1 **Tuesday, 5 November 2024**
2 **(10.00 am)**
3 **LADY HALLETT:** Mr Scott.
4 **MR SCOTT:** Good morning, my Lady. May we please call
5 Professor Fu-Meng Khaw.
6 **PROFESSOR FU-MENG KHAW (affirmed)**
7 **Questions from COUNSEL TO THE INQUIRY**
8 **MR SCOTT:** Good morning, Professor. Can we have your full
9 name, please.
10 **A.** Fu-Meng Khaw.
11 **Q.** And you are here today to give evidence on behalf of
12 Public Health Wales; is that correct?
13 **A.** That's correct.
14 **Q.** And can I just ask when you started working for
15 Public Health Wales?
16 **A.** On 1 June 2021.
17 **Q.** And prior to that, what were you working as?
18 **A.** I was working in Public Health England as the centre
19 director for the East Midlands then subsequently as the
20 national programme director.
21 **Q.** And since June 2021 what has been your role within
22 Public Health Wales?
23 **A.** I am the national director for health protection and
24 screening services and the executive medical director.
25 **Q.** Thank you. Just a brief outline of the role of

1 Public Health Wales. So part of the responsibilities
2 are maximising the use of digital data research and
3 evidence to improve public health and also part of
4 Public Health Wales' responsibilities is it's
5 a Category 1 responder, as defined by the Civil
6 Contingencies Act, and therefore plays a key role in
7 relation to the preparation for and response to any
8 emergency and major incident; is that correct?
9 **A.** That's correct.
10 **Q.** So there's very much a future-looking data-driven
11 element to the Public Health Wales, is that right?
12 **A.** That's correct.
13 **Q.** At the start of the pandemic, did Public Health Wales
14 actually have all of the data and surveillance that it
15 required in order to able to track cases of Covid-19,
16 hospital admissions, or did it not?
17 **A.** So at the start of the pandemic we were building on the
18 surveillance of communicable disease processes that we
19 routinely have and that includes monitoring cases of
20 infectious diseases and particularly spotting clusters
21 and outbreaks of communicable diseases so that we can
22 take early interventions to control further
23 transmission.
24 With respect to hospital infections, clearly
25 anyone who had a laboratory test with a result of

1 an infectious disease we would collect as part of our
2 surveillance.
3 **Q.** Yes, but were you able to get -- let me do this
4 a different way.
5 Can we please have on screen INQ000409575, page 4,
6 paragraph 13.
7 So this is the Public Health Wales statement, and:
8 "... up until 24 March 2020, NHS Wales had few
9 reports flowing out of our laboratory system on staff
10 and patients who had positive Covid results."
11 Apologies, this actually isn't the
12 Public Health Wales statement. This is a -- let me find
13 the correct reference.
14 **LADY HALLETT:** Take your time, Mr Scott.
15 **MR SCOTT:** This is a statement of Andrew Nelson, chief
16 information officer at a health board.
17 Mr Nelson there sets out there that:
18 "... up until 24 March ... NHS Wales had few
19 reports flowing out of the laboratory system on staff
20 and patients who had positive Covid results."
21 So in the early days, admission volumes was left
22 to text mine free text fields from the emergency
23 department and that was relied upon to provide a record
24 of who had been tested and what the outcome of the test
25 was.

1 "The absence of this information meant that
2 during March we had limited access to prevalence and
3 admission data from which we could monitor or estimate
4 growth rates and to provide an effective operational
5 response."
6 Now, if that's the chief information officer at
7 a health board is that unique to the health board or did
8 that also apply to Public Health Wales?
9 **A.** So let me set out the position as I see it. From
10 1 February Public Health Wales undertook laboratory
11 diagnosis of Covid-19 and made this test available
12 across Wales through its network of laboratories.
13 And any test coming through that system is
14 reported on the LIM system which is mentioned in this
15 statement, which the Laboratory Information Management
16 system and the results of that would have been available
17 to all health boards.
18 **Q.** So did Public Health Wales have the tracking of all of
19 these cases? Because if it was not available to this
20 health board, which seems to be the implication
21 particularly of that final sentence of paragraph 13,
22 then how was it available to Public Health Wales?
23 **A.** So we have access to LIMs in the same way but obviously
24 we have direct access to the outputs of our own
25 laboratories so we had access to the information to

1 collate information about Covid positive test results
2 and that information would have been also available to
3 health boards at a local level.
4 Now we collated the information in our
5 surveillance reports and through a variety of
6 mechanisms, whether it was publication of the daily
7 dashboard or sharing information at weekly meetings of
8 our surveillance outputs, we were able to share the
9 outputs of the surveillance of Covid-19 throughout the
10 pandemic.
11 **Q.** So you were satisfied that you were able to track --
12 when I say "you", I mean Public Health Wales, were able
13 to track all the cases that there were in Wales from
14 February 2020, is that right?
15 **A.** That's correct.
16 **Q.** And were you also able to track the -- if we just go on
17 to paragraph 15 of this statement. Just over the page.
18 Thank you.
19 So:
20 "A further implication arising from the design of
21 the hospital element of the record was ... that data is
22 not available to WG [presumably Welsh Government], NHS
23 Wales or others at a coded date ... level until clinical
24 coding 3 months post event, unless the patient went to
25 theatre ... Subsequently ... there was limited ability

1 to use the data to:
2 "... monitor and analyse who was receiving what
3 level of care.
4 "... assess whether somebody was admitted due to
5 Covid or whether [it] was an incidental finding, or
6 "... assess how outcomes varied dependent on care
7 pathway and treatment decisions."
8 Are you satisfied Public Health Wales did have all
9 of that information?
10 **A.** So Public Health Wales has access to information that
11 allows it to link up several information sources so
12 hospital episode statistics means we are then able to
13 track when a person was admitted to hospital and by
14 linking it with datasets about the test results we were
15 then able to say when the hospital admission occurred in
16 relation to the test result to make assumptions about
17 the acquisition of infection, whether it was community
18 onset or hospital onset and we published reports of
19 those outputs.
20 **Q.** That's not quite what this paragraph is touching upon
21 though. Is -- those three bullet points there, is that
22 type of information that Public Health Wales would have
23 sought to gather?
24 **A.** So we worked very closely with Welsh Government through
25 the Health and Social Services Group, Planning and

1 Response Group that had an overview of NHS planning and
2 response throughout the pandemic and we provided
3 epidemiological reports on the surveillance of Covid
4 occurring whether it was in the community or in the
5 hospital.
6 And the level of information in this statement
7 talks about clinical coding and outlines some of the
8 challenges in having official results of the level of
9 care that an individual receives in hospital. That
10 wasn't in the direct remit of the surveillance function
11 for Public Health Wales on monitoring communicable
12 diseases.
13 **Q.** So the answer, effectively, is this isn't something that
14 Public Health Wales needed to know?
15 **A.** It wasn't our direct responsibility to report on the
16 level of care received by patients in hospitals.
17 **Q.** Yes, but in terms of your levels of responsibility, when
18 you're in the middle of a pandemic, roles, remits, areas
19 and importance can slightly shift compared to
20 non-pandemic times; is that fair?
21 **A.** That is fair but we clearly have to prioritise against
22 what we had the expertise and capability and capacity to
23 do, which was the surveillance of communicable diseases.
24 **Q.** Right, so the surveillance of diseases, did that take up
25 all of Public Health Wales' capacity then?

1 **A.** No, it didn't. We were also there to help with the
2 control of transmission through investigation of
3 outbreaks, we also established genome sequencing and
4 used that to understand the transmission of the disease.
5 **Q.** So these elements here that we can still see on the
6 screen, those are aspects that fall outside of
7 Public Health Wales' remit and is it your evidence that
8 actually they shouldn't have fallen within Public Health
9 Wales' remit during the pandemic at all?
10 **A.** Not entirely. So assessment as to whether somebody was
11 admitted due to Covid or whether Covid was an incidental
12 finding was absolutely within our remit and we did
13 publish nosocomial transmission reports to that effect.
14 **Q.** I just want to come back to the reason why I was looking
15 at this. You have an information officer from a health
16 board who is talking about a lack of access to what
17 seems fairly fundamental data. Would you agree with
18 that?
19 **A.** That is what I read in this statement, yes.
20 **Q.** And if Public Health Wales is looking to make sure that
21 it was having access to the relevant data in its role as
22 maximising use of digital data to improve public health
23 and as a responder for a major emergency, a major
24 incident, is this -- is making sure that boards have
25 access to this type of information something that

1 Public Health Wales did do or should have done?
2 **A.** We contributed to the thinking and the planning and
3 worked directly with the Welsh Government Health and
4 Social Services Group.
5 **LADY HALLETT:** I'm sorry to interrupt, Mr Scott.
6 Can I just go back a step, Professor, and it's
7 probably a different point from the one that Mr Scott is
8 pursuing.
9 To carry out surveillance of the spread of Covid
10 infections in Wales, you need to survey how many people
11 are positive in the community, how many people are
12 positive in hospital admissions?
13 **A.** That's correct.
14 **LADY HALLETT:** How widespread was testing at the time that
15 we're talking about in Wales?
16 **A.** In the early stages of the pandemic testing was very
17 limited because of the lack of availability of testing
18 kits and testing platforms at the time and there was
19 a huge competition for these across the globe. So we
20 had to prioritise our testing for those who needed it
21 most and mostly it was testing to diagnose.
22 **LADY HALLETT:** So in other words, your data is coming from
23 positive tests in a hospital healthcare setting?
24 **A.** Mainly because these were symptomatic people who were
25 admitted to hospital and the case definition at the time

1 was that they had to be fulfilled before a test was
2 requested.
3 **LADY HALLETT:** So the data you had at the time would have
4 given you virtually no idea of what was going on in the
5 community?
6 **A.** Indeed.
7 **MR SCOTT:** Should you not have found a way or should you not
8 have planned to make sure that you did have access to
9 that information prior to a pandemic?
10 **A.** But we rely on testing activity and if there was
11 limitation in the testing activity there was no way of
12 ascertaining whether or not someone in the community
13 indeed had Covid.
14 **Q.** Talking also about the surveillance and you're talking
15 about causes of death in your statement at
16 paragraph 109, and the form was created, and it's
17 described as saying:
18 "... throughout April 2020 Public Health Wales,
19 DHCW, the Welsh Government and health boards worked
20 together to construct an electronic reporting form ..."
21 So that was the form that was then used in order
22 to provide key information about deaths; is that
23 correct?
24 **A.** That's correct.
25 **Q.** If we can have that on screen, please. That's

1 INQ000276009.
2 So this is the form that was created?
3 **A.** That's correct.
4 **Q.** Why was it that it was only throughout April 2020 that
5 work was being done on creating a form such as this
6 rather than being done at an earlier stage?
7 **A.** So there were systems of notification around deaths
8 occurring in hospitals at the beginning but it
9 transpired from early experience that this wasn't
10 reliable. So we wanted to put in place a consistent
11 method of rapid surveillance and mortality occurring in
12 hospitals and on 23 April this was implemented after
13 discussion with the chief statistician at
14 Welsh Government and also in liaison with the national
15 Wales information service.
16 **Q.** You say it transpired from early experience this wasn't
17 reliable. When did you realise it wasn't reliable?
18 **A.** I think there was a document summarising some of the
19 challenges in existing systems. There were multiple
20 routes of reporting. Some relied on official
21 information through the ONS with a data lag of 10 to
22 15 days which at the time was not acceptable because we
23 wanted a rapid surveillance system to indicate the
24 trends in mortality occurring in hospitals.
25 **Q.** Yes, but the question was when did you realise it wasn't

1 reliable?
2 **A.** Very close to that time, in early April.
3 **Q.** And so early April you realised it wasn't reliable. And
4 then it was on 23 April when this form became widely
5 used; is that correct?
6 **A.** Well, it was implemented on 23 April with the
7 communication from Dr Andrew Goodall who was
8 chief executive of NHS Wales and Director General of the
9 Health and Social Services Group and in the email there
10 were signposts to guidance documents on how to complete
11 the form and a training video that we prepared.
12 **Q.** So if it was implemented on 23 April, from what point in
13 time were you satisfied that the information that you
14 were gathering via this form was accurate and was
15 a complete representation of what was happening in
16 hospitals?
17 **A.** That's a difficult question to answer because throughout
18 the pandemic it was clear that there were elements of
19 the form that were not as well completed as they might
20 be and there was missing information, for example in the
21 6,514 deaths that had been registered throughout the
22 life of this form, there were over 1,000 elements of
23 missing data in the question around key worker status,
24 for example. So we couldn't reliably report on some of
25 the elements in this e-form.

