yes, we were -- we had, I think, an
2 appropriate amount of oversight.
3 **Q.** Can I ask, please, we've heard about a key feature of
4 app 1, and app 2 in fact, which was that app 1 was
5 centralised.

6 We've heard a little bit what that means from
7 Professor Fraser, but effectively is it right that, in
8 a centralised app, all the data as to a person's
9 contacts are held on a central server?
10 **A.** Yes, in an anonymised way. So we were -- that is
11 exactly the fundamental difference, those -- the data
12 that allowed people who had been in touch with a phone
13 that somebody who then subsequently reported as infected
14 would be held centrally through anonymised data in the
15 centralised app on people's phones on the decentralised
16 app.
17 **Q.** So were there privacy concerns if the data was
18 anonymised?
19 **A.** So we took a great deal of advice from the National
20 Cyber Security Centre, which published a couple of
21 public documents, I think at least one is in my evidence
22 pack, explaining why we thought those privacy concerns
23 could be allayed, as well as from Professor Finkelstein
24 himself who was a, sort of, very leading, sort of,
25 digital scientist.

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1 insight about the spread of the virus. It would have
2 allowed them to see how that spread changed in patterns
3 and shape when certain interventions were taken.

4 It would have allowed them to see sort of hot spots
5 and particular patterns. It would have also allowed,
6 through that insight -- in principle, it would have
7 allowed us to constantly tweak the algorithm that worked
8 out what was a concerning contact event and what wasn't,
9 because that insight into the contact events and
10 subsequent infections would have allowed us to see,
11 okay, if, when somebody appeared to be in contact, for
12 example, at 3 metres for ten minutes, turned out that
13 isn't so much of a problem, but 1 metre for one minute
14 is much more of a problem.

15 So the centralised approach and the insight it would
16 have allowed would have come with, I think, some quite
17 sharp advantages in terms of insight around how the
18 virus was spreading, but there was a totally legitimate
19 discussion to be had about the trade-off between the
20 two.

21 **Q.** Thank you.

22 Now, if I can move on to ask you about your
23 interaction with the devolved nations, so Scotland,
24 Wales and Northern Ireland.

25 **A.** Of course.

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1 I mean, on one level the decentralised app of
2 course, by definition, presents less grounds for concern
3 around privacy. It was -- there was a trade-off, and
4 this was a constant discussion which we had internally
5 and externally. There was, of course, a trade-off
6 between assuaging those concerns around privacy, which
7 we believed the model we were developing did
8 sufficiently, and ensured a level of anonymity which we
9 felt was strong, demonstrable, and appropriate, but on
10 the other hand, the insight from the data that we would
11 have accumulated on the centralised model, albeit
12 anonymised, we thought would have enormous value as
13 well.

14 So there was a trade-off between the two.

15 **Q.** So if I've understood you correctly, was the reason you
16 went for the -- a reason you went for the centralised
17 app, you decided to use that, because you felt that you
18 would have better data?

19 **A.** So, at the time, we felt it was an appropriate trade-off
20 that the privacy concerns were amply, we thought, amply
21 met through -- on the basis that's set out in the
22 National Cyber Security Centre's papers, but that the
23 benefits of having that anonymised, essentially
24 anonymised graph of contact events and infections would
25 have given colleagues in public health a great deal of

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1 **Q.** We heard that on 24 March you held a formal meeting and
2 of course you've said you might have informally spoken
3 to representatives from those nations before that. Was
4 it your intention, or your hope I suppose, that the
5 devolved nations would adopt the app?

6 **A.** Yes, it was certainly our hope because obviously it
7 would have made contact tracing across borders more
8 straightforward, and at a point when everyone was
9 working absolutely flat out, it seemed to us sensible
10 that we don't have duplication. As you know, what
11 happened in practice was the Welsh Government chose to
12 adopt the version that we and then Simon's team
13 developed; the Scottish Government chose to develop a
14 separate approach; and the Northern Irish government
15 chose to use the approach developed with the Republic of
16 Ireland.

17 **Q.** Yes. So in relation to -- as you say, Wales adopted the
18 app, were there any efforts to collaborate or coordinate
19 with the Welsh Government, NHS Wales, and/or Public
20 Health Wales in the development of the app?

21 **A.** So I think from memory, and I've set out my
22 recollections as best I can in my witness statement,
23 I don't have too much more to add to that, but from
24 memory, we did maintain a sort of fairly regular and
25 frequent dialogue with the Welsh authorities on exactly

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1 that.

2 **Q.** As part of that dialogue were you taking into account

3 things such as having the app available in Welsh, or

4 other Wales-specific issues?

5 **A.** I imagine we would have been; I have to say, I can't

6 remember the precise details.

7 **Q.** I know that Scotland and Northern Ireland didn't in fact

8 use the same NHS app, but was there any coordination or

9 discussion had with them in relation to the development

10 of the app?

11 **A.** Yes. I mean, we did speak to our colleagues in both

12 those devolved administrations, and in fact, before the

13 pandemic started, I'd initiated a coming together of

14 digital health leads from all four nations on a regular

15 basis. So we knew our counterparts shared, and there

16 was quite a healthy exchange.

17 **LADY HALLETT:** Presumably, Northern Ireland, you can see the

18 sense of that being with the same part of the

19 epidemiological -- I can never say that word -- unit.

20 **A.** Yes, my Lady.

21 **LADY HALLETT:** And therefore, in a perfect world, the

22 epidemiological unit that is Scotland, Wales, and

23 England would also have been together. Is that your

24 approach?

25 **A.** Yes, my Lady, I think that's exactly right. It would

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1 with the Republic of Ireland, and one did its own thing.

2 **Q.** Thank you.

3 Now I'd like to, please, move on to ask you about

4 your knowledge of another app, application that was

5 being developed at around the same time as you were

6 developing app 1. So we're looking back again at March

7 and April 2020. That's an app called the ZOE app.

8 I think you know that Professor Timothy Spector is one

9 of the co-founders of a science and nutrition company

10 called ZOE?

11 **A.** Yes.

12 **Q.** In fact, you've seen his witness statement to this

13 Inquiry and have a copy of it with you.

14 **A.** I have.

15 **Q.** So you know, do you, that in early March 2020,

16 Professor Spector and the team at ZOE had started

17 development of an app designed to log symptoms,

18 incorporate location information, and effectively let

19 users know whether they might have Covid-19?

20 Are you aware that by 21 March 2020, ZOE had

21 produced a version of their app on the Apple store and

22 they launched it the next day on 23 March?

23 **A.** Yes, I am.

24 **Q.** And Professor Spector has told us in the witness

25 statement that you've seen that within 24 hours, the

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1 have made, I think, good sense to have done it that way.

2 **MS NAGESH:** Do you know -- you don't know, I suppose you

3 can't help us, with why Scotland and Northern Ireland

4 chose to develop their own apps?

5 **A.** I think with Northern Ireland it's more, it's clearer

6 although, obviously, the question is best put to them,

7 but it was essentially that, as the baroness has said,

8 it made sense, given movement across the land border in

9 Ireland to have a single system covering both Northern

10 Ireland and the Republic of Ireland.

11 Scotland, I don't understand that reason, no.

12 **Q.** Thank you. Just one more question, then, on devolved

13 nations. At paragraph 41 of your witness statement,

14 which on page 11.

15 **A.** Yes.

16 **Q.** Line 2. About halfway through the line. You say:

17 "In the end the Welsh joined in with the adoption of

18 the Covid-19 app that was rolled out in

19 September 2020 ..."

20 And quite a specific question, really, you use the

21 words "in the end", does that mean there was some

22 reluctance or delay in Wales joining the app?

23 **A.** No, I don't think "in the end" was intended to signify

24 that so much as we had been discussing with all three,

25 but in the end one came with us, one chose to brigade

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1 downloads, in his words, went viral and they had about

2 a million downloads.

3 **A.** Yes.

4 **Q.** Then he tells us this, I'll read it to you, but for

5 yours and my Lady's reference it's at paragraph 16 of

6 his statement at pages 7 to 8, he says this:

7 "After the first day or two of the launch of the app

8 [so the ZOE app], we saw that it was a success and we

9 were getting very useful data back from participants

10 that we knew would be useful. We made contact with the

11 government with the initial intention of handing it over

12 to them so they could run it as a UK-wide screening

13 service to find out what was going on."

14 I'll just pause there so I can ask you some

15 questions about that part first of all, if I may.

16 Do you recall whether you personally were involved

17 in any discussion with Professor Spector or the ZOE team

18 in relation to the ZOE app?

19 **A.** So we did have discussions with the ZOE team. I don't

20 think that initial conversation where he says, "the

21 intent of handing it over to them" was with me or my

22 team, but we certainly did have, as he sets out later in

23 the paragraph, further discussions with them.

24 **Q.** Can you help us, then, with whether NHSX did consider

25 Professor Spector's, as he puts it, offer to hand over

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1 the ZOE app?

2 **A.** Yes, we did. And -- I mean, look, first of all, I'm
3 filled with admiration for what Professor Spector
4 achieved, and it was a really impressive system that he
5 developed, but I think it's important to make clear he
6 was doing something different from the thing we were
7 trying to do. He was developing a symptom tracker. Did
8 so extremely expertly. We were trying to develop
9 a digital contact tracing tool. And so, although what
10 he did was brilliant, it was a different thing from what
11 we were trying to achieve.

12 **Q.** Was the ZOE app something that you could have built
13 upon, and developed your app on top of the framework, if
14 I can put it that way, that he'd already put in place?

15 **A.** I'm not sure. I mean, I think actually doing that would
16 have been rather more work and complication. It's very
17 important, if you're building something like a digital
18 contact tracing app, which is a sort of sovereign tool
19 of the NHS, which has the purpose of telling people to
20 isolate, so really has a sort of profound impact on
21 people's lives, that right from the start it should be
22 built to the very highest standards of security, which
23 is why we had the National Cyber Security Centre experts
24 in right from the start.

25 I think trying to retrofit that on top of someone

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1 Professor Spector's achievements in building it.

2 The second thing it had, which he refers to in his
3 statement, is a wider set of symptoms that people could
4 tick. Now, we were entirely directed on symptoms set by
5 the medical experts, the CMO and so forth. So, on that,
6 it's a straightforward sort of question for the medical
7 leadership.

8 The third thing he obviously had was a good number
9 of users, and it was extremely impressive, but the truth
10 is, as soon as the NHS Covid contact tracing app --
11 version 2, as it happened -- was released, we had really
12 impressive uptake. And Simon can speak to this later,
13 but our uptake was in the tens of millions.

14 **Q.** Thank you. That is helpful. I'll just go on to
15 something else Professor Spector says in the same
16 paragraph, paragraph 16. He says this a few lines
17 later, so over the page, on page 8, about three lines
18 down, he says:

19 "The initial response of the UK government (NHSX)
20 was not supportive. It was to initially try and see if
21 they could stop us doing the app because they were
22 worried it would interfere with the COVID-19 app
23 developed by NHSX which was in the trial phase, and we
24 were told it would be released within three weeks to
25 everyone in the UK. The rationale was that the public

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1 else's app, built in a way which we didn't have insight
2 into, without that same really sort of precise expert
3 input from the National Cyber Security Centre, wouldn't
4 necessarily have been a sort of saving or helpful thing
5 to try and do.

6 **Q.** Does it follow that -- as part of your discussions, was
7 there any cost-benefit analysis or did it not even reach
8 that stage because the concepts were just so different?

9 **A.** It didn't reach that stage, because essentially he was,
10 brilliantly, doing something different. If he had
11 developed a digital contact tracing tool, it would have
12 made much more sense, but essentially, he was developing
13 something that allowed you to put in your systems --
14 your symptoms, so that there was a -- really helpful
15 data around who had what symptoms and then who then
16 subsequently turned out to test positive for Covid.

17 So, I mean, it's worth breaking down what the ZOE
18 app had that could have been useful in relation to what
19 we were doing. So, first of all, it had the symptom
20 tracker. Now, as I've said, we weren't developing
21 a symptom tracker; we were developing a digital contact
22 tracing tool. Had the CMO or the deputy CMO or SPI-M
23 said to us "We need a symptom tracker", then of course
24 we would have developed that, including through a proper
25 analysis of whether we should build on the ZOE app and

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1 would be confused and therefore our app would likely
2 damage the major official effort."

3 He goes on to say:

4 "Pressure was put on my university and funding
5 buddies to make us stop promoting the app (though I have
6 no written evidence). Because of this pressure ... we
7 organised a virtual meeting with many groups including
8 the head of NHSX to reach a compromise. The outcome was
9 we were allowed to carry on, but had to agree to stop as
10 soon as the NHSX app was up and running and agree to
11 promote the future NHS app to our followers who were by
12 then over two and a half million people."

13 So, a fairly long quote, but, first of all, do you
14 agree with his written evidence there that you wanted
15 them to stop development of the ZOE app?

16 **A.** No.

17 **Q.** Had you taken any view on whether there was a benefit to
18 allowing both the ZOE app and the NHS app to run in
19 parallel?

20 **A.** So I'll say a couple of things. We didn't try to shut
21 down the ZOE app. We did make the point that, at that
22 point, it was claiming that it had the backing of the
23 NHS, and we didn't think that was appropriate. We
24 hadn't formally endorsed the app.

25 There was a concern, which I think, in retrospect,

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1 I'm not sure was correct, but there was a concern that,
 2 on the basis that we knew the success of the contact
 3 tracing app was sort of arithmetically linked to the
 4 number of users, if you had lots of Covid apps out there
 5 and people not being keen to have loads of different
 6 Covid apps, it could have affected the uptake of the
 7 digital contact tracing app. And so that was the basis
 8 for saying they should carry on -- at the point at which
 9 the NHS contact tracing app was released, could either
 10 consider rolling in or, at the very least, using
 11 Professor Spector's user base to encourage uptake of the
 12 NHS app.

13 But in terms of running in parallel, I mean, it
 14 comes back to they were doing different things. They
 15 were different functions. And so we were focusing on
 16 digital contact tracing. He was focusing on tracking
 17 symptoms.

18 **Q.** So you didn't want him to stop development of the app
 19 but you were concerned about, effectively, dilution of
 20 the market, if I can put it that way?

21 **A.** We were concerned that people wouldn't want to have
 22 a multiplicity of Covid apps, even if they did different
 23 things. So it was important that we were clear about
 24 function, clear about what was being endorsed and what
 25 wasn't, and that we had an agreement that once the NHS

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1 you want is everyone on the same system, because if I'm
 2 on one app and -- if I'm on one app and you're on
 3 another, my phone sees yours, but you don't get a ping
 4 when I test positive because you're on a different
 5 system, that's actually a failure of the system.

6 So it's one of those rare cases where you do,
 7 actually, for digital contact tracing, you want one app
 8 in the same way you want one test and trace. It would
 9 have been really odd to have had two test and trace
 10 organisations to give people the choice; the same is
 11 true with the app.

12 **Q.** Thank you, that's clearer, I would say.

13 We know -- just a few more questions on the ZOE app.

14 **A.** Of course.

15 **Q.** We know, I think, around April or so Professor Spector
 16 indicates that the ZOE app did halt development due to,
 17 I think, a lack of funding, and that's his pages 9 to
 18 ten, paragraph 19. But my question is really about the
 19 effect of the fact that the ZOE app had halted
 20 development around April, but there was no, as yet,
 21 NHS app. Did that mean that there was a period when the
 22 government was unable to, effectively, track emergence
 23 of new symptoms?

24 **A.** I mean, there were other ways of tracking. It wasn't
 25 just his app and our app. But again, it comes down to

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1 app was released, then we would coordinate to make sure
 2 that one way or another, uptake was driven to the
 3 highest level possible.

4 **Q.** I see. Thank you.

5 Was there any -- you've mentioned concerns about too
 6 many apps. Was there any thought about potentially the
 7 opposite, that if there was only one app, people might
 8 be reluctant to effectively feel directed to join that
 9 app? That if they had choice, they might be more
 10 willing to engage at least with one of the apps.

11 **A.** So, I mean, I'd say two things, and it's a very fair
 12 question. First of all, it is back to the point that
 13 the apps are doing different things, so they're both
 14 Covid apps, but ours was a digital contact tracing tool,
 15 Professor Spector's was not, it was a symptom tracker.
 16 So ours was designed to measure who was within range,
 17 who -- which other phones my phone would be able to see,
 18 at what distance for how long, and therefore, if
 19 I tested positive, who needed to be alerted to the fact
 20 that they may have been infected themselves.