1 **Q.** What did you do, because you generated this form
2 in April 2020, it clearly contained information that was
3 required by Public Health Wales or other bodies, what
4 did you do to make sure that it was accurately
5 completed, because it was all necessary information?
6 **A.** So there were weekly meetings at the outset with all the
7 health boards, with clinicians from health boards,
8 particularly through medical directors and my
9 predecessor and the chief statistician for
10 Welsh Government co-chaired these mortality meetings and
11 that was an opportunity for improvement in reporting
12 using the e-form. The e-forms were completed often not
13 by a single person in each health board and were shared
14 amongst the clinicians in the health board reporting the
15 deaths.
16 **Q.** I just want to look at one line at the bottom. It was
17 highlighted earlier on, if we could please have that
18 highlighted again. The highlighted line "Was the
19 patient a key worker?" And there are five different
20 buttons that can be pushed, one of which is a healthcare
21 worker. So it was intended when this form was created,
22 was it, that you'd be able to flag up whether somebody
23 who died was a healthcare worker?
24 **A.** That's correct.
25 **Q.** In your statement at paragraph 126 it says:

1 "We do not hold data in respect of the number of
2 staff within healthcare settings in Wales recorded as
3 having died of COVID-19. This is because the
4 occupation of cases was not recorded on most
5 laboratory reports or rapid death reports."
6 How is it that you weren't getting the information
7 that you required from this form?
8 **A.** As I said earlier, there was a significant element of
9 missing data in this particular question, about 17%
10 missing data. Where we were able to collect information
11 on healthcare worker status, I think there were 36
12 responses to the status as a healthcare worker,
13 representing 0.6% of the mortality reported.
14 **Q.** It was very important information that you had
15 an understanding of who the staff were who were dying of
16 Covid-19, is that fair?
17 **A.** It is an important aspect of our surveillance, and
18 clearly this had to be understood in the context of the
19 denominator as well, and this is information that we
20 don't usually report on, so the denominator of
21 healthcare workers in Wales.
22 **Q.** Yes, but it was a question that was included in the form
23 specifically for the purpose of capturing that data.
24 Did you think to make it -- there are ways when
25 you complete electronic forms that you can't submit

1 a form unless you've answered a question. Did you think
2 that that should have been done for that question so
3 that you made sure that every form included all the
4 information rather than a 70% gap?
5 **A.** That is a possible improvement that we would consider in
6 the future.
7 **Q.** Is there any other improvements that you can think of to
8 capture the data about deaths or infections of
9 healthcare workers in Wales?
10 **A.** I think there's more we can do in the future and --
11 I think the mechanisms we put in place were intended to
12 improve the quality of reporting and we could have done
13 more to continuously improve it throughout the pandemic.
14 **LADY HALLETT:** Can I just ask a question. Sorry, I'm
15 interrupting all the time this morning.
16 Going back to you could consider a form that you
17 could only submit the information if you completed all
18 the boxes. But can I challenge that. I appreciate it
19 was put to you by Mr Scott and you accepted it, but
20 wouldn't it be more important to find out how many
21 people had died of Covid? I mean, obviously it's
22 important to find out their status if you can, but
23 wouldn't you rather get the information even with the
24 incomplete boxes?
25 **A.** There's always a balance between having a robust method

1 for collecting information, that might take a lot longer
2 and at the time, as you can imagine, it was a pretty
3 difficult time for everyone and filling a form like this
4 might be one of many things people had to do. So the
5 purpose of this surveillance wasn't to provide
6 a comprehensive capture of information, which there are
7 official statistics that do that through death
8 registration, that are more robust and more defined but
9 this was a very raid surveillance method for capturing
10 mortality which was the primary purpose of this.
11 **MR SCOTT:** Can I move on to understanding of ethnic
12 grouping.
13 That document can come down, thank you.
14 Did Public Health Wales have access to sufficient
15 information about the various ethnic groups that people
16 fell into when they were testing positive with Covid?
17 **A.** So in order to have data on ethnicity we rely on
18 information from either the requester of the test or
19 information available on the so-called master patient
20 index available in Wales which has all the demographic
21 information collected at the point of entry into the
22 NHS, and this routine data allows us to understand
23 whether ethnicity plays a role in a whole range of
24 outcomes, not just around Covid.
25 So we had access to that information. The reality

1 is that for the laboratory reporting forms, this data
2 was typically not available.
3 Q. Why is that?
4 A. That's because it wasn't completed if requested and
5 often this would rely on a requester making assumptions
6 about ethnicity and putting it on the request form.
7 Q. So when you say making assumptions, can you just expand
8 a little bit about how someone was making assumptions
9 rather than recording information?
10 A. So recording information about ethnicity will require
11 someone to designate an ethnic group to an individual.
12 If they don't have direct access to that individual, for
13 whatever reason, maybe they didn't have capacity at the
14 time of taking the sample, then that field is often not
15 filled in.
16 Q. Was there any guidance that was given by
17 Public Health Wales for those who were taking a sample
18 to say: we need to make sure that you're recording these
19 various categories of data?
20 A. There wasn't specific guidance, no.
21 Q. Do you think that should have been issued?
22 A. I think we relied very heavily on routine systems for
23 data collection and if it's not in the routine system
24 then it -- the extra steps we take might not have been
25 adhered to, despite guidance.

1 Q. Again I come back to the question I asked earlier on,
2 when you are looking for that extra information beyond
3 the routine systems, you're asking for that information
4 for a reason and therefore is it not incumbent upon
5 Public Health Wales to do what they can to make sure
6 that they are getting as much of that information as
7 they can? It wouldn't necessarily be perfect but you
8 have taken all steps to satisfy yourself you get that
9 information you need?
10 A. So our preference would be to rely on the data available
11 through routine registration of a patient and individual
12 in the NHS and that allows us to have a consistent
13 ethnic designation for any individual and allows us to
14 define therefore the denominator.
15 Q. Because if I can please take you to INQ000224048. So
16 this is page 11. I wonder if we can go to page 1,
17 please. So this was a rapid analysis of ethnic
18 variation in Covid-19 outcomes in Wales using Onomap,
19 a name-based ethnicity classification tool, and this is
20 dated 24 May 2020.
21 Could you please explain the reason why Onomap,
22 which is a software package to classify ethnicity based
23 on names, was used rather than the access to the
24 information that you actually had on the systems about
25 ethnicity?

1 A. The system that we had access to where information
2 around ethnicity on individuals is stored didn't have
3 a very good completion rate.
4 Q. What was the completion rate?
5 A. But I understand it's about 40%. So for 60% of
6 individual across Wales, we didn't have information
7 around ethnicity.
8 Q. Pausing there. From a public health perspective, can
9 you draw any conclusions if you're missing important
10 information about 60% of the population?
11 A. I think it depends on what you're investigating, so
12 statistically you would undertake a power analysis to
13 understand whether a gap in the data of that proportion
14 will have a bearing on the findings of whatever you are
15 studying at the time.
16 Q. When did it become apparent there was a 60% gap? Was it
17 at the start of the pandemic or had it been known prior
18 to that?
19 A. I think it had been known generally, prior to that, that
20 the capture of ethnicity data is not good.
21 Q. Has any steps been taken to improve that capture?
22 A. So one of the things that came out is the First Minister
23 established BAME advisory group, recognising the
24 disproportionate impact on black and Asian minority
25 ethnic groups in Wales, and one of the elements of the

1 recommendations and the report published
2 in September 2021 was for work to be done to improve the
3 capture of ethnicity data in the NHS.
4 Q. How is that going?
5 A. I can't comment, I'm not in a position to clarify what
6 the process is undertaken led by Welsh Government.
7 Q. Okay. Is Public Health Wales involved in that programme
8 then?
9 A. It is.
10 Q. So, then, just coming back to the Onomap assessment,
11 this was -- is it fair to say this was the best that
12 Public Health Wales were able to do to provide
13 an understanding of ethnic variation of Covid-19 in
14 Wales by using Onomap?
15 A. We had experience of applying Onomap to other infectious
16 diseases and understanding of blood-borne viruses prior
17 to the pandemic, so it was an opportunity to use this to
18 develop understanding about SARS-CoV-2 at the time, and
19 we were proactive in this regard and obviously shared
20 our findings of the initial assessment with the relevant
21 decision-making groups, including the First Minister's
22 BAME advisory group.
23 Q. And there are difficulties with Onomap, is that fair to
24 say?
25 A. That is correct, and the strengths and limitations of

1 the software are discussed in the final published
2 article.
3 Q. Yes. I think if we can actually go to that it's
4 INQ000276032, and that is at page 8. This is, I think,
5 the published article that came out in the BMJ; is that
6 correct?
7 A. Can you give me a tab number reference, please?
8 Q. This is 11. So this is the table of, effectively, the
9 difference between the ethnicity that was reported and
10 the ethnicity that was predicted. And I think to
11 summarise it, it was recognised that Onomap has a habit
12 of overestimating the white population and in particular
13 underestimates the black population; is that correct?
14 A. That's correct.
15 Q. And so you can see there in particular that the
16 ethnicity reported by the participant is of black or
17 black British is 377, and Onomap actually predicted 143.
18 So, less than half.
19 How useful was this tool to be able to allow you
20 to have an understanding of the impact of Covid-19 on
21 ethnicity if the tool that you're using has not a hugely
22 successful rate of identifying, in particular, black or
23 black British ethnicity based solely on their names?
24 A. There are limitations in using the software and you've
25 you know talked about some of these and you know the

1 rest are in the published article. So in terms of its
2 utility, clearly at the time there wasn't much else in
3 terms of analysis. We were also working alongside other
4 sources of information and the ONS had published -- had
5 started to publish mortality data demonstrating the
6 differential impact of Covid on black and ethnic
7 minority groups. So this helped build our
8 understanding, but with the limitations, we had to
9 interpret it alongside other sources of information.
10 Q. Did it build an accurate understanding or did it build
11 just a general understanding?
12 A. I think it contributed to the understanding. It wasn't
13 the whole understanding because of the limitations of
14 the use of this, but it was useful in forming the work
15 of the BAME advisory group.
16 Q. I want to ask you about hospital capacity and modelling
17 now. It's correct that Public Health Wales didn't have
18 any role in providing advice or guidance on the
19 capability of different sectors of healthcare systems to
20 scale up or scale down to areas of need, is that right?
21 A. That's correct.
22 Q. But Public Health Wales did have a role in modelling
23 reasonable worst-case scenarios which was then used to
24 inform how that capacity should be scaled up and scaled
25 down; is that correct?

1 A. That is correct.
2 Q. And if we could, please, have on the screen
3 INQ000469765, page 17, paragraph 49. And this is the
4 Public Health Wales statement. And we're saying here
5 the model from NHSE was refined because I think it's
6 correct that Public Health Wales didn't have the
7 capacity or the capabilities to come up with reasonable
8 worst-case scenario, so the one that had been created by
9 England was adopted for Wales, is that a broad summary
10 of it?
11 A. It was used to model potential impact in Wales at the
12 very early stages.
13 Q. And then there was a disagreement between
14 Public Health Wales and the Welsh Government about
15 whether it should use 25% or 40% of the reasonable worst
16 case scenario and four lines up from the bottom:
17 "Public Health Wales is unsure as to why the
18 Welsh Government provided estimates for 40% of the
19 [reasonable worst case]. The effect of using different
20 percentages is to reduce the numbers ..."
21 I just want to unpack that a little bit. 25 or
22 40% of the reasonable worst-case scenario, what does
23 that actually mean?
24 A. So the reasonable worst-case scenario is a prediction
25 about the worst scenario that health services could face

1 in terms of a -- Covid as it was emerging at the time
2 through modelling trajectories of cases.
3 Q. Her Ladyship has heard a lot about this in Module 2 in
4 particular, so yes.
5 A. So the reason for choosing something less than that was
6 to allow health service planners to also plan for other
7 context where perhaps it was 40% of the worst-case
8 scenario or 25% of the worst-case scenario, so that
9 there was an understanding if the worst-case scenario
10 didn't emerge as to be the case, then this is what 40%
11 or 25% might look like.
12 And, as we said in my statement, the first wave
13 actually produced 7% of the revised worst-case scenario.
14 Q. Yes, but I'm struggling to understand what 40% is. Is
15 it 40% of the numbers that were in the reasonable
16 worst-case scenario? I mean, what actually was it
17 because it sounds like a multiplier but it doesn't seem
18 that straightforward.
19 A. It is a multiplier. So it's 40% of the numbers you
20 would expect from the reasonable worst-case scenario.
21 Q. Was it based on a 40% compliance with control measures
22 in Wales?
23 A. No, it's based on 40% of the numbers predicted through
24 the reasonable worst-case scenario and therefore
25 planning what hospital admissions might arise from that,

1 and therefore the resources required to meet with that
2 demand.
3 **Q.** Okay, and why was the Welsh Government providing
4 estimates rather than Public Health Wales?
5 **A.** Well, Welsh Government were using an interpretation of
6 reasonable worst-case scenarios to help with the
7 planning, and Public Health Wales in the early stages
8 recognised that it didn't have a primary role in
9 modelling, it didn't have the capability to undertake
10 sophisticated modelling, and therefore it looked to the
11 modelling that was undertaken in England to extrapolate
12 to Wales to give an early indication of the capacity
13 demand of the system.
14 **Q.** So whose primary responsibility was it to model that
15 capacity, Public Health Wales or Welsh Government?
16 **A.** It wasn't Public Health Wales.
17 **Q.** It was or wasn't, sorry?
18 **A.** It wasn't Public Health Wales.
19 **Q.** I want to move on now to infection prevention and
20 control. So there's a team within Public Health Wales
21 called the Healthcare Associated Infection,
22 Antimicrobial Resistance & Prescribing Programme,
23 I think the acronym is HARP?
24 **A.** That's correct.
25 **Q.** And it was HARP who engaged with the UK IPC cell, and

1 the head of HARP and the assistant medical director and
2 the consultant nurse within HARP became members of the
3 Covid UK IPC cell, is that right?
4 **A.** That's correct.
5 **Q.** And was it right that effectively HARP didn't create IPC
6 guidance itself but it applied the UK IPC guidance?
7 **A.** That's correct.
8 **Q.** Were there any differences of opinion about what the
9 form of the guidance should be between
10 Public Health Wales and the UK IPC cell?
11 **A.** There wasn't. We were completely aligned.
12 **Q.** Did Public Health Wales have any capacity or
13 capabilities to be able to independently, so distinct
14 from anybody within the IPC cell, assess the routes of
15 transmission, benefits of masks, any of those elements?
16 **A.** No, there was no need to because of the construct of the
17 UK IPC cell and how it looked to emerging evidence and
18 considered it in issuing updates on the guidance.
19 **Q.** Did Public Health Wales engage with any groups in Wales,
20 professional bodies, representative groups, patient
21 groups about IPC guidance and what it should say in any
22 of their views on its impact?
23 **A.** So we established a network of healthcare
24 epidemiologists just before the pandemic, and these
25 epidemiologists are in each of the six health boards

1 where there are hospital settings, and they work very
2 directly with the infection prevention and control teams
3 locally. And through that network we were able to stay
4 in touch with the experts at a local level. We also
5 liaised with the Welsh Government Nosocomial
6 Transmission Group that was co-chaired by the deputy
7 Chief Medical Officer and the Chief Nursing Officer.
8 **Q.** I want to ask about the relationship between PPE and IPC
9 guidance. Did at any point in time the availability of
10 PPE drive the way that the IPC guidance was constructed,
11 as opposed to whether it was able to be applied in due
12 course due to supply issues?
13 **A.** I am led to believe that the UK IPC cell did not
14 consider the shortage of PPE in that considerations as
15 it was outside the scope.
16 **Q.** So, I think you were careful when you said you were led
17 to -- you weren't in role at the time this information
18 had been given to you?
19 **A.** I wasn't.
20 **Q.** Were you aware or was Public Health Wales aware that
21 there were differences within Public Health Wales itself
22 about whether there should be a greater use of FFP3
23 masks compared to FRSMs during 2020?
24 **A.** I'm aware of the email from Brendan Keely, one of our
25 consultant microbiologists, and you will have received