21 His app wasn't doing that, so a choice between the
 22 two is a choice between totally different things.

23 The second thing to say is it's of -- in the nature
 24 of digital contact tracing and the way the technology
 25 works that you don't want competing apps, because what

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1 the fact that his app and our app were doing different
 2 things. So again, if the CMO or Jonathan Van-Tam or
 3 SPI-M had said to us, "We need a symptom tracker", then
 4 of course we would have taken their direction and the
 5 conversation with ZOE and, indeed, our own work would
 6 have gone off in that direction, as well or instead.
 7 But, of course, we didn't receive that direction.

8 **Q.** Thank you. Then just two more fairly discrete
 9 questions. The first is Professor Spector, I think, has
 10 told the Inquiry that the Welsh Government in fact did
 11 adopt the ZOE app and we know that the Welsh Government
 12 then went on to adopt the NHS app. Please say if you
 13 can't help us with this, but are you able to provide any
 14 insight as to why the Welsh Government decided to
 15 ultimately use the NHS app rather than the ZOE app?
 16 I know they were very different things.

17 **A.** No, I mean, again, it comes down to the fact that the
 18 NHS app was a digital contact tracing tool; the ZOE app
 19 was not.

20 **Q.** Then I know that you weren't as closely involved, or at
 21 all in the version of the app that was eventually
 22 launched in September 2020 so again, if you can't answer
 23 this, please do just say, but can you help us with
 24 whether there was any monitoring after the launch of the
 25 app as to whether any users who had used and trusted the

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1 ZOE app didn't then use the NHS app?

2 **A.** I think you're better directing that question to Simon

3 when he appears later.

4 **Q.** Thank you.

5 Now if I can move on, please, to the Isle of Wight

6 trial --

7 **A.** Of course.

8 **Q.** -- which as we mentioned earlier launched on 4 May. And

9 that was a trial of app 1 amongst the residents of the

10 Isle of Wight.

11 **A.** Yes.

12 **Q.** First of all, why did you choose the Isle of Wight,

13 geographically?

14 **A.** So we had given this a lot of thought. It came with

15 several advantages, in terms of being a discrete test

16 area, so for obvious reasons, it's an island with

17 limited movement on and off at that time. There was

18 a single health authority and a single local authority

19 which made for much simplicity in terms of organising

20 it, and then crucially, in terms of digital exclusion,

21 it had a much higher rate of people aged above 65 than

22 the national average.

23 So it was useful in respect of one axis of potential

24 exclusion or inequality. I recognise it wasn't useful

25 on a number of axes, which is why it was so appropriate

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1 ethnicity."

2 Then it goes on to say uptake was similar for key

3 workers and non-key workers, and between genders,

4 effectively, it was about the same for males and

5 females.

6 **A.** Yes.

7 **Q.** While you were developing app 1, were you aware of these

8 figures, these results?

9 **A.** From memory, yes. And I think, as it happened, these

10 figures, because of the timing, mostly impacted the

11 decisions taken by Simon and his team for app 2. So,

12 for example, the multiplicity of languages that app was

13 produced in, and the wraparound support, and so forth,

14 was in part built on the insight that this gave us.

15 **Q.** Did these figures concern you at all, given that even at

16 that stage it was fairly well known that people over 70

17 and ethnic minorities were more likely to succumb to the

18 effects of the virus?

19 **A.** So, I mean, yes, and I should say all way through from

20 the very first note we wrote to the Secretary of State

21 at the start of March, we flagged the risk of inequality

22 and digital exclusion on the basis of the use of

23 a smartphone-based digital contact tracing tool, and

24 I think it's fair to say that that concern and

25 consciousness of risk flows through literally almost

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1 that, under Simon's leadership, a subsequent test was

2 done with the London Borough of Newham. And I think

3 a combination of the two was a very sensible one.

4 **Q.** And in fact there was -- that takes us nicely, I think,

5 on to our next question, which is -- which will be

6 helped by referring to the report of the results of the

7 Isle of Wight trial.

8 So if we can have on screen, please, INQ -- thank

9 you. If we can look, please, at page 16 of that report.

10 It's the first paragraph. It is on your screen as well,

11 if that helps.

12 **A.** Thank you.

13 **Q.** But sometimes people prefer paper as well. So feel free

14 to use whichever helps.

15 The first paragraph says:

16 "Age had an impact on the percentage of smartphone

17 owners who said they downloaded the app, falling from

18 87% for those aged 55 to 69 to 79% for those aged 70+.

19 Similarly, fewer smartphone owners with no

20 qualifications downloaded the app ... than smartphone

21 owners with GCSEs or equivalent ..."

22 And it gives 78% as contrasted with 85%.

23 "Ethnicity also had an impact, with 87% of white

24 smartphone owners saying that they downloaded the app

25 compared with only 77% of smartphone owners of non-white

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1 every document in the pack. So it was something -- it

2 was a risk about which we were acutely concerned and

3 alive.

4 **Q.** Thank you. And certainly we'll pick up the point about

5 digital exclusion shortly. And in fact, assist us. If

6 we can look, please, at page 17 of this report, and the

7 chart near the top headed "Reasons for not downloading

8 the app", we can see that the largest reason or the

9 highest reason for those not downloading the app is,

10 perhaps unhelpfully on its face, labelled "Other", but

11 if we keep the chart on the screen and I just read out

12 to you the explanation given for "Other" on page 16, the

13 report says:

14 "... the most commonly cited reason was not having

15 the appropriate equipment. Many did not have the

16 correct operating system or were using phones that they

17 did not think would be compatible with the app.

18 Additionally, those who did not have mobile data or were

19 on pay-as-you-go contracts were not keen to download the

20 app or did not think it would be useful. Another

21 commonly cited problem was not having enough space on

22 the phone to be able to download the app."

23 Does that effectively demonstrate that your concerns

24 about those who were digitally excluded were borne out

25 in practice?

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1 A. Yes, I think it does.

2 Q. Then the second highest reason given for not downloading
3 the app were people worried about privacy. We discussed
4 earlier the fact that you've chosen a centralised
5 system, and potential concerns about privacy. When you
6 became aware of this feedback, did that impact your
7 decision in the end to move to a decentralised system?

8 A. So, as I said, that -- between the two systems there was
9 essentially a trade-off, and different equities in play.
10 One, I think, had a sort of more reassuring story to
11 tell about privacy, although I still maintain the
12 centralised app had a very strong story all the same.
13 The other -- the centralised app, though, gave the
14 possibility of insight into the way the virus spread
15 that could have been profoundly useful.

16 Now, what we took from the Isle of Wight trial,
17 a message, actually, that, even with those concerns as
18 set out in this graph, the uptake was very high. I mean
19 really, sort of, gratifyingly high.

20 So we didn't come away with the message that the
21 privacy concern was going to kill the project. In the
22 end, the decision to move from version 1 to what became
23 version 2 was based on technical performance.

24 Q. Thank you. We can take that off the screen. Thank you.

25 And moving on to version 2 briefly, we know that

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1 that the version based on top of the Google/Apple API
2 was more performant than version 1.

3 But it made total sense in that period to develop
4 both and test them against each other.

5 Q. Thank you. And am I right in thinking that Google and
6 Apple had indicated from the beginning that they would
7 be using a decentralised system?

8 A. Yes.

9 Q. And so was that the primary reason that app 2 was
10 a decentralised system in the end?

11 A. Yes, because Google and Apple had said that the -- their
12 API, so access to the data, would only be available to
13 those systems that conformed to certain standards that
14 they had set out. So they had determined that no
15 government or health service app should be able to have
16 access to the API unless it was built on the
17 decentralised version.

18 They told us that they did that because they had
19 concerns around how health data might be used in some
20 countries. We asked them at the time if, despite that,
21 given it was the UK and we had clear legal standards and
22 checks and balances and assurance in place, we could
23 nonetheless have access to the API for our centralised
24 app, but they chose not to give it to us.

25 Q. Thank you.

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1 in June, as we've discussed, on 15 June, you and
2 Simon Thompson both recommended that version 2 be
3 preferred.

4 A. Yeah.

5 Q. But version 2 had already been developed; is that right?

6 A. The sort of technical version. So it was -- it clearly
7 wasn't a version that you would release to the public.
8 The actual version was much better in all sorts of ways
9 that Simon can talk about. But what it was was the bare
10 bones, so we could test one versus the other.

11 Q. That may answer my next question, which is simply this:
12 what was the reason for not moving to version 2 sooner?

13 A. So I think -- and what it comes down to, essentially, is
14 we did what I think you would have hoped we would have
15 done, which is: we developed version 1; as soon as the
16 Google/Apple API became available we worked up a bare
17 bones version to test one versus the other; we then
18 developed both in parallel; and then mounted a series of
19 technical tests, one against the other, to check
20 performance.

21 And actually, I think, comparatively, as far as we
22 know, had one of the most rigorous approaches to testing
23 efficacy between different models of any country, and it
24 was on the basis of those repeated very scientific tests
25 of performance that we were able to come to a conclusion

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1 Now, the last topic, I think, before we get on to
2 the recommendations and your learning, is the topic of
3 inequalities. And really, first of all, focusing on
4 digital exclusion which we've mentioned.

5 So could I ask, please, to put on screen
6 INQ000279898, the third paragraph of that letter,
7 please. Starting "We propose spending" -- thank you.

8 And this is the letter we've referred to dated
9 8 March 2020, which is the letter from yourself and
10 Mr Finkelstein, Anthony Finkelstein, to the Secretary of
11 State, copying in various others.

12 So on 8 March you said:

13 "We propose spending an exploratory week testing
14 whether this [as in the app] is possible in a helpful
15 timescale."

16 You go on to say you will look at the potential
17 sources of data, the risks of false positives and other
18 unintended consequences and the level of uptake required
19 for the app to be useful, the technical challenges of
20 combining data sources, and producing meaningful
21 analytics, data protection, public trust, consent and
22 other policy challenges, and then you say "including
23 implications for the digitally excluded".

24 So is it right that even as of 8 March, you were
25 concerned about the digitally excluded?

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1 **A.** Yes, and look, I mean, I think it's worth saying by way
 2 of context that when, at this point, the technology that
 3 we were proposing to develop was entirely novel. So
 4 using Bluetooth as a way of seeing who was around at
 5 what distance and for how long, it's not what Bluetooth
 6 was designed for, and so we were doing something really
 7 extraordinary, which was hence this talk about
 8 unintended consequences because this was really new.
 9 In terms of the digital exclusion, I mean, it is --
 10 it's a sort of unavoidable feature of digital contact
 11 tracing that if you're digitally excluded you're not
 12 part of it. So we knew right from the start that by
 13 definition, a digital contact-based -- a digitally-based
 14 contact tracing system wouldn't be accessible to those
 15 without smartphones, those without a level of comfort of
 16 using smartphones, those with old smartphones that
 17 weren't technically compatible with what was being
 18 developed which is why I think we always knew that
 19 the -- it was essential that any digital system of the
 20 sort we were developing should sit within a wider system
 21 which included manual contact tracing.
 22 So if it had been the app by itself, it would have
 23 been much more problematic. It made sense, and was to
 24 some degree a mitigation for, people without smartphones
 25 that it was within the context of a wider Test and Trace

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1 spent a lot of that week considering exactly what we've
 2 just discussed, and came to the view, number 1, it had
 3 to be set within a wider context, a wider system, so
 4 it's not just a digital system; and number 2, the main
 5 mitigation or defence of the system would be that the
 6 benefit isn't to the users directly, it's to society as
 7 a whole.

8 **Q.** Thank you. And then just a final point on the digital
 9 exclusion, in your statement at paragraph 57, but you
 10 don't need to go to it unless you need to, you've
 11 mentioned developing the COVID Pass app which isn't
 12 within the scope of this module but the thing of
 13 interest that you say that is of interest to this point
 14 is that there was a non-digital element available to the
 15 COVID Pass app which was launched before the digital
 16 version?

17 Is that similar to what you're describing now: the
 18 manual contact tracing style -- (overspeaking) --
 19 **A.** Yes, exactly. So COVID Pass, the benefit was very much
 20 to the individual who held the app, because it was used
 21 to get into venues or whatever, and show proof of
 22 vaccination. So it became really important that people
 23 who were digitally excluded could nonetheless get those
 24 benefits. So we made a point of developing
 25 a non-digital version of COVID Pass which came in the

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1 Programme.

2 If I can make one other point, though, which I think
 3 is really germane to your question, it's important to
 4 note that the benefit of the app and the system we
 5 developed didn't accrue to the individual user. It was
 6 a societal benefit. Because what it did was
 7 essentially, if you were a user, what you got out of it
 8 was a ping telling you that you had to stay at home for
 9 ten days or whatever it was.

10 The importance of it and the benefit was to society
 11 as a whole, because it was intended to remove people who
 12 might have had the virus from circulation so that the
 13 spread of the virus was reduced. So although there is
 14 a sort of serious question about digital inclusion, it
 15 is important to assess that in the context of the
 16 benefit being collective not individual.

17 **Q.** That is helpful. Did you -- thank you, we can take that
 18 off screen.

19 Were you given authority to proceed with that
 20 exploratory week?

21 **A.** Yes.

22 **Q.** Are you able to help us with what the findings were in
 23 relation to the digitally excluded, or --

24 **A.** I think it was, as actually, as I've just described, we,
 25 as well as a sort of technical week of development, we

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1 form of a watermarked certificate sent through the post
 2 which, as you said, we launched before the digital
 3 version on purpose, to make sure that there was a
 4 version which could be used by anyone before we brought
 5 on line a digital version.

6 **Q.** Thank you. And one final question in relation to
 7 inequalities, a slightly broader question, were you
 8 involved in any exercises to ascertain the impact of the
 9 app on those with protected characteristics or
 10 particular vulnerabilities?

11 **A.** So that was done, I think, well and properly by Simon
 12 and his team under version 2, who did a full equalities
 13 and health inequalities assessment before the launch of
 14 the app to the public. I think that was the right point
 15 to do that formal assessment, and I know the outcome of
 16 that assessment informed his team's work.

17 **Q.** Thank you.

18 Now, just moving on to, finally, lessons learned and
 19 recommendations. You've set out very helpfully some
 20 lessons learned in your statement, and the Inquiry does
 21 have that and certainly is taking it into account.

22 There is one additional query in this point
 23 that I wanted to ask you about, and it relates to some
 24 evidence that the Inquiry heard yesterday. The Inquiry
 25 heard from Professor Iain Buchan yesterday, who

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1 described the Liverpool Pilot, with which, I think,
2 you're familiar?
3 **A.** Yes.
4 **Q.** And he described difficulties he had in obtaining data
5 from that pilot. He indicated that you were very
6 supportive and of great assistance in helping him obtain
7 that data but it still took him about eight months,
8 I think.

9 Do you have -- first of all, what was your
10 perspective of that situation? And second of all, do
11 you have any recommendations arising out of that
12 situation?

13 **A.** So this speaks to a much wider endemic problem across
14 health and care, which is data flows very slowly and --
15 or can flow very slowly and incompletely between
16 different systems. That's for technical reasons which
17 NHSX was trying to address. It's also for system --
18 some quite deep-rooted cultural reasons across the
19 system.

20 If you are a healthcare professional, the way you
21 see the world, from all you've heard and all you've
22 read, is there is much more risk in sharing data than
23 not sharing data. And it's something I used to talk to
24 the Information Commissioner and to Dame Fiona Caldicott
25 about often, was we were sitting on top of -- or next to

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1 both for individual care and for optimising the public
2 and policy response. And so everything which allows
3 that to happen is really important.

4 **MS NAGESH:** Thank you. That's answered my question
5 perfectly.

6 My Lady, those are all my questions.

7 **LADY HALLETT:** Thank you very much indeed.

8 Thank you very much, Mr Gould, I'm very grateful.

9 How did a diplomat that end up doing the job that
10 you were doing that we've been hearing about?

11 **THE WITNESS:** So when I was ambassador in Israel, one of the
12 things I did was spending quite a lot of time to build
13 links in the tech community between Israel and the UK,
14 so when I came back to the UK I thought it would be fun
15 and worthwhile to go down that route. So instead of
16 going back to the Foreign Office, I asked to become
17 director of cyber security for the government, and then
18 the next ten years of my career followed.

19 **LADY HALLETT:** Well, it sounds as though you made good use
20 of the skills that you'd adapted in the Foreign Office.

21 **THE WITNESS:** Thank you.

22 **LADY HALLETT:** Thank you very much. I'm sure it must have
23 taken you many, many hours and a lot of personal cost to
24 you and your family, so thank you very much for all you
25 did to try to get the apps off the ground.