1 that communication in exhibit, and we clearly responded
2 to the inquiry around the wider use of FFP3 masks. And,
3 clearly, in the hierarchy of controls, the use of
4 personal protective equipment is the last thing one
5 would consider. So we would look at eliminations,
6 substitution, administrative and engineering solutions,
7 before looking at personal protective equipment.
8 **Q.** Yes, but I'm just interested in discussions within PHW,
9 because if you had that individual who was sending
10 emails -- I believe he says "This isn't the first time
11 I've raised it" -- were there internal discussions
12 within Public Health Wales about what they should be
13 saying at the IPC cell about whether there should be
14 greater use of FFP3s and, if so, what was the outcome of
15 those discussions?
16 **A.** So the response to the email was guided by the UK IPC
17 cell guidance that, actually, we need to consider this
18 as a whole, that if there are outbreaks or concerns
19 about local transmission, there needs to be a root cause
20 analysis to identify whether additional precautions need
21 to be taken over and above the use of PPE and that
22 advice was given and in response to the email.
23 **Q.** Yes.
24 **LADY HALLETT:** Can I just go back to the hierarchy of
25 controls, Professor. I have some problems with it and

1 can I explain one of those problems which you just
2 touched on. If your first port of call is elimination
3 in the hierarchy of controls, why isn't personal
4 protective equipment part of your strategy for
5 elimination? Surely if more people are protecting
6 themselves from catching the virus, then that's going to
7 help with elimination. So why are they separated and
8 put into a hierarchy; why are they not a package of
9 measures as opposed to hierarchical structure?
10 **A.** I think there is a rationale behind the hierarchy of
11 controls that actually in the healthcare setting
12 elimination might not be an option because you can't
13 eliminate the threat from a hospital setting because
14 that is the very place that people will seek treatment
15 if they have Covid. So I think the elimination agenda
16 may not be applicable in some settings as easily as in
17 other settings.
18 **LADY HALLETT:** Not sure you've addressed the question. My
19 question is, why is the hierarchy of controls
20 a hierarchy, as opposed to "Right, we've got this virus,
21 it's possibly spreading, and here are a package of
22 measures that we can put in place to try and make sure
23 it doesn't spread too far"?
24 **A.** I think you are right in describing as a package of
25 measures, and I think the hierarchy connotes some of the

1 earlier steps you might take in order to control the
2 transmission of infection and in some settings
3 elimination is an absolute option. In others, it is
4 more challenging.
5 **MR SCOTT:** But when you're talking about, for example,
6 an emergency department, a waiting area, something along
7 those lines where you can't eliminate it --
8 **A.** Exactly.
9 **Q.** -- then, when you're talking about a package of
10 measures, you need to look along those lines as you deal
11 with it effectively as a collective piece?
12 **A.** Indeed.
13 **Q.** I just want to look at one particular document. It's
14 INQ000398224. This is the IPC cell meeting of
15 22 December 2020 which we've seen on a number of
16 occasions in the Inquiry and four lines up from the
17 bottom.
18 "ED", and I think that there is Eleri Davies, head
19 of HARP; is that correct?
20 **A.** That's correct.
21 **Q.** And she says there:
22 "There will be pressure from organisations and
23 bodies for more precautionary measures. The
24 confidence of staff in high intensity units is being
25 lost. If there is a high-risk pathway we should take

1 precautionary measures."
2 At some point in time Public Health Wales is
3 saying more should be done, is that right?
4 **A.** So I think this is recognising that more should be done
5 in the face of any high risk and in this context it
6 could include aerosol-generating procedures.
7 **Q.** Right. But nothing was done as a result of this. The
8 guidance stayed the same, is that correct, after there
9 had been discussions on the 23rd, as well?
10 **A.** This was a discussion at the IPC cell at one of their
11 meetings and will have informed the decisions of the
12 group.
13 **Q.** So Public Health Wales said, well, that's been the
14 consensus of the IPC cell and therefore we're going to
15 abide by that consensus?
16 **A.** So the decisions of the UK IPC cell were clearly not
17 individual decisions from individual members but it was
18 a collective consensus based on the scientific evidence
19 available at the time, and best practice where this was
20 not available, and this discussion will have been taken
21 into account in coming to the various iterations of the
22 UK IPC cell guidance.
23 **Q.** Right, so effectively Public Health Wales did abide by
24 the consensus view that was taken at the cell, is that
25 right?

1 **A.** It did.
2 **Q.** So even though at this point in time it had been
3 recognised that the confidence of staff in
4 high-intensity units is being lost, if the consensus was
5 then followed what steps did Public Health Wales take to
6 ensure the confidence of staff was maintained?
7 **A.** So it reiterated the elements in the UK IPC cell that
8 talked about local risk assessment and it talked about
9 identifying root causes in order to put in interventions
10 that would better control transmission.
11 **Q.** That sounds a little bit like there's been repetition of
12 what the guidance already says. Surely this required
13 a little bit more in order to retain the confidence of
14 healthcare workers in Wales. Was that done?
15 **A.** So in terms of, you know, doing more, there was a report
16 published in September 2020, identifying lessons learned
17 with lots of elements in that describe the measures that
18 we should take in securing the -- strengthening the
19 ability to avoid nosocomial transmissions.
20 **Q.** But did anybody from Public Health Wales talk to any
21 representative groups of any healthcare workers and say:
22 look, we recognise confidence is being lost, this is the
23 reason why we're taking these decisions, please have
24 confidence, and actually explain it to them, rather than
25 simply pointing people back to the guidance that they

1 were already losing confidence in?
2 A. I'm not aware of any direct conversations with
3 healthcare workers. Our work on the Nosocomial
4 Transmission Group was to co-ordinate this across Wales
5 through that group.
6 Q. Ventilation then. Public Health Wales didn't have any
7 role in advising about ventilation or portable
8 air-cleaning devices; is that right?
9 A. That's right.
10 Q. Despiting the fact that ventilation was an important
11 part of IPC guidance?
12 A. That's correct.
13 Q. Why did it not have such a role?
14 A. It's not for me to speculate why that is but there are
15 other parts of NHS Wales that have that role.
16 Q. Well, do you think it's a useful role for
17 Public Health Wales to have in the event of a future
18 pandemic?
19 A. It might be a consideration but with any role we would
20 need to ensure that we have the right capability and
21 capacity to fulfil that role competently.
22 Q. Before I look at nosocomial infections I just briefly
23 want to touch upon visiting.
24 Did Public Health Wales provide any IPC assessment
25 to show the relative benefit of imposing visiting

1 restrictions for pregnant women and partners at
2 hospital?
3 A. So the Chief Nursing Officer in Welsh Government
4 established a hospital visiting group that we were part
5 of and contributed to the discussions of. We didn't
6 issue any guidance directly on this issue.
7 Q. No, but did you provide any specific advice about
8 visiting restrictions?
9 A. I don't have that information.
10 Q. Did that visiting group seek the views of patients,
11 families, about changing rules, the application of
12 visiting guidance or not?
13 A. I don't know.
14 Q. Do you think that the role of families was actually
15 taken into account within that visiting group or do
16 you know not that either?
17 A. I don't know but I assume it will have.
18 Q. In terms of nosocomial infections then. I think it's
19 right that there were -- there was a report on
20 13 April 2022 which identified there were more than
21 10,000 probable or definite hospital acquired cases in
22 Wales over the pandemic period; is that right?
23 A. That's correct.
24 Q. And the probable layer is defined as 8 to 14 days after
25 admission to hospitals when they test positive and

1 definite is 15 days or more; is that right?
2 A. That's correct.
3 Q. If we can please have on screen INQ000276011, page 4.
4 And ACM there we see referred to, that's all cause
5 mortality; is that correct?
6 A. That's correct.
7 Q. And if we zoom in, please, on table 2 if possible. So
8 we can see there a table which sets out the various
9 different categories across the waves, and this is
10 across the entirety of Wales.
11 So the one I want to focus on is probable hospital
12 onset and definite hospital onset in wave 2. It looks
13 like probable and definite hospital onset is over 50% of
14 cases of Covid in the population during wave 2. Am
15 I reading that correctly?
16 A. That is correct.
17 Q. And when we're talking about wave 2, I think we're
18 talking, is that September 2020 through to July 2021?
19 A. I think it's September to May.
20 Q. September to May, yes.
21 A. July to May.
22 Q. July to May.
23 So what lessons had been learnt from wave 1 about
24 how to prevent nosocomial infections between wave 1 and
25 wave 2?

1 A. So the document we published was in September 2020 and
2 that set out a range of lessons learnt and this was
3 shared with the directors of nursing in Wales. It was
4 also shared with the NHS leadership board through the
5 Chief Nursing Officer and it was used on an ongoing
6 basis through our network and in ongoing communications
7 with the infection prevention and control teams at the
8 health boards.
9 Q. Okay, but what specifically was learnt?
10 A. The lessons identified are wide-ranging and, you know,
11 they include elements around testing and case
12 definition, disease presentation, IPC and PPE use,
13 patient placement, staff movement, social distancing.
14 Q. Do you think that those lessons had been learned or even
15 if they were learned whether they were necessarily
16 entirely effective if more than 50% of cases in Wales
17 were probable or definite hospital acquired in wave 2?
18 A. I don't have the information to confirm or otherwise
19 whether the lessons were learned but the lessons were
20 identified and in commenting on the mortality rate in
21 different waves I think that also has a bearing on the
22 severity of the variant concerned because during most of
23 that period in the second wave we were dealing with the
24 Alpha variant at the time and that may have a different
25 characteristic in terms of clinical impact when compared

1 with the other variants such as Omicron that was
2 predominantly during wave 4.
3 **Q.** Yes, but you are also then looking at preventing
4 infections in hospital because even if your mortality
5 isn't -- if death doesn't occur, you still have serious
6 illness issues such as Long Covid that arise. So
7 standing back and looking at what happened in wave 2 and
8 subsequently, could more have been done to prevent
9 nosocomial infections in Wales?
10 **A.** So we can see that the numbers of probable and definite
11 hospital onsets as a proportion actually reduced
12 throughout the pandemic and when you look at that
13 table that you've highlighted the percentages have
14 continued to reduce from a total of 70% in wave 1 to 24%
15 in wave 4.
16 **Q.** I'm not sure I understand the statistics but I think
17 I'll have to work that out myself in due course.
18 Can I please just ask you briefly about
19 Long Covid. Did Public Health Wales have -- that
20 document can come down, thank you.
21 Did Public Health Wales have any role in
22 identifying Long Covid within 2020, or putting in place
23 any treatment measures that should arise for Long Covid?
24 **A.** Public Health Wales doesn't have any services that would
25 address symptoms of Long Covid and it didn't have a role

1 in monitoring it.
2 **Q.** Did it have a role in identifying Long Covid as
3 a concept?
4 **A.** No.
5 **Q.** So Public Health Wales doesn't have any role in
6 identifying long-term impacts of a pathogen in
7 a pandemic?
8 **A.** It hasn't so far, no.
9 **Q.** Do you think that would be a beneficial addition to its
10 role?
11 **A.** It could be.
12 **Q.** And then finally the last point I want to touch upon is
13 shielding. So Public Health Wales didn't have any
14 involvement in the development of guidance in Wales
15 around shielding. That was led by the Welsh Government
16 and co-ordinated through clinical teams across the
17 health boards. Did Public Health Wales provide any
18 advice about any aspect of the support, the health that
19 should be offered to those people who were shielding or
20 their families?
21 **A.** We didn't and nor were we asked.
22 **Q.** Just very finally. Are there any recommendations that
23 you would wish the Chair to consider?
24 **A.** So I have three suggestions. One is for the four
25 nations of the UK to work closely together in the

1 pandemic and we've seen some of the benefits of that in
2 co-ordinating the UK IPC cell guidance which applied
3 equally across the four nations and early involvement of
4 the devolved administrations particularly in the
5 development of guidance would be very beneficial.
6 The second is with respect to what we do in
7 preparedness now for the next pandemic to clarify very
8 clearly roles and responsibilities of different
9 agencies. To learn the lessons of exercises that we
10 undertake but also to undertake exercises at a national,
11 regional and local level so that we get through the
12 operational, tactical and strategic aspects.
13 And the final thing is around research and to
14 focus on undertaking and co-ordinating priority research
15 studies at the beginning and putting in processes to
16 enable research to be undertaken efficiently,
17 effectively and that are well resourced.
18 **MR SCOTT:** Thank you, Professor Khaw.
19 My Lady, those are my questions.
20 **LADY HALLETT:** Can I ask you to go back to your second
21 possible recommendation, Professor. You said to clarify
22 the roles and responsibilities of various organisations.
23 What areas were there where you felt there wasn't
24 sufficient clarity of the roles and responsibilities?
25 **A.** I think this was manifest during Module 2B in terms of

1 the early experience we had around contact tracing and
2 contact centres that for that to fall to one
3 organisation without the ability to surge was quite
4 challenging. So having clarity around our surge
5 capacity, the workforce that we have in readiness to
6 surge, and what digital solutions there might be to help
7 us would be really helpful during this planning phase.
8 **LADY HALLETT:** Thank you. Those are all the questions
9 Mr Scott has for you. Mr Wagner has a question or some
10 questions. He is over that way.
11 **Questions from MR WAGNER**
12 **MR WAGNER:** Good morning, I ask questions on behalf of 13
13 pregnancy, baby and maternity charities. I only have
14 one area to ask you about and it relates to visiting
15 guidance. You said in your answers earlier the Chief
16 Nursing Officer in the Welsh Government established
17 a hospital visiting group that you, Public Health Wales,
18 were a part of and contributed to the discussions of.
19 Do you recall during those discussions whether any
20 consideration was given to the health benefits of
21 pregnant people having their partners available just,
22 for example, having a support partner able to assist
23 them post birth rather than requiring a nurse for
24 assistance?
25 **A.** I don't have any specific recollection, partly because

1 I wasn't in those discussions, nor have I been given
2 information to suggest that was a specific discussion by
3 the group.
4 **MR WAGNER:** Thank you. That's my question.
5 **LADY HALLETT:** Thank you, Mr Wagner.
6 Miss Foubister. She's behind the pillar.
7 **Questions from MS FOUBISTER**
8 **MS FOUBISTER:** Good morning, Professor Khaw.
9 I represent John's Campaign, Care Rights UK and
10 The Patients Association and I have some questions about
11 the impact of public health messaging on access to
12 healthcare.
13 At paragraph 104 of your witness statement you say
14 that you understand that some -- you understood that
15 some patient groups had concerns about people with
16 chronic health conditions not accessing or attending key
17 appointments. What did you and/or Public Health Wales
18 do about those concerns?
19 **A.** Thank you. The co-ordination of public health
20 communications was something we worked together as
21 a system so that no single organisation would be seen as
22 leading and we always worked very closely with
23 Welsh Government who clearly oversaw the policy context,
24 so Public Health Wales' communication team would advise
25 on statements and on the communications strategy.