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1 a system where the incentives had all been not to share,
2 and that was very dangerous, but particularly dangerous
3 in a pandemic where you really need data to share -- to
4 be shared quickly.

5 So, I mean, I think Professor Buchan's problem was
6 symptomatic of a much wider and deeper-rooted issue.

7 I think one of the things we did during the pandemic
8 which I think was probably had the biggest effect
9 was a relatively straightforward thing, which is -- you
10 had a -- it got together with Fiona and Elizabeth, the
11 National Data Guardian and the Information Commissioner,
12 and we just agreed that we would put out a really short
13 statement that said, effectively, if we are in
14 a pandemic, if you are a healthcare professional and you
15 share data, sort of, sensibly and in good faith, there
16 will be no bad consequences. We're not going to launch
17 enforcement action.

18 So it's just a really strong jolt to the system that
19 you can share data for the benefit of your patients if
20 you need to. And we got a flood of feedback that this
21 had really sort of electrified the sharing of data
22 across the system.

23 And I think in as much as there's a recommendation,
24 it is the sharing of data saves lives. And particularly
25 in a pandemic, the quick sharing of data is essential

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1 **THE WITNESS:** Thank you, my Lady.

2 **LADY HALLETT:** Thank you.

3 Very well, I think it's best to break now before the
4 next witness. I shall return at 3.05 pm.

5 **(2.50 pm)**

(A short break)

7 **(3.05 pm)**

8 **LADY HALLETT:** Ms Cartwright.

9 **MS CARTWRIGHT:** Thank you, my Lady. Could Mr Thompson be
10 sworn, please.

11 **MR SIMON THOMPSON (sworn)**

12 **LADY HALLETT:** Mr Thompson, I hope the wait to become our
13 last witness of the week hasn't been too long.

14 **THE WITNESS:** It's been fine, thank you.

15 **Questions from LEAD COUNSEL TO THE INQUIRY FOR MODULE 7**

16 **MS CARTWRIGHT:** Could you tell the Inquiry, please, your
17 full name.

18 **A.** My name is Simon Thompson.

19 **Q.** Mr Thompson, thank you for the witness statement you
20 have provided to the Inquiry. It's 23 pages, dated
21 23 April 2025. We see your signature and statement of
22 truth on page 23. Can I ask you to confirm that the
23 contents of the statement are true to the best of your
24 knowledge and belief.

25 **A.** Yes, they are.

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1 Q. Thank you. Can we identify the relevant evidence you
2 had to TTI and, perhaps headlining it in the shortest
3 way possible, you essentially had five months'
4 involvement developing app 2 that we've heard about?
5 A. That's right, 20 weeks developing app 2, yes.
6 Q. So let's just crystallise the dates, 3 June 2020 until
7 9 October 2020?
8 A. That's correct.
9 Q. And would it be fair to say that once you left the
10 project on 19 October you had no more involvement in
11 app 2?
12 A. That's correct.
13 Q. And similarly in respect of app 1, you had nothing more
14 to do with app 1?
15 A. That is also true.
16 Q. Thank you. Please can you give the other relevant
17 experience you have as to why you came to be seconded on
18 this project, please.
19 A. Yes, sure I have a long history in technology. During
20 to my time at William Morrison Supermarkets, I took them
21 online, I'm an ex Apple executive, and I also worked in
22 the technology solutions organisation of Ocado Plc.
23 Q. Thank you. I'm going to briefly take you to the
24 handover that was given to you as you joined the
25 project. Can we go to the organogram that's in the

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1 or Northern Ireland or Scotland, as part of the
2 development for app 2, please?
3 A. Yes, sure. We were in touch with the devolved
4 administrations on a very regular basis. We continued
5 an awful lot of the processes that Matthew covered off
6 as well and we also reached further afield. So if you
7 take the check-in part of the app, which I suspect we'll
8 cover off, that was actually developed for us by a team
9 in New Zealand based on their experience.
10 We were very interested in what other people had
11 done that had worked.
12 Q. Thank you.
13 Now, perhaps the most efficient way to deal with
14 your evidence as to the functionality and development
15 and implementation of the app is to use the slides just
16 before you left from October 2020.
17 So, again, could I ask, please, to be displayed
18 INQ000575876.
19 So we know that this is your handover documents from
20 9 October, although you left the project ten days later.
21 Again, just perhaps because there's a more detailed
22 organogram within this, can we please go to internal
23 page 34, please. And we can see "185 App Cell Total".
24 Now is that the number of individuals working on the
25 development of app 2?

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1 PowerPoint, please.

2 Can I ask for it to be displayed, please,
3 INQ000575875. And it's internal page 5 to go to,
4 please -- sorry, can we move along to page 7, I do
5 apologise. Thank you.

6 Thank you. So this is part of the pack of slides
7 that was part to the handover in June 2020. And just to
8 identify you in the organogram, we can see that you sit
9 below -- the team below you that deal with the
10 technology, the product marketing and support, and then
11 above you is Mr Bailie and, directly above that,
12 Dido Harding.

13 A. Yeah, that is correct. And as it says there quite
14 rightly, is that I was accountable for all matters
15 relating to the app and all of the engagement with Apple
16 and Google.

17 Q. Thank you.

18 Can I ask you, just whilst this is displayed, we can
19 see stakeholders to the right-hand side bullet points.
20 We've got, first of all, fourth bullet point, "Other
21 country App teams", and I think you were present in the
22 hearing room when Mr Gould was asked about uptake of the
23 Covid app 2 and other countries. Are you able to assist
24 us in terms of other country app teams? Did you have
25 any liaison with any of the devolved nations, from Wales

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1 A. Yes, that's the number of people dedicated to this
2 initiative. It did not include some of the resources
3 from devolved administrations and some other resources
4 that we would leverage, but this team was 185 people.
5 Q. Thank you. And, obviously, if we move to the right we
6 can see under "What we do", your name, and then I think
7 it's described as a tree that sits below it that then
8 has the other aspects of the development of app 2, the
9 "What we Make", "Make it", "Assure it", "Approve it",
10 "Adopt it", "Improve it", "Fix it", and "Operate it".
11 A. No, that's absolutely right. I think what it says here
12 is absolutely right. My accountability was what exactly
13 are we doing, the strategy, the outcomes, accountable
14 for the decisions around the app, of course also working
15 with the rest of the test and trace team and actually
16 leading it to a conclusion.

17 And what we can see here from the left to the right,
18 we had a team that were dedicated on making it, we would
19 call that project management. We had a team that made
20 it, that was the technical team. We had a dedicated
21 team to make sure that it met all quality standards and
22 it was indeed secure. And then we had an approver team
23 which I think is a really significant part here. If you
24 have a look at the general headcounts across here, apart
25 from the "Make it" team, you can see this is where an

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awful lot of the resources were input.

This team here were largely made up of civil servants around governments, ethics, equalities, accessibility, because I felt, we felt that they were best placed to be the gatekeepers of what we gave to society.

And then we had a team that was accountable for adopting it, making sure it was downloaded and used.

And then also making sure we had a team that were improving it, so every day we would look at user feedback.

The "fix it" team were dedicated and focused on making sure that the distance algorithm was accurate and we had an operator team that really managed all the infrastructure.

Q. Thank you.

Mr Thompson, you have the benefit, as we've now heard two witnesses, both Professor Fraser and Mr Gould a minute ago, so there's been a large volume of evidence that her Ladyship has heard around app 1 and its functionality, and then what I'm going to describe as the privacy app, app 2, that was then ultimately the one that was implemented and available for downloading from 24 September 2020.

A. Mm-hm.

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you help us at all with how the Covid app looked at or monitored any data from the symptom tracker app of the ZOE app?

A. Two separate things.

Q. Yeah. Thank you. So let's -- using your slides, please, for functionality, can we please go almost to the beginning at internal page 4, first of all, please, the role of the app. I'm not going to spend time on that because I think it's clear what the purpose of the app was.

But again, we can see on that slide, speed, reach, precision. Can you just speak to what you intended this to communicate as you provided your handover, having implemented the app.

A. Yes, when we were reviewing is what did we feel the app could do particularly well versus other contact tracing methodologies? And we really felt that these three areas was something that digital tools could do better. The first one was speed, which is being able to get a notification to self-isolate in a matter of minutes.

There was precision, so of course, the tools that we built were good at understanding how close people were to each other and for how long, better than a human would be able to do, I would suggest.

And in terms of reach, of course the digital tool

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Q. And having said about the privacy app, there's been some discussion as to whether to refer to app 1 as the centralised app and app 2 as the more local app. How would you characterise app 2?

A. Yes, well, I think the phrases "centralised" and "decentralised" are probably a little unhelpful because they are technological solutions. I think the way that I think about it and I think the team felt about it, was which technological solution was going to allow society and the people feel confident that it was protecting their privacy? And that, to me, was the debate, was which would be, would give the assurances of privacy, therefore was more likely to be downloaded and used?

And I think, from the Isle of Wight survey, testing that Matthew and the team did, there was over 70% of the people that participated in that particular test initiative that felt or were concerned about the fact that they were being tracked.

And in my view, and in the team's view, that would be a negative to the product being downloaded and used.

Q. Thank you. Now, I'm going to ask you a question that Mr Gould deferred to you a moment ago, which was a question that was asked about the extent to which the app monitored, after its launch, app users under the ZOE app. I think he said you might be able to help us. Can

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will remember people who you've met who you hadn't realised you'd met.

So our view was that the app was better in terms of speed, precision and reach, but I think there's one really important point here to make, as well, is, as good as the tool was at these three things, it was only ever designed to be part of an overall system. Within the test and trace strategy there were ten particular areas of focus of which the app was one. It was number 6, really focused on letting people manage their freedoms and make the right decisions.

So yes, the app was better at this, but it was also important that it sat within an overall system.

Q. Thank you. Can we then go to the next slide, please. We can see a slide that essentially gives some indication of the functionality, but I think it's right, isn't it, the Geiger, social distance score, was not something that was then used on the app?

A. No, that's right. Geiger we didn't launch in the end.

Q. Can you summarise what that was and why it was dispensed with?

A. Yes, so what Geiger was about was about giving people even more information as to whether they were putting themselves at risk. I think later on in the pack that we disclosed, we did actually put that into research and

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1 people liked it. The issue that we had is that within
2 the timelines that we had, that had a high degree of
3 complexity in terms of development so at that point in
4 time we actually didn't launch it. What I would say in
5 terms of learnings for next time, certainly based on
6 consumers' feedback, I think that's something worth
7 investigating again.

8 **Q.** Thank you. Can that be taken down, please.

9 Can I then ask you in respect of we know the app
10 allowed you to book a test, it was the method by which
11 you'd be notified of a positive test. Is there any
12 other aspects of the functionality you wish to touch on?
13 I think we've heard quite a lot of evidence about that
14 already.

15 **A.** Yes, two things if you don't mind. I think the first
16 thing is that when we looked at general app adoption
17 around the world it was relatively low, with some
18 notable exceptions that I think have been mentioned.
19 And our view was that we had to have a situation where
20 we got mass adoption of the app, so a good take-up of
21 the app. So the approach that we took was not just
22 being privacy protecting and just a contact tracing app,
23 it was also given the users some real benefits for
24 themselves, where it would actually drive adoption.

25 So I think one that I'll really specifically pick
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1 I thought was a really benefiting tool, yes.

2 **Q.** Thank you.

3 Can you then just clarify my understanding is
4 correct that from the app being operational from
5 24 September downloaded, essentially if you were told to
6 isolate, there was no, then, requirement to, if you'd
7 used the app, to have any dealings with a contact tracer
8 through centralised call centre?

9 **A.** Yeah, that's right, you followed the instructions.

10 **Q.** Thank you.

11 Now can I just ask you a few questions on
12 accessibility.

13 **A.** Mm-hm.

14 **Q.** First of all, your statement deals with engagement you
15 had with Newham and Newham Council. Do you want to give
16 her Ladyship just the details of that and how that
17 factored into the development of app 2, please.

18 **A.** Yes, and I think Matthew mentioned a little bit about it
19 before, is that, you know, we'd done the work in the
20 Isle of Wight -- which by the way was totally invaluable
21 in helping us accelerate with those learnings. We
22 should really not ignore that. I think it was a very
23 important part of the process.

24 But one thing that really struck me, stuck us as the
25 team, is that, you know, was the Isle of Wight truly
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1 out would be the check-in process which really helped
2 drive up adoption, which is if you wanted to go out to
3 a restaurant, that, you know, you had two choices, you
4 could actually do a handwritten, you know, "I am here
5 with", I would suggest maybe limited privacy protection
6 on that, a lot of them were handwritten.

7 But here, actually, you could check in in a totally
8 privacy-protecting way and I think that was real big
9 driver of general take-up. And of, course, what we've
10 seen and I think we've heard over the last few days is
11 that the higher the level of adoption, the higher
12 benefits or the more benefits the app would bring.

13 **Q.** Thank you. We know also from your helpful statement
14 that once you were told to isolate through the app, it
15 had a helpful countdown function which meant that told
16 you when you were then released from your isolation.

17 **A.** That's right. And when we had a look at, you know, when
18 we spoke to the potential users, actually remembering
19 how many days it was that you had isolated and how many
20 days there was to go through isolation was not something
21 that everybody could remember in a very clear way. So
22 I think having that isolation partner that would count
23 down ten, nine, eight, seven, to wherever it was, so
24 that you were really clear on how long you needed to be
25 isolated for, so that you did not spread the virus,
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1 representative of all of the communities around the
2 country? And I think that the answer was probably no.
3 So we reached out to Newham Council -- and I have to
4 say, I'll take the opportunity of thanking Althea, the
5 CEO, and Rokhsana, who was the MP (sic) there, who were
6 absolutely tremendous in helping us engage with the
7 local community. And we went there and spent an awful
8 lot of time really understanding some of the barriers to
9 potential app usage.

10 There was a few that really immediately struck me.
11 One was the multi-cultural nature of that particular
12 community, which is why we ended up launching in many,
13 many languages. And I will say here that having an app
14 in multi-language is painful -- very, very difficult to
15 develop and also difficult to test at speed -- but
16 incredibly essential in terms of this response.

17 We also learned many other things as well. We made
18 sure that the app was available for a reading age 8 and
19 above, which, again, is going to give people the access
20 that they want as well.

21 **Q.** Thank you.

22 Can I, again on accessibility or usability, it's
23 a separate question linked to the devolved nations,
24 because you tell us in your witness statement the hope
25 had been to launch app 2 before the Scottish holiday --
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1 sorry, the Scots went off their holiday and their
2 children back to school, which is early in August of
3 2020, and obviously Scotland then developed their own
4 app.

5 Is there any observation you can give about
6 accessibility from the four nations' perspective?
7 Because we have obviously Wales that was a part of this
8 app, but then separately we've got Scotland and
9 Northern Ireland with different apps.

10 **A.** Yes, I think interoperability is very, very important,
11 and the way I characterise it is: I am living in
12 England, and I travel to Scotland, and I meet some
13 people in Scotland, and then I travel back to England
14 and then I test positive for the virus. How can we make
15 sure that the people that I've interacted with in
16 Scotland can be notified that they are potentially at
17 risk?

18 So my view was, and remains today, that actually
19 having one app that is interoperable -- or what would be
20 even more preferable is not needing the
21 interoperability, actually having one app as part of the
22 response I think would have been a much better approach.

23 **Q.** Thank you.

24 Now, I'm not going to take you to the documents
25 unless it would help your understanding, but we have

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1 But I'll say again that the app was never going to
2 be the total solution. It was one part of an overall
3 response.

4 **Q.** Thank you. And you've just mentioned the Public Sector
5 Equality Duty consideration. You say "we"; in fact was
6 it you that completed that --

7 **A.** No, it was not me, it was not me, but within the team we
8 had a very, very dedicated team that were looking after
9 the equalities and all of the parts of government
10 requirements before you put a tool such as this in their
11 hands.

12 And as I said before, I would not say that that was
13 my expertise. It was certainly their expertise. And
14 they -- and that function was predominantly staffed by
15 people from the Civil Service.

16 **Q.** Thank you.

17 Now, I'm going to ask for us briefly to look, as
18 well, at the launch PowerPoint that identifies issues of
19 accessibility that were looked at, please.

20 It's INQ000575873.

21 So it was the campaign activation slides that you've
22 provided.

23 Again, just on accessibility issues, please, having
24 identified that, thank you, can we move to internal
25 page 5, please.