1 **Q.** Just specifically on my question though, in relation to
2 your understanding that there were concerns about people
3 with chronic health conditions not accessing or
4 attending key appointments, did you do anything in
5 response to learning about that?
6 **A.** We didn't do anything specifically but we did share that
7 information with the relevant groups.
8 **Q.** And why did you not do anything about that?
9 **A.** Because we are part of a system and there are
10 implications of communicating to the public about access
11 to services that were beyond our direct control. So we
12 would have to work in collaboration with other parts of
13 NHS Wales, for example health boards who provide those
14 direct services because if we are signposting people to
15 access those services and those services are not
16 prepared to take them then we wouldn't be communicating
17 the right messages.
18 **Q.** And who did you tell about these concerns about people
19 with chronic health conditions not attending
20 appointments? Who were the specific people that you
21 shared that with?
22 **A.** So I do not recall and I do not have the information to
23 know where that specific information was shared with but
24 we can get that information for you.
25 **Q.** Thank you.

1 At paragraph 103 of your witness statement you say
2 there was no systematic assessment of what the impact of
3 a Stay at Home messaging would be on planned and
4 emergency care. Would such an assessment have been
5 helpful?
6 **A.** So we did undertake a health impact assessment to look
7 at the impact of the social distancing and Stay at Home
8 policy and that report was published and shared widely
9 within Wales and that demonstrated some of the downsides
10 of the policy and highlighted some of the concerns
11 around health-seeking behaviours.
12 **Q.** But you do refer to the health impact assessment at
13 paragraph 103, but your first couple of senses in that
14 paragraph explain that there wasn't a systematic
15 assessment, and so presumably you were drawing
16 a distinction between the health impact assessment and
17 a systematic assessment. And so what would the
18 systematic assessment have provided that what was done
19 wasn't able to?
20 **A.** So I would see a systematic assessment as something that
21 was routine, that was undertaken on a continuous basis.
22 The health impact assessment was a one-off assessment in
23 the light of the change in policy.
24 **Q.** And in this section of your witness statement you also
25 talk about there being limited information about what

1 the impact ultimately was of the Stay at Home messaging,
2 there's those two health impact assessments that you
3 refer to. Why weren't steps taken to collect or monitor
4 that information, including from patient groups?
5 **A.** I cannot answer why that wasn't taken, but at the time,
6 I think that the policy decision and its impact might
7 have been another organisation's responsibility because
8 it didn't directly relate to health protection.
9 **Q.** And which organisation you would say would have been
10 responsible if it wasn't Public Health Wales?
11 **A.** I cannot specifically answer that at this time but
12 I think this is something we might need to consider
13 going forward.
14 **MS FOUBISTER:** Thank you.
15 Thank you, my Lady.
16 **LADY HALLETT:** Thank you very much.
17 Ms Polaschek. I think she is -- that way.
18 **Questions from MS POLASCHEK**
19 **MS POLASCHEK:** Good morning. I ask on behalf of Clinically
20 Vulnerable Families, and we just have one set of
21 questions today in respect of the public health measures
22 that were taken to protect those particularly clinically
23 vulnerable to Covid-19.
24 The Chief Medical Officer, Frank Atherton, gave
25 evidence to this inquiry that he recalled that close

1 consideration was given to providing clinically
2 extremely vulnerable patients with surgical masks. Do
3 you recall or are you aware that there were discussions
4 about providing either clinically vulnerable or
5 clinically extremely vulnerable patients with masks and,
6 if so, which type of mask was considered appropriate for
7 their risks of catching Covid?
8 **A.** I'm not aware of those discussions.
9 **MS POLASCHEK:** Thank you.
10 In which case, madam, that is my question.
11 **LADY HALLETT:** Thank you very much.
12 Mr Thomas.
13 He is behind you, Professor. If you could make
14 sure, please, that even if you look at Mr Thomas while
15 he's asking the question, your answer goes into the
16 microphone. Thank you.
17 **Questions from PROFESSOR THOMAS KC**
18 **PROFESSOR THOMAS:** Good morning, Professor. I am
19 representing FEMHO, that's the Federation of Ethnic
20 Minority Healthcare Organisations and FEMHO is
21 particularly interested in how data tools and methods
22 can be refined to better understand and address the
23 disparities within these communities.
24 At paragraph 151 of your witness statement, you
25 reference an Onomap tool. Mr Scott referred to this

1 earlier on today, which was a 2021 study to analyse
2 ethnic disparities through named-based classifications.
3 Question: given the recognised limitations in
4 using names alone for an ethnicity, how effective do you
5 believe the Onomap tool was in accurately identifying
6 ethnic health disparities during the pandemic?
7 **A.** Thank you. Clearly the strengths and limitations of the
8 use of Onomap are detailed in the published paper and
9 I wouldn't want to repeat those but we did recognise
10 there were limitations in the findings as a result of
11 that, and therefore we were keen to look at other
12 evidence sources to develop understanding about the
13 differential impact on BAME communities. We knew, at
14 a very early stage, of the differential mortality
15 incomes reported through the ONS which collects data
16 through death registrations, and so this evidence that
17 we generated proactively contributed to our
18 understanding and contributed to understanding
19 particularly in Wales. And some of the findings were
20 interesting around younger people, greater admission to
21 intensive care units, and also mortality rates, but it
22 was part of our wider understanding about the
23 differential impact.
24 **Q.** Okay. I think you've touched upon my second question so
25 I'll move on to my next question.

1 Following the findings derived from the Onomap
2 tool in identifying ethnic disparities did
3 Public Health Wales explore other methods or other tools
4 to complement these findings and further close gaps in
5 understanding ethnic disparities?
6 **A.** So our work on ethnic disparities relies on information
7 about ethnicity, both in terms of the numerator, ie
8 those people who were confirmed to be Covid-positive and
9 the denominator, ie those people in Wales and their
10 ethnic background. Without the denominator it is very
11 difficult to make assertions around significant
12 differences between different population groups, and the
13 Onomap allowed to us understand the numerator but not
14 necessarily the denominator.
15 I know it's a very technical response, but in the
16 absence of good denominator data then the evidence
17 generated through these other studies may have
18 limitations, and we have identified that with the use of
19 Onomap.
20 **Q.** Sorry, I don't think you quite answered my question.
21 Let me repeat it. My question was, you recognise that
22 there were limitations with this tool. Simple question,
23 bearing in mind you recognised that, did you use
24 additional tools to assist in your understanding?
25 **A.** So I repeat my response which is any investigation on

1 disparities for ethnic minority groups relies on good
2 quality data, and we didn't have access to data around
3 ethnicity, both in terms of people with Covid and in
4 terms of people who didn't have Covid, which therefore
5 limited our ability to undertake any more robust
6 investigations around differential impact, and in our
7 assessment the use of the Onomap tool, which we had
8 applied to other areas with some success, was a good
9 tool for us to explore how it could contribute to the
10 science.
11 **Q.** So it's a simple answer to my question, "No, we didn't
12 use additional tools"?
13 **A.** That's correct.
14 **Q.** Thank you. If as you've just accepted no additional
15 tools or methods were employed to supplement the Onomap
16 findings, would you agree that this represents
17 a critical gap in the data?
18 **A.** That's correct, and this is why the First Minister's
19 BAME group made several recommendations in its report
20 from September 2021 and one of this was about
21 strengthening the data around ethnicity in Wales.
22 **Q.** Let me come on to my third and final area. And I want
23 to be forward-facing to assist the Inquiry. In your
24 view what should future public held strategies implement
25 to address these data limitations to ensure a more

1 accurate and inclusive representation of ethnic
2 disparities in health outcomes?
3 A. So our fundamental building block for this, going
4 forward, is to improve our data collection around
5 ethnicity status for all people in Wales, and
6 I understand that work is ongoing.
7 Q. And just following on from that, what role do you think
8 cultural competency should play in any future public
9 health data collection efforts?
10 A. I believe very strongly in cultural competency for all
11 in all that we do, that without an understanding about
12 differences between ethnic groups, it will challenge
13 our -- the effectiveness of the work that we undertake.
14 So I think it has an important bearing for all parts of
15 the process around developing cultural competency.
16 **PROFESSOR THOMAS:** Professor, those are all my questions,
17 thank you very much.
18 Thank you, my Lady.
19 **LADY HALLETT:** Thank you, Mr Thomas.
20 Ms Woodward. I think you probably can see her
21 directly.
22 **Questions from MS WOODWARD**
23 **MS WOODWARD:** Thank you. Good morning. I ask questions on
24 behalf of Covid-19 Bereaved Families for Justice Cymru.
25 And I'm going to ask you some questions about what was

1 covered at the very start of your evidence, and that's
2 in regards to data collection in Wales.
3 And you've already been asked some questions about
4 the Covid-19 mortality surveillance e-form, and as
5 I understand it, your evidence was that some elements of
6 that form were not as well complete as they might have
7 been, and that led to lots of missing data. As well as
8 forms being completed with missing data, and despite the
9 assurances at paragraph 110 of your witness statement
10 that the timeliness of reporting to that e-system was
11 good, would you also accept that as set out in the
12 review of the reporting Covid-19 deaths in Wales --
13 Professor, that paper is at tab 19 of your bundle if
14 you want to turn there and the reference is
15 INQ000395663 -- so would you accept that as set out in
16 that report, that there were also difficulties with
17 health boards failing to use the new centralised system,
18 which led to delays by health boards in the reporting of
19 deaths, and that there were also difficulties with
20 ambiguity in the definition of what constituted a death
21 to be reported, and that this led to the under-reporting
22 of deaths in at least two health boards in Wales?
23 A. That's correct.
24 Q. So given those delays and the under-reporting, would you
25 agree that the system therefore wasn't even working well

1 to find out how many people had died of Covid, let alone
2 where that infection had come from?
3 A. So the issues identified in the report that you
4 referenced talks about the identification on 23 April,
5 for example, of 84 deaths in one of the health boards,
6 and the e-form was implemented following an instruction
7 from Welsh Government on 23 April to address this very
8 issue, we had mechanisms to ensure a timely reporting
9 from clinicians on an ongoing basis, and as I said
10 earlier, initially weekly meetings chaired by the chief
11 statistician and the director of Public Health Services
12 at the time.
13 Q. The report there also sets out difficulties with using
14 the e-form at the start of its implementation as well,
15 so there were continuing difficulties, weren't there?
16 A. Yes.
17 Q. Sticking with data. In your evidence earlier, as
18 I understand it, you agreed that nosocomial infection
19 data was something that was well within the
20 Public Health Wales remit, and you also recognised that
21 testing was, of course, a limitation of data collection.
22 In written evidence given for Module 2B,
23 Andrew Nelson, who is the Chief Information Officer at
24 Cwm Taf Morgannwg University Health Board, and you've
25 already been taken to his statement, Mr Nelson is

1 critical of the use of data in wave 1 as no
2 consideration was given to differentiating community and
3 hospital-acquired infection. And he infers that a lack
4 of reporting and awareness may have resulted in people
5 not thinking about healthcare required for infections as
6 being as much of an issue as it became.
7 My question is this: do you agree that there were
8 specific difficulties in differentiating between
9 hospital and community acquired infection in the data in
10 Wales?
11 A. We relied on definitions of this and I think ultimately
12 we had a four nations agreement of what would be counted
13 as a community onset case and what would be a probable
14 or a definite hospital onset case. Once we agreed those
15 definitions we were able to apply them to the data
16 analysis that we had. So I can't think technically
17 there was an inability to do that because we had access
18 to the datasets to allow us to link the data but it may
19 be a question more about agreeing the technical
20 definitions and what would constitute a hospital onset
21 case.
22 Q. And would you accept that that may therefore have posed
23 a problem at the local health board level as identified
24 by Mr Nelson in his statement?
25 A. It is possible, it is possible that the lack of accepted

1 definitions may have affected the early work on this.
2 **Q.** Apart from the weekly meetings that you described
3 earlier in your evidence, were there any other measures
4 taken by Public Health Wales to address any of these
5 difficulties in relation to data collection, and
6 reporting and the completion of the e-form monitoring?
7 **A.** Nothing in addition and in those meetings we would
8 provide the latest analysis so that people were sited on
9 the gaps and clearly with health board representation we
10 would look to them to implement any improvements
11 locally.
12 **Q.** Professor, would you therefore agree that there was in
13 fact no comprehensive form of monitoring put in place to
14 ensure that health boards at the local level had
15 rectified any reporting areas other than simply
16 attending a weekly meeting?
17 **A.** Well, attending a weekly meeting clearly had
18 responsibilities for the person attending to take back
19 any improvements that were discussed and we relied on
20 that mechanism. It wasn't for Public Health Wales to
21 hold people to account, it is not our role to hold
22 health boards accountable for the information they
23 provide but we can help by providing information that
24 would hopefully lead to improvement. But recognising
25 that, you know, the e-form was one of many things that