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1 within the documents provided to you information that
2 confirms that the accessibility of the app met the
3 level AA success criteria of the web content
4 accessibility guidelines.

5 Are you able to help us then? Because if you go to
6 the underpinning guidelines in respect of AA and AAA, it
7 obviously doesn't meet the highest standard of the AAA,
8 and can you help us as to why the app was only developed
9 to meet the AA rather than AAA standard, please?

10 **A.** Yes, well, the first thing is just picking up on that
11 particular letter, that definition on that standard.
12 Those standards are set on a global basis by an
13 independent organisation. They are to make sure that
14 there is accessibility of the app. I mean, one example
15 I'll give is that if you're using a screen reader on the
16 app, that that would actually work.

17 We took a judgement call that getting to that
18 standard, which was a really good standard, within the
19 timeline that we had, would mean that we would
20 accommodate the vast majority of needs that would be out
21 there. And I think one other thing to add, as well, is
22 that before the app was launched, we also did a Public
23 Sector Equality Duty test as well, just to make sure
24 that as many people as possible were going to be able to
25 access the app.

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1 I think we can see there certainly in terms of
2 targeting, black, Asian, minority ethnics is part of the
3 target that has been considered for the launch for
4 uptake of the app; would you agree?

5 **A.** Yes, I would. Now, I would say this is the first time
6 I have seen this slide so I am reading it freshly here,
7 but that does meet with my understanding.

8 **Q.** Thank you. Can we then move to internal page 8 of that
9 document, please. These slides also suggest that there
10 had been work done by way of onboarding with local
11 authorities in community settings, and in particular of
12 significant, trusted voices.

13 **A.** Yes, I think that's right. And I think I did cover off
14 in my statement a number of people that we spoke to on
15 a very, very regular basis to make sure that when the
16 app was launched, they would have the right level of
17 engagement. I think one of the things that we
18 definitely learnt in Newham is the power of local
19 advocates to get the app downloaded was incredibly
20 important, as well as central messages, and we made sure
21 that we had trusted voices across many communities, and
22 within many organisations, feeling that they understood
23 what the app was about and they understood why it was of
24 benefit for their area of interest.

25 **Q.** Thank you. And then finally for these slides, please,

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1 the internal page 17, please, which I think also
2 identifies -- thank you -- the thought process again in
3 terms of engagement with TV and radio, socials, that had
4 bespoke content that would obviously make the knowledge
5 of the app go as widely as it needed to do for download?

6 **A.** Yes, that's absolutely correct, including an awful lot
7 of videos that were put on YouTube and through other
8 digital channels actually explaining very clearly how it
9 is that the app worked, yes.

10 **Q.** Thank you. That can be removed, please.

11 Now, can I then, please, see if you can assist us
12 with a broader review that was part of research that we
13 looked at with Professor Fraser, that deals with the
14 really positive things, but then there's also an issue
15 I want to see if you can help us with around download or
16 use in Wales.

17 I'm going to go, first of all, please, to
18 INQ00509696, internal page 6, please. That's
19 INQ000509696. Internal page 6. Thank you.

20 Could it be expanded so it shows the graphs and the
21 two maps of England and Wales?

22 Mr Thompson, you tell us in the witness statement
23 about the success as to downloads.

24 Could you do the top graphs, first of all, please,
25 a, b and c.

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1 and functionality are the same for all of these areas,
2 yet for some reason and I think it's important that we
3 understand what that reason is, it clearly had some
4 different levels of uptake.

5 The first time I saw this document was just the
6 other week, but I can understand why it is that you're
7 showing it to me here now and I think there are clearly
8 some learnings in here that perhaps we haven't quite got
9 to yet.

10 **Q.** Thank you. And in terms of that, you say "we've not got
11 to yet", but it's not within your portfolio; would that
12 be correct?

13 **A.** Yes, that's correct. I mean, I was with the app, as
14 I've said for that 20 weeks. There was three weeks
15 whilst I was leading the team when it was initially
16 launched. I think this reporting came in sometime
17 after.

18 **Q.** Thank you. Then, please, to move in the same document
19 to page 2, where we see another map that I want to see
20 if you can assist at all with an issue of particular
21 interest.

22 Can you expand the map again, please at the top.

23 There's what seems to be a significant trend
24 identified for Wales around the usage of the app. Are
25 you able to help us as to any understanding of why we

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1 They're shown on the graphs themselves but do you
2 want to just confirm the success of the download but
3 also the very meaningful difference it made in many
4 areas?

5 **A.** Yes, I would like to. I think that, you know, to get 18
6 to 19 million downloads was a great success. We'd set
7 ourselves a target of making sure that people felt that
8 their privacy was protected and it had daily usability.
9 So I think to get to that level of people downloading it
10 was great. And I saw this the other day, and I know
11 that Professor Fraser went through it, I think, you
12 know, a million infections, say 44,000 hospitalisations
13 and 9,600 people -- deaths averted, I would like to take
14 the opportunity of thanking the team that worked on both
15 app 1 and app 2, to actually get these results.

16 Of course, we would have all wanted more. Of
17 course.

18 **Q.** Thank you. Can we now go to the maps below. Is there
19 any additional comment or input you can provide as to
20 what's shown here as to map d, which is the estimated
21 cases averted and the different impact or uptake, or the
22 estimated percentage of reduction in cases in map e?
23 Can you assist us at all with anything there?

24 **A.** Well, I think it's got to me curious. The technology
25 itself is the same for all of these areas, the features

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1 see the, sort of, almost widespread uptake of the 16-20%
2 apart from what seems to be one area of yellow? Can you
3 help us as to that trend that seems to be very
4 particular in Wales.

5 **A.** No, I think Professor Fraser described it a couple of
6 days back as "striking". I agree, it's definitely
7 striking. I think it's important that that's
8 understood. I can't add anything today but what I would
9 offer is if I could help in understanding what it is
10 that drove that, then I would be more than happy to
11 support.

12 **Q.** Thank you. Can I then ask you if you could provide
13 whatever recommendations or learning, they're detailed
14 in your statement, that you'd wish to provide to her
15 Ladyship in the context of your knowledge and
16 experience, please?

17 **A.** Yes, I would. I think that there were many things that
18 we learnt. I think the first thing that we really
19 learnt was that confidence and privacy is really
20 critical for foundation of app adoption, but I would
21 just add a couple of other data points, if you don't
22 mind.

23 I think that when we launched the NHS Covid app, the
24 actual NHS App, the one that gives you access to
25 services, only had 1 million downloads back then.

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1 When we look at that app today, it's got
2 34-35 million downloads, that's almost two-thirds of the
3 population. That's an incredible change in five years.
4 I think the other thing that I would say, as well,
5 is that Generation Z, who have actually been brought up,
6 they are probably the first generation that have been
7 brought up in the digital age, they're approaching 28
8 and 30 years of age. In ten years' time they will be
9 deciding things, very much so, from a leadership
10 perspective.

11 I think also on the privacy side of things, if you
12 have a look at what is now the norm, some five years
13 down the line, in terms of what people are prepared to
14 share, in terms of their location, who their friends
15 are, their videos, it almost appears that they're more
16 comfortable living in that digital world than perhaps
17 the world that I'm more used to.

18 I think those three things are incredible
19 differences for anybody that would be looking to develop
20 an app today.

21 I think a couple of other things just to pick up.
22 I think that as technically challenging as it was,
23 I think multi-languages and accessibility were
24 absolutely key. I think it's very important.

25 I think, as I mentioned earlier on, developing one
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1 of underserved communities?

2 **A.** I believe it was.

3 **MS CARTWRIGHT:** Thank you.

4 My Lady, that having been said, there are questions
5 from other Core Participants.

6 **LADY HALLETT:** Certainly.

7 Just before Mr Stanton, who is over there, asks his
8 question, going back to the point you made, Mr Thompson,
9 about the downloads of the NHS App, going up from
10 1 million to 34-35 million, do you think that that is
11 largely attributable to the fact that people got used to
12 using an app during Covid?

13 **A.** That would be my view. I have no data to support that
14 but I think --

15 **LADY HALLETT:** No, I think because I've done the same, I'm
16 just wondering whether I was encouraged to do it because
17 I have an NHS App.

18 **A.** I think it gives a very different starting point, next
19 time, in terms of how a response could be potentially
20 done, because one of the things that is really, really
21 important is that people trust the technology. And
22 I would suggest that there's now 34, 35 million
23 people -- I think my numbers are right -- that trust
24 that app.

25 **LADY HALLETT:** Booking a test, which I, obviously, given my
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1 app for the whole of the UK would be my strong, my very,
2 very strong preference.

3 **LADY HALLETT:** Did you ever find out why Scotland had
4 a separate app?

5 **A.** No, it irritated me, but I moved on.

6 I think also as I said, I think it's very important
7 that the next time a response like this is required, is
8 that we've taken the learnings from now and we are more
9 prepared.

10 **MS CARTWRIGHT:** Thank you.

11 And I think you've already said as much but one of
12 the things you wanted to make clear within your
13 statement is a formal thanks to all of those involved in
14 the development of app 1 and app 2.

15 **A.** Yes, please. It was difficult, it was a very difficult
16 time, and a big thank you to everyone that was involved.

17 **Q.** Thank you.

18 Now, Mr Thompson I've got one question that I'm
19 asking, that permission has been given to FEMHO, a Core
20 Participant who unfortunately now can't be here, so I'm
21 asking the question on their behalf, that they've been
22 given approval for.

23 So could I ask you, how was the NHS Covid-19 app's
24 functionality and intended use communicated to the
25 public, and was this messaging adapted to meet the needs
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1 advanced age, I'm allowed to do, is really easy. Is
2 that part of the system that your team developed, or is
3 that the NHS App development?

4 **A.** I'm not sure of the current functionality so I can't
5 answer the question on the current one, but what we did
6 embed within the Covid-19 app is that if you did a check
7 on the symptoms, then you could actually book a test
8 straight away, and then you would go and do your test,
9 but the results would actually come straight back to the
10 device. I think that making that really easy and very
11 seamless, I thought definitely drove some good upside,
12 I think.

13 **LADY HALLETT:** Thank you.

14 **MS CARTWRIGHT:** My Lady, I apologise to you, there are two
15 other strands of the questions from FEMHO I haven't
16 asked so could you permit me to complete --

17 **LADY HALLETT:** Sorry, Mr Stanton, you will have to stay
18 seated for a bit.

19 **MS CARTWRIGHT:** Mr Thompson, these are other questions that
20 (unclear) asked on behalf of FEMHO.

21 Can I ask you additionally: were specific efforts
22 made to reduce minority ethnic populations or
23 communities with historically lower levels of trust in
24 government-led health interventions?

25 **A.** I'm not actually sure how to answer that question. What
180

1 I would say is that, from our perspective, we delivered
2 something that was going to be inclusive for as many
3 people as we could find. That was absolutely our focus.
4 Whether it was through a Public Sector Equality Duty
5 process or whatever else it was. So we worked very hard
6 to make sure as many people could access this as
7 possible, accepting that it was part of a system and
8 that system had to accommodate everybody.

9 **Q.** Thank you. Then, finally, on behalf of FEMHO, how were
10 concerns regarding data privacy and potential
11 surveillance, particularly among communities with
12 reasons to be cautious about state technology,
13 anticipated and addressed in communication strategy?

14 **A.** There was no surveillance. There was no risk of
15 people's information being given us. And that is why we
16 took the route that we took.

17 **MS CARTWRIGHT:** Thank you.

18 And with apologies to you, my Lady.

19 **LADY HALLETT:** Thank you.

20 Mr Stanton now, please.

21 **Questions from MR STANTON**

22 **MR STANTON:** Thank you, my Lady.

23 Good afternoon, Mr Thompson. I ask questions on
24 behalf of the Covid-19 Bereaved Families for
25 Justice Cymru.

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1 that's the work that we did.

2 I don't ever recall having a conversation on the
3 particular topics that you've articulated, but I'll say
4 again, looking at the information that was presented by
5 Professor Fraser, it is striking -- it's the word he
6 used: it's striking. And I'm happy to participate if
7 I can help, but I think it's really important we
8 understand why that is striking.

9 **MR STANTON:** Thank you very much.

10 Thank you, my Lady.

11 **LADY HALLETT:** Thank you, Mr Stanton.

12 Ms Munroe, I think you have some questions.

13 **Questions from MS MUNROE KC**

14 **MS MUNROE:** Thank you, my Lady.

15 Good afternoon, Mr Thompson. My name is
16 Allison Munroe. I ask questions on behalf of Covid
17 Bereaved Families for Justice.

18 Just two questions, and in fact you touched upon
19 some of the points, or the main point, indeed, in answer
20 to questions from my Lady just a little while ago.

21 And just to put my questions in context, now I know
22 you're app 2, but at the end of the Isle of Wight Pilot
23 there was a report and, amongst the things that they
24 looked at and evaluated, it was noted that, although
25 1,592 people had reported symptoms via the app, only

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1 I just have one question, the context of which is
2 the map that you were shown earlier, and the apparent
3 disparity in uptake between Wales and England, and
4 I note you've already answered very candidly that you're
5 keen yourself to understand why there should be such
6 a difference. But could I please ask you, and having
7 regard to the fact that you indicated you were in
8 regular contact with the devolved government, can you
9 recall whether there was any engagement with the Welsh
10 Government specifically on issues or problems in Wales
11 that might relate to the slightly older population in
12 Wales, or particular issues of digital inclusion in
13 Wales?

14 **A.** We applied the same principles across the whole of the
15 areas that we went, and I've articulated the things that
16 we did.

17 I think in terms of engagement of the devolved
18 administrations, I think our relationship with Wales and
19 the people had -- they were excellent. And we did make
20 some changes based on their requirements. You know,
21 they had a different look and feel for their particular
22 campaign. We did, you know, the Welsh language from
23 launch. And if there was a different application of
24 the -- you know, the health rules within Wales, then we
25 made sure that the app could accommodate that. So

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1 309 home test kits were actually ordered. So that
2 discrepancy was obviously very marked.

3 There doesn't seem to have been a definitive answer
4 as to why, although it is suggested in the report that
5 the discrepancy "may be because people were using
6 drive-in test centres instead or they were entering
7 symptoms to the test app to see what happens".

8 In terms of -- concentrating on app 2, then, would
9 you agree, Mr Thompson, that in relation to the app and
10 the effectiveness of contact tracing on an app, it
11 relies not just on reporting symptoms but on prompt
12 action to be taken, such as testing. There's a clear
13 link, isn't there?

14 **A.** Yes, I would say that, yes -- yes. I would believe
15 that.

16 **Q.** So, in terms of -- and as I said, you touched upon this
17 with her Ladyship.

18 So in terms of app 2, what our families that
19 I represent are particularly concerned about is whether
20 that link was properly examined in the development of
21 the app, because I don't know, and it may be that I've
22 missed it, whether there was a similar reporting
23 thereafter to see what was the correlation between
24 people tapping in "I've got symptoms" and actually
25 following through with the test.

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1 **A.** I don't have that information to hand. What would also
2 say is that the app was privacy protecting. So if
3 people actually had a symptom checker and said that, you
4 know, "Please go and check", I don't know, we don't
5 know, whether they actually went and did it in
6 a different process.

7 So I think because of the privacy protecting nature,
8 I think the insight that you're after might be a little
9 bit hard to get to, but I think there's no reason why we
10 can't take your question as a takeaway from today and
11 see whether we can get a better answer than the one I'm
12 giving you today.

13 I can't give you a definitive answer. I think the
14 question I have is, because of the privacy protecting
15 nature of app 2, whether that answer can be given. But
16 I totally understand why you're asking the question.

17 **MS MUNROE:** Thank you very much, Mr Thompson.

18 **THE WITNESS:** You're welcome.

19 **LADY HALLETT:** Thank you, Ms Munroe.

20 That completes the questions that we have for you,
21 Mr Thompson. I don't know if you heard what I said
22 earlier to Mr Gould, but thank you very much indeed for
23 all that you and members of your team did to try to get
24 these apps off the ground. I'm sure it took a lot of
25 long hours and hard work, and so I'm sure we're very

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1 grateful to you. Thank you.

2 **THE WITNESS:** Thank you very much. That's very kind.

3 **LADY HALLETT:** And thank you for helping the Inquiry.

4 **THE WITNESS:** You're welcome.

5 **LADY HALLETT:** 10.30 on Monday.

6 **MS CARTWRIGHT:** Thank you, my Lady.

7 **LADY HALLETT:** Thank you all.

8 (3.43 pm)

9 (The hearing adjourned until 10.30 am on Monday,
10 19 May 2025)
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