1 people had to complete.
2 **Q.** You say that it's not Public Health Wales' role to hold
3 health boards to account but would you agree that it is
4 part of Public Health Wales to ensure that data
5 collection and reporting is happening as accurately as
6 possible so that you know what's happening on the ground
7 in pandemics such as this?
8 **A.** That's correct, which is why we engaged very actively
9 with those routine meetings.
10 **MS WOODWARD:** Thank you, Professor.
11 Thank you, my Lady, those are my questions.
12 **LADY HALLETT:** Thank you. Those are all the questions we
13 have for you, Professor. Thank you very much for your
14 help in providing your statement and for coming to the
15 Inquiry to give evidence today.
16 **THE WITNESS:** Thank you, my Lady.
17 **LADY HALLETT:** We shall break now. I shall return at 11.30.
18 **(The witness withdrew)**
19 **(11.15 am)**
20 **(A short break)**
21 **(11.31 am)**
22 **LADY HALLETT:** Mr Scott.
23 **MR SCOTT:** My Lady, may we please call Aidan Dawson.
24 **MR AIDAN JAMES DAWSON (sworn)**
25 **Questions from COUNSEL TO THE INQUIRY**

1 **MR SCOTT:** Mr Dawson, can we have your full name, please.
2 **A.** Aidan James Dawson.
3 **Q.** And you are currently chief executive of the Public
4 Health Agency; is that correct?
5 **A.** That is correct.
6 **Q.** And you've had that role since July 2021, is that right?
7 **A.** I have.
8 **Q.** And prior to that you worked within the Belfast Trust;
9 is that correct?
10 **A.** Yes, that is correct.
11 **Q.** And is it right that you personally don't have
12 a clinical background?
13 **A.** Yes.
14 **Q.** Healthcare management is your primary background, is
15 that right?
16 **A.** Yes, that is correct.
17 **Q.** So you haven't held a role prior to July 2021 in PHA so
18 it wasn't that you'd gone to PHA and then to the trust
19 then back to the PHA?
20 **A.** No, I had never worked in public health prior to taking
21 up the role of chief executive in '21.
22 **Q.** So in terms of the statement that's been provided on
23 behalf of PHA, that's been done in conjunction with
24 people who were within PHA at the time, is that right?
25 **A.** Yes.

1 **Q.** Where is the self-reflection on what went wrong in terms
2 of the role that PHA played during the pandemic?
3 **A.** I think some of that comes from the Hussey review which
4 we have built upon and since the -- since I've taken up
5 the post and we've moved out of the pandemic we have
6 gone into a significant review of the agency, its
7 structure, its operational capability and how it
8 prepares and works as an organisation to support the
9 people of Northern Ireland.
10 **Q.** It doesn't appear to be set out in terms of the role
11 that the PHA played during the pandemic, it doesn't
12 appear to be set out in the statement, any of that
13 critical analysis. Is that a fair assessment or not?
14 **A.** I think that's perhaps a reasonable assessment, yes, but
15 I do think it also builds on what we've learnt through
16 the pandemic.
17 **Q.** Why isn't there that critical assessment in a statement
18 from the PHA to the UK Covid-19 Inquiry?
19 **A.** I suppose we built our review around what Public Health
20 Agency should be. I do believe we've taken in the
21 consideration as we moved through it, learning from our
22 reflection of what we went through in the Covid Inquiry
23 as an organisation but we're also hoping that we will,
24 and it's an iterative process as well, and obviously we
25 will learn as we go through the Inquiry as to what

1 lessons we should take out of that.
2 Q. So has there been any internal proactive assessment of
3 the PHA's performance during the pandemic or is it
4 waiting for reviews or external bodies to assess the
5 performance of PHA?
6 A. I think the review is an assessment of what we've --
7 what we went through to some extent, probably not as
8 critical as you have suggested so I would concede that.
9 Q. And I want to move to staffing and capacity of the PHA.
10 So at the start of the pandemic, was there sufficient
11 staffing and capacity within the PHA to perform the
12 roles and functions it would envisage that it would have
13 during the pandemic?
14 A. No, there wasn't. I think critically we did not have
15 enough in terms of professional public health qualified
16 individuals and that issue has -- is being addressed
17 through our review. We have also put in place two
18 additional training numbers for public health
19 consultants above what NIMDTA actually provide us with.
20 Q. So NIMDTA, if you could just define that, please?
21 A. Northern Ireland Medical & Dental Training Agency, so
22 they are the primary trainers of doctors and dentists
23 across Northern Ireland.
24 Q. So if you didn't have enough professional public health
25 qualified individuals, how did that impact upon the

1 PHA's response to the pandemic?
2 A. It hampered it, although we would identify that we had
3 a number of people who had retired and returned, as
4 well, who had significant experience, going back
5 many years.
6 Q. Right, and is it also correct that during the pandemic
7 staff were seconded to work directly to the Department
8 of Health or redeployed or redirected to work in new
9 areas; is that right?
10 A. That is correct.
11 Q. And is it also right that a number of the staff who were
12 seconded to the Department of Health were actually your
13 senior staffers?
14 A. There were some senior staff, as well, yes.
15 Q. So, again, after those individual had been seconded to
16 the Department of Health was there sufficient capacity
17 and capability within PHA to perform the roles that it
18 had at that point in time in relation to the pandemic?
19 A. I think at that point in time we worked so closely with
20 the Department of Health, there was a balance between
21 where those individuals sat and where they could best
22 provide service during the pandemic and I think that we
23 probably didn't have enough but we did the best with
24 what we could at the time.
25 Q. So can you provide any specific examples of where that

1 insufficiency of capacity and capability hampered the
2 service that PHA could provide?
3 A. I think we had, and it's borne out in the Hussey Review,
4 as well, that we didn't have modelling capability as
5 a public health agency going forward, or at that time,
6 and I think that was one of the areas that we were
7 hampered. We did work very closely with the department
8 and -- with the Department of Health, I should say, and
9 we established a modelling group that sort of worked
10 between the department and ourselves, but I think one of
11 the things that we have learnt coming out of the
12 pandemic is the necessity to have our own modelling
13 capability going forward.
14 Q. So you didn't quite have the modelling capability that
15 you required?
16 A. Mm-hmm.
17 Q. Did you have the ability to conduct surveillance of data
18 and cases that you needed as the PHA?
19 A. I think we lacked in terms -- we had the capability for
20 day-to-day work that we would have had but for something
21 on the scale of the pandemic I don't think we had that
22 capability when we started the pandemic, no.
23 Q. Did it improve throughout the course of the pandemic or
24 did it get worse?
25 A. It did. I believe it did.

1 Q. In what way did it improve?
2 A. I think our information became better and we worked very
3 closely with the trusts, the Department of Health and
4 Queen's University, as well, I think, in developing our
5 information flows where we would draft information in to
6 give us a better understanding of how the disease
7 progressed.
8 Q. Two very closely related questions. One, what was the
9 reason why you didn't have that capability? And two,
10 how do you prevent that happening in the event of
11 a future pandemic?
12 A. I was not there pre-pandemic so it's hard to say that.
13 I don't think that we --
14 Q. Presumably it's a question that you've asked in
15 preparation?
16 A. Yes, I think it's one of the -- we as -- in
17 Northern Ireland we did not embrace the mixture of
18 multidisciplinary approach in terms of developing public
19 health consultants which the rest of the UK has adopted.
20 We have since addressed that and we will do that going
21 forward, but I think that's one of the key reasons why
22 we didn't have the people coming through.
23 Q. And is that a PHA failure to identify or is that the
24 department or anybody else?
25 A. I think probably both. We're a very small system in

1 Northern Ireland. We work very closely with the likes
2 of NIMDTA and the Department of Health and I think there
3 has been, it's probably fair to say not -- we haven't
4 invested in public health consultants and capability but
5 you could also say that of many other medical
6 specialties across Northern Ireland at this point in
7 time, as well.
8 **Q.** I want to look now at data and surveillance in terms of
9 what PHA did with that information so Joanne McClean
10 gave evidence in Module 2C, and could you please tell us
11 in terms of what Ms McClean's role was within the PHA?
12 **A.** Well, currently she is the DPH for Northern --
13 **Q.** Director of Public Health?
14 **A.** -- Ireland, Director of Public Health, yes, and that's
15 why she was giving evidence at that time.
16 **Q.** And she says in her evidence -- this is at page 28 of
17 her transcript:
18 "... a really important part of responding to
19 infectious diseases is knowing how many infections there
20 are in the community and any changes in that infection,
21 and ... the technical term for that is surveillance,
22 [and that's] a core bit of our function."
23 Presumably you agree with that completely?
24 **A.** Yes.
25 **Q.** Did you actually have the level of surveillance in terms

1 of the primary care data that you needed during the
2 pandemic?
3 **A.** I don't think we had that sort of level of primary care
4 data that we would require.
5 **Q.** And did you have the requisite level of critical care
6 data that you required?
7 **A.** Not at the beginning of the pandemic, no.
8 **Q.** Was there any type of data that you did have at the
9 level you required?
10 **A.** I think we, as I said, we would have had normal sort of
11 surveillance data around flu and around RSV and
12 conditions like that, and things which would have come
13 up on a seasonal -- sort of normal seasonal process
14 throughout the year.
15 **Q.** But when you went into the pandemic, so let's say this
16 is January -- because Public Health Agency had been
17 aware of the Wuhan virus in January 2020, that's fair?
18 **A.** Yes.
19 **Q.** So did you look, then, at the data in the information
20 that you had available to you and think, is that
21 sufficient or do we need to get access to more?
22 **A.** I don't know exactly what they would have considered at
23 that point in time, but I do know, as we sort of moved
24 into March and April, that there was concern that we
25 didn't have the access to information that we may have

1 needed.
2 **Q.** Okay, so you said March and April there.
3 **A.** Yes.
4 **Q.** Lockdown was 23 March 2020. So it was still in
5 April 2020 that you were concerned that you didn't have
6 the information you needed?
7 **A.** Well, I think at that point people were discussing what
8 sort of information we would need and how you would
9 develop those information flows out of such areas as
10 critical care.
11 **Q.** Okay, and so what did you identify you required, and how
12 did you develop those flows?
13 **A.** We had a small team to identify -- through -- led by
14 Declan Bradley, who is one of our public health
15 consultants working with others to identify the number
16 of people coming into critical care that might have
17 Covid, and the pressures that that was exerting.
18 **Q.** Okay, and so when were you satisfied that you had
19 accurate information about the people coming into
20 critical care that might have Covid and the pressures
21 that was exerting?
22 **A.** I think around about sort of April/May, but I think the
23 sort of confidence in the data grew over a period of
24 time.
25 **Q.** Is that not the end of wave 1, that the confidence in

1 the data actually arrived?
2 **A.** I think -- yeah.
3 **Q.** Any other areas in terms of critical care?
4 **A.** Not that I'm aware of.
5 **Q.** And so are you satisfied that by the end of, let's call
6 it end of May, that there was sufficient information
7 that PHA had about critical care? Or was there more
8 that you required?
9 **A.** I think at that stage they were pretty sure that they
10 had sort of the information they required, but I'm not
11 wholly sure of the answer to that, my Lady.
12 **Q.** Okay, because -- can I show you, please, PHA statement
13 INQ000485720, at page 41, paragraph 116. It's at tab 1
14 of your bundle or it's going to be up on the screen. So
15 this is the genesis of these questions, the data that
16 was most challenging was primary care and critical care.
17 And it talks about that there was access to the
18 influenza -- is that what you're suggesting, that the
19 surveillance of flu, RSV, was available?
20 **A.** Yeah.
21 **Q.** And:
22 "... information was initially considered to be
23 potential and relevant and useful but upon discussion
24 with HSCB ..."
25 Just in terms of the acronyms, HSCB is

1 effectively the commissioning body. It no longer
2 exists, but it was between the trusts and the
3 Department of Health at the time; is that right?
4 **A.** That's correct.
5 **Q.** And so "it was established that there were no
6 permissions [for] the primary care data owners to use
7 this source for Covid-19 monitoring, and it was not
8 subsequently used."
9 That sounds like data access was preventing PHA
10 getting access to information it needed during
11 a pandemic, is that right?
12 **A.** That is correct.
13 **Q.** What steps were done to break that data access block?
14 **A.** Discussions between sort of the primary care -- so
15 Health and Social Care Board would have primary
16 responsibility for the management of the primary care
17 contracts. So there was the significant piece of work
18 done with the Department of Health and Health and Social
19 Care Board around data access agreements, over that
20 period of time, but I think that probably took too long.
21 **Q.** Was that because it was August 2023 that it came in?
22 **A.** Yeah.
23 **Q.** So it's two-and-a-half years?
24 **A.** Yes.
25 **Q.** Could things not have been moved a little bit quicker to

1 get access to the information PHA needed in primary care
2 about tracking cases of Covid-19 in Northern Ireland
3 across the lifetime of the pandemic?
4 **A.** In hindsight, yes.
5 **Q.** Surely it's not just hindsight --
6 **A.** Yeah.
7 **Q.** So was there any consideration taken to passing
8 legislation, for example, to get access to the
9 information that you needed?
10 **A.** Not that I'm aware of.
11 **LADY HALLETT:** Who were the primary care data owners?
12 **A.** My understanding is the primary care data owners are the
13 GPs themselves.
14 **LADY HALLETT:** That's what I assumed, but I just wanted to
15 check.
16 **MR SCOTT:** Because is it right that there's not
17 a centralised system like you might find in other
18 countries, in the United Kingdom each one has their own
19 system? Is that broadly correct --
20 **A.** Yes, I think there's actually three different systems in
21 use. I think they are now moving towards one type of
22 system, and each GP is obviously their own independent
23 contractor for their practice.
24 **Q.** And then just moving slightly further down that
25 paragraph, individual level critical care data. What

1 does individual level critical care data mean, as
2 opposed to systemic data, which I presume --
3 **A.** Individual critical care data is specific to the
4 individual patient.
5 **Q.** Right. So that was initially reported manually to the
6 PHA, and then was discontinued. Why was that?
7 **A.** My understanding is that then they had flows established
8 that came in straight in from the information systems.
9 **Q.** Right. And so:
10 "As of August 2023 [so at the same time]
11 governance arrangements and data transfers have now been
12 established from critical care units in Northern Ireland
13 to the PHA for the purpose of monitoring the
14 epidemiology of severe COVID-19 and respiratory
15 infections."
16 Again, so why did that take two-and-a-half years
17 to get those governance arrangements and data transfers
18 in?
19 **A.** I think that's what's been established in August '23,
20 but my understanding is that we would have had flows
21 directly from the ICU and HDU facilities during the
22 pandemic as well.
23 **Q.** So what did the PHA lose out on by not having access to
24 all that information from primary care and critical
25 care?

1 **A.** I think that we had a considerable lack of information
2 in what was happening in the community, in terms of
3 tracking the disease, whilst I think from sort of early
4 on in the pandemic we had good information about what
5 was going through ICU, HDU, and the hospitals, we
6 continued to have a lack of information through primary
7 care.
8 **Q.** And that goes all the way through to August 2023?
9 **A.** Not as good as you would have wanted it, yes.
10 **Q.** What impact did that have upon the response of
11 healthcare systems in Northern Ireland to the pandemic?
12 **A.** I think in terms of hospital level, it probably had very
13 little. I think in community care it continued to be
14 a blind spot.
15 **Q.** Why doesn't the same apply then to the information you
16 were getting out of the critical care units, or was
17 information being sourced in a different way that meant
18 that you had the information you needed?
19 **A.** I think because we were able to source information
20 directly from critical care units, that allowed us
21 a good picture of what was happening within the
22 hospitals.
23 **Q.** You said it was a good picture; was it a sufficient
24 picture that you needed in order to perform your role?
25 **A.** I think so.

1 Q. How could it be improved in the future if it needs to be
2 improved at all?
3 A. We are obviously now in Northern Ireland implementing
4 a new system, encompass, which relies on the Epic
5 hospital information system. That will connect up the
6 laboratories, it will connect up the ICUs, ICUs, etc,
7 and give us a more complete digital picture and feeds of
8 information into the Public Health Agency. I think it
9 was a better facilitated view of what exactly is
10 happening in the hospitals.
11 Q. Is that system then going to include all the various
12 categories of data that you would wish it to in the
13 event of a future pandemic, such as age, gender, ethnic
14 group, disability?
15 A. I understand it will contain all those. However, it
16 will not in-reach into GP systems. So, obviously, where
17 we've had a lack of information that was in community
18 care in our -- in the community through our GP systems,
19 Epic is a hospital-wide system across the trusts and
20 laboratories, etc. It is not in community care. They
21 will continue to have their own systems, but I believe
22 the data access agreements are now better and in place
23 to better access through NIHAP -- and please don't ask
24 me what that stands for, I can't remember -- but NIHAP
25 is a system whereby we can access anonymised data

1 through the GP systems going forward, I think --
2 Q. So have the blind spots gone?
3 A. I wouldn't say it's completely gone, but I think the
4 picture is improving.
5 Q. What remains then?
6 A. I think we're probably still limited in what we can get
7 out of the -- it's not sort of complete access as you
8 would want into it, because it's obviously coming out as
9 anonymised data and feeds in and our groups continue to
10 work with our GP colleagues and SPPG, which is the
11 replacement from Health and Social Care Board, to
12 identify what feeds we should get. So I think it's
13 an improving picture.
14 Q. In terms of deaths and recordings of death, so your
15 statement sets out, effectively during the pandemic,
16 there were two ways of recording deaths. There was --
17 or two systems, maybe, I'll put it that way, there was
18 one through PHA and one through NISRA, Northern Ireland
19 Statistics and Research Authority, have I got that
20 right? I'm making the "A" up --
21 A. "Agency", I think.
22 Q. "Agency", thank you. But they were doing two different
23 things?
24 A. Yes.
25 Q. And actually the PHA's role wasn't a role you had prior

1 to the pandemic?
2 A. No, NISRA and the GRO, which is the General Registrar
3 Office, I think have the legislative responsibility for
4 the recording of deaths in Northern Ireland. PHA, prior
5 to the pandemic, had no role in the recording or
6 reporting of deaths.
7 Q. So why did the PHA get that role at the start of the
8 pandemic?
9 A. I think expediency. The minister in Northern Ireland
10 was frequently being asked about the level and impact
11 and number of deaths that was happening. NISRA is quite
12 a prolonged -- there's a data lag, and therefore the --
13 Q. There's a data lag -- could you say how long is that, is
14 it five days or longer?
15 A. I think it's longer than five days. So that data lag,
16 when we were looking for sort of realtime data, was
17 obviously causing concern. Whilst the PHA put in place
18 a way of tracking deaths, it wasn't obviously as wholly
19 accurate as NISRA because it obviously goes through the
20 death certificates, I mean, that is a part 1 and part 2,
21 but we had data on deaths which allowed us to put
22 forward sort of trends and make decisions.
23 Q. Why wasn't it foreseen prior to the pandemic -- and
24 maybe you can't answer this question -- by the PHA that
25 in the event of a pandemic they might need to have

1 an accurate and up-to-date system for reporting deaths
2 from whatever pathogen was causing the pandemic?
3 A. I think prior to -- there was an assumption because that
4 legislative responsibility sits with NISRA, that that
5 would be provided through them, and we had never been
6 asked, and I don't think it had ever been considered.
7 Q. On reflection, do you think it should have been
8 considered?
9 A. Yes.
10 Q. Didn't it cause difficulties for the PHA, given its
11 staffing and capability requirements we discussed
12 earlier on, at the start of a pandemic, to get a new
13 function to track deaths when there wasn't a system in
14 place for identifying those deaths? How was that likely
15 to ever be an accurate and easy system to put into
16 place?
17 A. I don't think it was easy to put in place. It was never
18 going to be -- it was something that we were asked to do
19 at that time, and which our team worked to quickly -- to
20 put in place because we were asked to do so.
21 Q. Did you push back and say, "We just don't have the
22 capability to do this"?
23 A. No, I think people wanted to be helpful. I think people
24 at the time thought that it was information that would
25 be useful as well in tracking the progression of the

1 disease, and as I understand it there was no push back
2 at all.
3 Q. Was it more beneficial to the response of healthcare
4 systems for PHA to be helpful or to make sure that
5 there's an accurate system put in place which is
6 sufficiently staffed and manned by those with the
7 capability and capacity to do it?
8 A. I think at the time it was a very fast-moving
9 environment, and I don't think whether or not people
10 thought this was our responsibility, I think people did
11 what they felt was the right thing to do at the time,
12 and that's why they proceeded to do it.
13 I don't think it was ever suggested that it was
14 wholly accurate, I think what was suggested, it was
15 a tool that allowed us to track progression and trends
16 in deaths.
17 Q. One of the features which we'll discuss is ethnic group
18 data wasn't kept. Was disability data kept?
19 A. I think we had very poor data on both disability and
20 ethnicity in Northern Ireland.
21 Q. Why is that?
22 A. It's hard to say. I think certainly in terms of
23 ethnicity in our 2001 census people from a black and
24 ethnic minority background were less than 1%, and
25 I think even in 2021 it's gone up to somewhere between

1 like 3 to 4%, and therefore I don't think it ever got
2 the focus that it probably required or deserved.
3 Q. Well, just to put the numbers to that. So the 2021
4 census, and this is tab 19 of your bundle, INQ000474456,
5 that is -- it's 96.5% is from the white ethnic group
6 across Northern Ireland. So across the other 12 groups
7 identified in the census, that's 65,604 people?
8 A. Yes, over a population of 1.9 million, I think.
9 Q. Yes, but that's still 65,000 people whose impact wasn't
10 tracked; is that right?
11 A. That's correct. And I would say, and I have said
12 I don't think we had the focus that was appropriate on
13 ethnicity or disability that is required.
14 Q. But wasn't ethnicity important for the Public Health
15 Agency to perform its just non-pandemic public health
16 functions?
17 A. I think the agency had a history of more focusing on
18 people with -- from sort of -- from a disability point
19 of view or an ethnicity or migrant point of view, on the
20 ground in terms of working with community groups as
21 opposed to in the disease side of things. So I think in
22 terms of health improvement we had a greater focus on
23 working with local communities, etc, as opposed to
24 tracking disease and its impact.
25 Q. Is it fair to say that PHA never chose to make it

1 a focus to ensure that they kept that data?
2 A. Yes.
3 Q. And has that changed since?
4 A. Yes, we're in the process of drafting a new corporate
5 plan at this point in time and we will refocus the
6 organisation into how we address things in terms of
7 ethnicity, in terms of disability and a greater focus on
8 people from a disadvantaged background across
9 Northern Ireland.
10 Q. So how did PHA assess the impact of the pandemic upon
11 minority ethnic groups?
12 A. I don't think it did it at all -- or well.
13 Q. At no point during the pandemic?
14 A. I think as time went on we worked -- we had a low uptake
15 group in terms of vaccination, etc, but in terms of
16 surveillance of hospitals and the impact upon people
17 from a black and ethnic minority background, no.
18 Q. I want to ask about staff infections and deaths.
19 I believe it's right, is it, there was effectively
20 a spreadsheet, and this is the document behind tab 3 of
21 your bundle. It was a big spreadsheet that had been
22 provided, I believe from PHE originally.
23 A. Yes.
24 Q. And it kept a series of categories of data and one of
25 that was staff illnesses and staff deaths and my reading

1 of that is that that was never included in terms of the
2 data was never inputted alongside those rows, yet other
3 bits of data were put in alongside other rows. Is that
4 a fair reading of that document?
5 A. I think that is a fair reading of that document, yes.
6 Q. Why wasn't there any record kept of staff illness, staff
7 deaths -- maybe staff deaths is easier to focus on than
8 staff illnesses?
9 A. I think staff deaths was, when I discussed it with the
10 team, was that it would have been very difficult to
11 differentiate as to whether those deaths -- through
12 staff -- were due to them acquiring the disease in line
13 with their work, or whether or not they had acquired it
14 in the community.
15 Q. But how can you tell that unless you actually keep the
16 data and know where they were working at the time?
17 A. We just didn't have access to that data at that time.
18 It is one of the things which we have now addressed
19 going forward and that we will have, but it wasn't at
20 that time.
21 Q. Can I just understand the sequence. Was it that there
22 was an assumption made that it wouldn't assist you
23 because you didn't have access to the information about
24 where people were working, whether it be home acquired
25 or hospital acquired, and therefore you didn't seek the

1 data or was it that you sought -- I see you nodding.
2 Was it that way around?
3 **A.** I think it was that way around. We didn't see that the
4 data would actually help us manage at that point in
5 time.
6 **Q.** On reflection was that the right decision?
7 **A.** I don't know the answer to that. It's not something
8 which I have reflected on, sort of, greatly and
9 I probably need to give it some more thought but I'm
10 quite content to do that.
11 **Q.** Has the PHA institution given it any thought, or no?
12 **A.** No. But if I may, if it is now one of the things which
13 we are -- I've said that and I'm now reflecting that it
14 is one of the things which we would collect and be able
15 do in a future pandemic so obviously our information
16 team have thought that that's one of the things, because
17 my understanding is they are able to anonymise sort of
18 healthcare workers, their vaccination status, and going
19 forward, their cause of death.
20 **Q.** So there is planning ongoing?
21 **A.** Yes.
22 **Q.** How about keeping information or data about people who
23 are suffering from Long Covid, is that information being
24 kept?
25 **A.** Not that I'm aware of.

1 **Q.** Does the Public Health Agency have any role in
2 identifying those with Long Covid, trying to provide
3 information to the department or HSCB -- I may have got
4 the acronym wrong now.
5 **A.** SPPG.
6 **Q.** Thank you -- about -- to inform them about commissioning
7 that may need to be put in place?
8 **A.** I haven't been involved in any discussions for that.
9 I can't for certainty say yes or no whether or not we
10 have been involved in the provision of information
11 around the commissioning of services for people with
12 Long Covid.
13 But I am quite content to answer that question and
14 come back to the Inquiry if that's helpful.
15 **Q.** Thank you.
16 I want to look now at infection prevention and
17 control. Again, it's right that there was a UK IPC
18 cell, which the Inquiry has heard a lot about, and then
19 there was a smaller cell put in place in
20 Northern Ireland; is that right?
21 **A.** Yes.
22 **Q.** And effectively the Northern Ireland IPC cell didn't
23 produce its own guidance, it followed and applied the UK
24 cell, is that right?
25 **A.** That's correct.

1 **Q.** Did the PHA have any or sufficient scientific knowledge
2 capabilities to determine routes of transmission and
3 create IPC guidance in response?
4 **A.** I think we had input into the national cell. I think
5 the four nations worked very closely together on that
6 and therefore I don't think there was a necessity seen
7 to replicate that or whether or not we would have had
8 that capability. Northern Ireland has always relied on
9 health -- NHS England and now UKHSA to provide to us
10 sort of guidance in many areas.
11 **Q.** Throughout the pandemic there are obviously different
12 periods of time where different areas would have
13 different levels of Covid-19. Hospitalisations were
14 different, impact upon healthcare workers would often be
15 different depending on the pressures that they were
16 feeling at the time. Is that a fair summary?
17 **A.** That is correct.
18 **Q.** So to what extent did PHA see it was part of its role in
19 terms of informing the IPC cell discussions to engage
20 with healthcare workers, patient groups, anyone in
21 Northern Ireland about what was being felt in
22 Northern Ireland at the impact of those IPC guidance?
23 **A.** I'm not aware that we conducted an awful lot of work
24 with sort of various groups. I think we took much of
25 our lead from England at that point in time.

1 **Q.** Was Northern Ireland not looking to feed into the
2 impact, that was being felt in Northern Ireland to those
3 discussions?
4 **A.** Yes, and I think they did that through our involvement
5 of the people that went to there but I'm not sure that
6 there would have been a wider discussion. We obviously
7 were part of the gold and silver command structure, we
8 would have had discussions with trusts, etc, but in
9 terms of specific groups I'm not aware.
10 **Q.** I want to look briefly at some of the comments that were
11 being made by the UK -- the Northern Ireland
12 representative in the UK IPC cell. And it's on 23
13 December -- it's at tab 9 of your bundle, INQ000398242,
14 the individual is stated to say:
15 "In the absence of robust evidence to support
16 the move [and then the initials are given] felt that
17 colleagues might think that they have not been
18 appropriately protected with what has been previously
19 recommended."
20 Are you aware of what discussions were taking
21 place within PHA in and around
22 December 2022 -- December 2020 about what the impact
23 might be on the confidence of healthcare workers in
24 Northern Ireland if there wasn't a change of guidance?
25 **A.** I'm not aware of those discussions. I would be aware,

1 because I worked in the trust during that period of
2 time, that there was always a degree of concern that
3 people wanted to use PPE, etc, at a, sort of, maybe
4 beyond what was recommended, I think you discussed
5 earlier the use of FFP3 masks, etc, people may have felt
6 that they give them added protection in -- but the
7 guidance was, you should use them only when you're in --
8 or used in AGP, aerosol-generated procedures, etc,
9 people might have thought, well, actually I should be
10 using that if I'm working in an ED department or not
11 involved in non-aerosol-generated. So I think there was
12 always that concern. I think people were genuinely
13 frightened and sort of always sought to have a higher
14 level of protection than was sometimes what was being
15 recommended within the guidance.
16 **Q.** And what did PHA as the body with representatives on the
17 UK IPC cell do to assuage those fears of healthcare
18 workers in Northern Ireland? Did they explain the
19 guidance? Did they provide further information? Did
20 they talk to representatives?
21 **A.** I think through -- so the gold -- that we would have had
22 discussions each day with trust representatives or, as
23 the pandemic progressed, every sort of number of days
24 through that sort of command structure in terms of
25 providing the evidence and saying, look, this is the

1 best evidence we can have confidence in at this point in
2 time and we had nothing to dissuade to us move away
3 from it.
4 **Q.** Did that message pass down to your healthcare workers
5 who were actually on the wards, because it seems that
6 that fear never went away. Is that a fair description
7 of what happened?
8 **A.** I think that fear never went away. Whether or not that
9 was because people just had a high degree of anxiety at
10 that point in time and whether or not you could have
11 ever dissuaded it in terms of that, I don't know.
12 **Q.** Did PHA do enough to try to dissuade it or should they
13 have done more?
14 **A.** We probably should have done more but again in -- it was
15 a very fast-moving environment as well at that time and
16 we had a very limited resource in terms of what we could
17 actually put on the ground and where we could have those
18 conversations and we went back to that -- we took that
19 up at the start that we probably didn't have the number
20 of staff, we had a very small team.
21 **Q.** So that would be another lesson learned, effectively,
22 about something that should be done, something that
23 should be thought about within PHA in the event of
24 a future pandemic?
25 **A.** Yes.

1 **Q.** Paragraph 91 of the PHA statement says that there were
2 no issues in relation to PPE reported to PHA. Is that
3 true?
4 **A.** My understanding is that we never had concerns about the
5 lack of supply of PPE across Northern Ireland if that's
6 the issue that people are referring to.
7 **Q.** Right. So that's at a very high level, that's
8 Northern Ireland as a whole rather than individual
9 healthcare workers were saying that they didn't have
10 access to PPE that they needed within their own
11 hospital, GP surgery, pharmacy?
12 **A.** I'm not aware of any reports of people ever saying that
13 they didn't have access to appropriate PPE as advised in
14 the guidance.
15 **Q.** Are you saying that throughout the whole pandemic there
16 wasn't one report to PHA that people didn't have access
17 to the necessary levels of PPE?
18 **A.** When I've spoken to my team that's what I've been
19 advised. I don't think there was ever a major concern
20 over the supply of PPE across Northern Ireland.
21 **Q.** Okay.
22 **A.** Can I add, I think there may have been general concerns
23 where people at times felt that they should have been
24 using higher levels of PPE than was recommended but
25 again that goes back to that sort of fear issue,

1 I think.
2 **Q.** I also wanted to, if we could, I hadn't flagged this up
3 ahead of time, so I apologise for this.
4 If we could have on screen INQ000398219.
5 So this is an IPC cell meeting minutes and this is
6 at tab 10 of your bundle, and I just want to scroll down
7 to that bottom paragraph, please. Again, that's the
8 individual from Northern Ireland who had been,
9 I wouldn't say seconded, was a member of the cell:
10 "... AGP discussions have been had around
11 individual organisations to decide what an AGP is
12 which is causing confusion in trusts in NI as some are
13 going with resus council guidance over PHE guidance
14 ... these additional guidelines are causing ongoing
15 issues."
16 To what extent did the Northern Ireland IPC cell
17 seek to try and bring some clarity about what guidance
18 should be applied?
19 **A.** I think the Northern Ireland IPC cell through the trust
20 would have advised that we should follow the PHE
21 guidance. I think prior to the pandemic organisations
22 followed the Resuscitation Council guidance and as the
23 pandemic progressed there was much discussion around
24 well, what is an AGP? And guidance on AGPs and what
25 could, should be considered an AGP progressed at the

1 time of the pandemic.
2 Q. Because if we could please go over the page. It's the
3 top line, I am very hesitant to stray into Module 6
4 territory around care homes but, again, there's
5 a comment that care homes were refusing to undertake CPR
6 due to this issue. Isn't that exactly the type of thing
7 that the Northern Ireland IPC cell should have been
8 making sure did not happen, that there was absolute
9 clarity that care homes knew that they could undertake
10 CPR?
11 A. Sorry, could you say that to me again.
12 Q. Sure. Isn't that exactly the type of thing that the
13 Northern Ireland IPC cell should make sure was not
14 happening so that care homes knew that they could
15 undertake CPR?
16 A. I think -- I know that comment was made when I checked
17 it with the team. They have said whilst the comment was
18 made about care homes refusing to undertake CPR due to
19 this issue, there were -- whilst there may have been
20 a refusal, we don't know that there were any incidences
21 where it was actually not given at all.
22 Q. But did the Northern Ireland IPC cell make sure that
23 there were no situations in Northern Ireland of people
24 not providing CPR as a result of any potential
25 misunderstanding or lack of clarity in the IPC guidance

1 that applied?
2 A. I'm not sure it would've been as specific as that.
3 I think what would have happened was that notification
4 would have been that the PPE in use was sufficient to
5 meet the needs, and I think CPR later was not considered
6 an aerosol-generating procedure.
7 Q. That document can come down now, thank you.
8 How did the Northern Ireland IPC cell or Public
9 Health Agency track and assess whether the IPC measures
10 that were being implemented were actually working?
11 Putting it a different way, did they track nosocomial
12 infections to just have an understanding about how those
13 were arising?
14 A. I think nosocomial infections were tracked through
15 Northern Ireland, but again we would have had lack of
16 information in sort of the community, etc, and GP
17 surgeries.
18 Q. But did the IPC cell in Northern Ireland have any
19 understanding of how the various trusts, maybe different
20 hospitals at different times, were applying that
21 guidance, whether they thought that their local risk
22 assessment meant a higher level of IPC protection was
23 needed, or actually whether the level was low so it
24 wasn't as necessary? Was there any record kept,
25 tracking kept of that?

1 A. No.
2 Q. Why not? Would that not have been useful to understand
3 how the IPC guidance was operating in Northern Ireland?
4 A. I think there was an assumption the IPC guidance was out
5 there, it was being adhered to and the general sort of
6 tracking of the disease was not sort of significantly
7 different from other parts. But I can see the point
8 you're making, was it specifically tracked on whether or
9 not the IPC guidance was effective, I don't think it
10 was, don't believe it was.
11 Q. Is that not a failing to -- as the body sets the
12 guidance to check to see whether it's actually working
13 or not, and how it's being applied?
14 A. Yes.
15 Q. And, again, maybe this isn't something you have given
16 any thought to, but how do you prevent that happening in
17 future? How do you address that situation?
18 A. I think we -- in the future, we -- the way the
19 surveillance systems are now being set up, we would have
20 a better understanding of the disease progression at
21 this point in time so I think they would rely on that
22 but I don't think any consideration has been given
23 specifically to how you understand so the safeguards put
24 in place are actually effective.
25 Q. Did the PHA ever provide any advice about visiting

1 restrictions that were applied in healthcare settings?
2 A. Visiting was sat, I think as in other nations, with the
3 Chief Nursing Officer for Northern Ireland, but we would
4 have provided the advice into her and sat as part of
5 that group, but the decisions around visiting sat very
6 clearly with the CNO.
7 Q. Has there been any analysis done within the PHA about
8 the impact of the visiting restrictions put in place,
9 and whether actually they were too high, just right,
10 whether they had the effect that they sought?
11 A. No, but I think that would have been difficult to do
12 because I think the visiting was very much impacted upon
13 the type of a state you would have had, so it would have
14 been hard to get around a very general basis as to --
15 what -- how the visiting restrictions had an impact.
16 And I think much of it was based on local risk
17 assessment as well. So two maternity units with two
18 different types of estate may have had different
19 restrictions based on their own local risk assessment.
20 Q. And to what extent were those local risk assessments
21 being fed back in to show what worked well, what didn't
22 work well, in different situations?
23 A. I don't know. I'm assuming that would have went in to
24 the CNO. I don't think we did any of that.
25 Q. Okay. Moving now to the role of testing and the role

1 that testing can play.
2 Did PHA do enough to increase the availability of
3 testing to allow for a greater understanding of those
4 who present to either primary care, particularly
5 hospitals, about their Covid status?
6 **A.** Obviously we were -- all of us staffed and led the
7 expert group on testing, and I think they did quite
8 a bit of work over that period of time, if you look at
9 the guidance, there's like nine iterations of that, and
10 as understanding grew and the availability of tests
11 grew, and their accuracy grew, and confidence grew,
12 I think the guidance was adjusted to reflect that.
13 **Q.** I want to then ask about Long Covid. Does PHA have any
14 role in relation to identification of Long Covid?
15 **A.** Not that I'm aware of.
16 **Q.** And then another corollary of visiting is the use of
17 technology in the provision of services, and this is
18 something that is set out at paragraphs 68 to 70 of your
19 statement.
20 Again, there doesn't appear to be any analysis of
21 what went well, what went badly, about the use of
22 technology in the provision of services in
23 Northern Ireland. Is that something that the PHA was
24 looking into, has had consideration of?
25 **A.** I think we provided some guidance around the use of sort

1 of virtual visiting, and I think that's in the pack as
2 well, and how that could be used and to -- very
3 practical approaches. Its impact, I don't think, was
4 followed up in terms of analysis of whether or not that
5 could have been improved or not.
6 **Q.** Well, why wasn't it followed up?
7 **A.** Again, I would go back to perhaps we have a small team.
8 There are things that we prioritised during that, and
9 I don't think that was one of the ones we did and
10 visiting again, I think, sat with the CNO's group as
11 opposed to us.
12 **Q.** Okay. So was there any assessment of the impact of
13 those living in rural areas to access services?
14 **A.** No, that wouldn't have happened.
15 **Q.** Has there been any review done by the PHA of the ongoing
16 use of technology and the provision of services and the
17 impact that has upon health in Northern Ireland?
18 **A.** In terms of visiting or in terms of use of virtual
19 technology overall?
20 **Q.** Either way. As far as it falls within the PHA remit.
21 **A.** No, and I don't think it does fall within our remit
22 either.
23 **Q.** PHA Deputy Director of Allied Health Professions and
24 Public Involvement was the chair of the HSC Covid Staff
25 and Well-being Group, is that right? That was

1 established in early March 2020, and the role of that
2 group was to provide -- well, part of the role of that
3 group was to provide staff with support, guidance and
4 advice. And I think there was a website that had been
5 established.
6 Was enough done to provide support for HSC staff
7 during the pandemic?
8 **A.** I don't think it was. I think we can reflect back and
9 say that we didn't do enough, and I think it's something
10 which is lacking in our preparedness about how you
11 support, because as you can see, those things were
12 developed after the event, an arrival of the pandemic.
13 And that surely should have been something which was in
14 our planning prior to that as to how we support staff
15 through that.
16 I think one of the other things was, at the
17 outset, people were hopeful it was going to be
18 a short-lived thing, no one expected it to go on so long
19 and therefore the impact upon staff health and
20 well-being wasn't considered, and I think more could
21 have been done.
22 **Q.** Just to push back on that slightly. It was anticipated
23 there would be a second wave, I think, in early 2020 --
24 **A.** Yeah.
25 **Q.** -- so -- knew this wasn't going to be just a one wave

1 issue.
2 **A.** No, but I think it did -- at the very outset, I don't
3 think people thought that it was gonna be -- last as
4 long as quite it did, and have the far-reaching impact
5 that it did.
6 **Q.** And so when that became apparent that it was having
7 those long-lasting, far-reaching impacts, was more done
8 to provide the extra support for staff?
9 **A.** I think that could continue to meet and think about it,
10 and the psychological blows, seen through the PPE etc,
11 was around physical protection of staff, I think the
12 significant issue around whether or not the mental
13 health of staff was protected was not addressed in the
14 way that it should have been.
15 **Q.** One of the points of this, the advice that was given was
16 psychological helplines that were open to staff and
17 within the trust, local GP practices and independent
18 care providers. And I think every trust had its own
19 line that was -- allowed staff to seek psychological
20 help, is that right?
21 **A.** That is correct.
22 **Q.** Again, reading the one that we have in your tab 5 at
23 INQ000416738, all of those are 9 am to 5 pm Monday to
24 Friday; what would the staff member do if they needed
25 help on the weekend?

1 **A.** I suppose their own -- trust would have had their own
2 access to occupational health during those periods of
3 time as well, and there are others who have
4 psychological helplines which are right there, available
5 to the general public, I'd say, those hours.
6 **Q.** During a pandemic, could more have been done to make
7 sure that there were psychological services available to
8 health and social care staff?
9 **A.** Yes.
10 **Q.** Are there any -- apart from the topics that we've
11 covered today, are there any other lessons learned or
12 recommendations that you would wish the Chair to
13 consider?
14 **A.** I think for me, and I think it's come out in the
15 evidence that there was a -- we did not have enough
16 information flows or give enough due diligence to the
17 impact of pandemics or healthcare disease and people
18 from a black and ethnic minority background, and I think
19 certainly in Northern Ireland that needs to be a focus
20 for us, going forward.
21 I think the other thing which we are acutely aware
22 of in Northern Ireland is we are the only part of the UK
23 with a direct land border with another country, and we
24 I think there needs to be a recommendation about how we
25 work as an epidemiological unit, as an island, going

1 forward, and certainly we are working with the Republic
2 counterparts on maybe an all-Ireland surveillance
3 system.
4 **Q.** To test you quickly on those two, the second one
5 certainly has quite a large political element to it, is
6 that fair? Whole-of-Ireland epidemiological unit?
7 **A.** I'm not thinking it in terms of politics, I was only
8 thinking about it in terms of health, because one of the
9 things that we are acutely aware of is that it's a very
10 open land border, and that people and disease flows
11 across that without recognition. And yes, I am aware of
12 the politics of that, but purely from a health
13 perspective, in talking to our health colleagues, that
14 that would be welcomed and I think it's -- certainly in
15 terms of H5N1 and things like that which may be caused
16 by migrating birds coming across from the Atlantic from
17 America, they could land either side of that border,
18 could cause disease, and individuals will travel back
19 and forth.
20 **Q.** So is it that within the healthcare system, do as much
21 as you possibly can do, let the politicians, and then to
22 quote Ms Campbell in a different setting, just get on
23 with it?
24 **A.** I mean, there are other examples where we do work very,
25 very well with our counterparts in the Republic of

1 Ireland in terms of health, but I do recognise that
2 there are political decisions which are outside my
3 remit, but in terms of the health service, it sort of
4 makes sense.
5 **MR SCOTT:** Thank you, Mr Dawson.
6 My Lady, those are questions we have.
7 **LADY HALLETT:** I think we have some questions.
8 Ms Foubister, I think you are going first. Behind
9 the pillar.
10 **Questions from MS FOUBISTER**
11 **MS FOUBISTER:** My Lady.
12 Mr Dawson, I represent John's Campaign Care Rights
13 UK and the Patients Association. At paragraph 181 of
14 your witness statement you refer to work undertaken to
15 identify learnings from the pandemic, and to identify
16 areas for improvement. And you report that virtual
17 visiting services were found to be successful and
18 valuable in maintaining connections between patients and
19 loved ones.
20 Were you aware and did PHA consider that many
21 patients and staff found using or facilitating virtual
22 communications traumatising, particularly around the end
23 of life?
24 **A.** I think they were difficult around end of life at that
25 point in time, and I appreciate that for families and

1 loved ones who lost people in those circumstances, doing
2 that over electronic means is very difficult and hard.
3 But I think that there were other complexities at that
4 time, around IPC, etc, and the protection of other
5 people that might have been in the unit as well.
6 **Q.** And was anything done to address those concerns
7 particularly around end of life as you say?
8 **A.** I don't think a lot was done, I think there was empathy
9 around it happening, and none of us felt that that was
10 a satisfactory way, but I don't think anyone could think
11 of a better way of doing it, at that point in time when
12 the disease was expanding.
13 **Q.** And had there been any reflection on how it could be
14 done better?
15 **A.** I think it is something that we need to reflect further
16 on when we go through it, but at this point in time I'm
17 not aware of anything.
18 **MS FOUBISTER:** Thank you.
19 That's my question, my Lady.
20 **LADY HALLETT:** Thank you very much.
21 Mr Wagner. Over there, Mr Dawson.
22 **Questions from MR WAGNER**
23 **MR WAGNER:** Thank you.
24 Good afternoon, Mr Dawson, I ask questions on
25 behalf of the clinically vulnerable families. I first

1 want to ask you about the IPC guidance.
2 Professor Susan Hopkins, who I'm sure you know, is the
3 chief medical adviser of the UK Health Security Agency,
4 gave evidence to the Inquiry earlier in this module.
5 One of the things she said was that in her opinion, the
6 use of air filtration was not given sufficient priority
7 in IPC guidance, and she said that going forward,
8 greater consideration should be given to, for example,
9 to portable HEPA filters. Do you agree with that?
10 A. Yes, I do agree with it. I think even in our office now
11 we have a portable HEPA filter. I don't think they were
12 in use as much before the pandemic or people gave any
13 great thought to it, but again there is an issue around,
14 sort of, the building stock of the NHS, and some have
15 better air handling facilities than others. It goes
16 back to the age of estate and the local estate knowledge
17 of where sort of turnover of air and oxygen within
18 a facility might be, so it would be hard to do, I think,
19 very sort of high-level guidance, but again it might
20 come down to local risk assessment based on buildings
21 and estate knowledge.
22 Q. Thank you. Did the Public Health Agency, through the
23 Northern Ireland IPC cell, at any time give or consider
24 giving guidance on IPC measures to be implemented to
25 protect clinically vulnerable or clinically extremely

1 vulnerable patients in healthcare settings, for example,
2 staff wearing FFP3 masks or indeed patients wearing
3 masks?
4 A. I'm not aware of that specifically. If helpful, I can
5 find out and report back to the Inquiry.
6 Q. Thank you. And if that guidance wasn't given, would you
7 agree it does make sense that where there is
8 a relatively high risk to particular patients, that
9 specific guidance is put in place to protect them?
10 A. Yes, I do think, in terms of IPC, in terms of some of
11 the most vulnerable areas around cancer, that there may
12 have been some discussions in how you protect in that
13 sort of very clinically vulnerable group who might be
14 more immunosuppressed than the normal sort of population
15 in hospital, that's where there was some discussion.
16 **MR WAGNER:** Thank you.
17 **LADY HALLETT:** Thank you, Mr Wagner.
18 Mr Thomas.
19 Behind you, but could you make sure your answers
20 are going into the microphone, Mr Dawson, please.
21 A. Yes, my Lady.
22 **Questions from PROFESSOR THOMAS KC**
23 **PROFESSOR THOMAS:** Give me one moment.
24 Good afternoon, Mr Dawson. I'm asking questions
25 on behalf of FEMHO, Federation of Ethnic Minority

1 Healthcare Organisations.
2 I want to first turn to limitations on the
3 ethnicity data collection. In paragraph 124 of
4 Sir Michael McBride's statement, he addresses
5 limitations in data collection due to poor coding of
6 ethnicity in healthcare records in Northern Ireland.
7 Despite awareness of proportionate health inequalities.
8 Given Northern Ireland's smaller proportion of ethnic
9 minorities, do you believe that this demographic factor
10 contributed to the oversight in prioritising ethnicity
11 data?
12 A. Yes. Yes. As I said previously, I don't think we
13 served that population well in terms of our data and our
14 data collection. And I agree with you, I think that the
15 size of the population, I know we discussed that
16 earlier, did probably lead to an oversight in that area,
17 or wasn't given the focus I think I had as it should
18 have been.
19 Q. Well, given that, what strategies you would suggest to
20 prevent similar data limitations in the future, if we
21 have another public health crisis, to ensure that all
22 communities are represented accurately?
23 A. Well, firstly I think the strategy in terms of the
24 information data is led by the department, and I'm not
25 gonna step away from that, but my understanding is

1 through -- and we have had these discussions -- our new
2 digital encompass project, that sort of trust data, and
3 the ethnicity will be much better and there are single
4 ways which data can be entered in, and I think going
5 back, it -- sort of like the failsafe that you have to
6 record ethnicity.
7 So I do think there's a strategy now, going
8 forward, to have better data across all the range of
9 information relating to our population that we haven't
10 had previously. But that strategy sits, I think, with
11 the Department of Health. Although we're a significant
12 user we would wish to see that as well.
13 Q. Both you -- so I'm now moving on, I'm looking at
14 intersection between social deprivation and ethnicity
15 and in health inequalities -- both you and Sir McBride
16 discuss the significant role of social deprivation in
17 health inequalities exacerbated by the pandemic. In
18 Northern Ireland where ethnicity data remains poorly
19 coded, there exists a critical intersection between
20 social deprivation and ethnicity that may not be fully
21 understood or addressed. So, moving forward, how do you
22 propose that this intersection could be better
23 incorporated into data practices?
24 A. Again, we are developing our new corporate plan, and
25 I think it's one of the things that we would focus on is

1 people from sort of a wider or diverse range of
2 ethnicity. In terms of the -- where we would want to
3 see better data is obviously we will get that from the
4 hospitals, but as identified earlier, the data owner for
5 GP practices remains with the GPs. And I would like
6 more access into that information because that will give
7 you a better basis of the whole population, not just
8 those which end up in our healthcare trusts. We already
9 have good data in terms of our child health system, but
10 that obviously only runs to a certain age.
11 **PROFESSOR THOMAS:** Thank you.
12 My Lady, those are my questions.
13 **LADY HALLETT:** Thank you, Mr Thomas.
14 Ms Samantha Jones for the -- there we are, behind
15 you to your right.
16 **Questions from MS JONES**
17 **MS JONES:** My Lady, your counsel covered one of our
18 questions pretty adequately, pretty well, and I wondered
19 if I could ask permission to ask one follow-up question
20 on the corporate plan that Mr Dawson has mentioned
21 a number of times. I will keep to my three minutes.
22 **LADY HALLETT:** All right.
23 **MS JONES:** Thank you very much.
24 Mr Dawson, thank you. So just to clarify
25 an answer earlier that you gave to Counsel to the

1 Inquiry you said and accepted there was very poor data
2 on disability kept by the PHA during the pandemic. Can
3 I just clarify, was any mortality data on disabled
4 people kept by the PHA during the pandemic?
5 **A.** Not that I'm aware of but I can't sort of say that for
6 certain so I'd be happy to come back on that.
7 **Q.** Thank you. And then my additional question. On the
8 corporate plan that you've mentioned a number of times
9 in your evidence today, could you just help us with when
10 that corporate plan will be finalised in its drafting
11 and when it will be implemented by the PHA?
12 **A.** Our aim at this point in time is to go to consultation
13 in December and then that's a public consultation.
14 Final drafts should go to the agency board in March with
15 its implementation from April going forward.
16 **Q.** Thank you. My final question then is in relation to
17 paragraph 161 of your statement and there you outline
18 several different sources of deaths data and that was in
19 respect of the ways that the deaths data was collected.
20 I don't want to take you to it. In respect of that, can
21 you explain whether any of those sources of that deaths
22 data, collected data on whether someone had
23 a disability?
24 **A.** Again, I don't know if disability is recorded on that.
25 Again, I could come back if any of those are -- I'm very

1 clear to say we don't a statutory responsibility that
2 sits with NISRA and the GRO in terms of the information
3 which is collected around deaths.
4 **MS JONES:** Thank you very much, those are my questions.
5 **LADY HALLETT:** Thank you very much, Ms Jones.
6 And Ms Campbell.
7 Ms Campbell is there.
8 **Questions from MS CAMPBELL**
9 **MS CAMPBELL:** Mr Dawson, thank you, my name is Brenda
10 Campbell and I represent the Northern Ireland Covid-19
11 Bereaved Families for Justice.
12 Can I take you back, please, to the topic of
13 testing and in fact all of my questions will focus on
14 testing. And just to give it some context, we know that
15 as at 23 January 2020, so we're looking at a very early
16 stage in the pandemic, the Public Health Agency had
17 established the emergency operations centre. We know
18 that shortly thereafter the agency was asked to lead
19 departmental initiatives around testing and particularly
20 the expert advisory group on testing. And we know from
21 paragraph 95 of your statement that there then began
22 some nine iterations of guidance issued by the PHA but
23 in conjunction with the department on testing, the first
24 of which was on 19 March 2020.
25 And that focused -- it's behind tab 11 in your

1 bundle, it focused on testing of healthcare workers and
2 patients in hospital settings.
3 **A.** Yes.
4 **Q.** And just for the Inquiry's reference, the INQ number is
5 INQ000120705. It's that 19 March guidance that I'd like
6 to ask you some questions about. It was three pages
7 long and to give it some context the later guidance was,
8 towards the end of the guidance, were as many as
9 25 pages long. And it focused on the testing of some
10 symptomatic patients in hospital and some healthcare
11 workers in certain frontline duties starting at surgeons
12 and physicians. It didn't address anything about
13 testing on hospital discharge into other care
14 facilities, it didn't address anything about testing in,
15 for example, non-hospital care settings or care homes.
16 In relation to those issues, wider groups of
17 testing, do you know whether they were on the PHA's
18 radar at the time?
19 **A.** I'm not sure that they were on PHA's radar at that time.
20 I think the greater focus at that time was around
21 capacity within those secondary care settings to deal
22 with people with illness. So I'm not sure that they
23 were. But, again, I wasn't there and that's not
24 something which I think is covered within the documents
25 that you're referring to therefore, but I'm happy to go

1 back and check as to what consideration was given to
2 that, if helpful.
3 Q. You see, by 19 March, and again this Inquiry has heard
4 much in terms of context, we had been long witnessing
5 what had been happening in other parts of Europe, we
6 were the best part of a month after Northern Ireland's
7 first positive case. We were a week after
8 Northern Ireland had in fact suspended community Test
9 and Trace and it was very shortly before relatives of at
10 least two of our client group had passed away both
11 having contracted the virus in the same Belfast
12 hospital. Do you as an agency understand the concerns
13 on the part of the Northern Ireland Covid Bereaved that
14 there appears to have been, even at that very early
15 stage, a failure on the part of the Public Health Agency
16 to identify the importance of widespread testing of
17 healthcare workers and patients in various settings?
18 A. I accept that, yes.
19 Q. And do you agree that what appears to be some
20 last-minute scrambling to produce a three-page guidance
21 of the nature that you'll have looked at in preparation
22 for your evidence, from the perspective of the
23 Northern Ireland Covid Bereaved is inadequate?
24 A. I think it is inadequate. Again, as we said at this
25 point in time I wasn't there and whether or not those

1 who felt at the time it was adequate or it met the
2 needs, I don't know what pressures they were under or
3 what information they had in front of them or for what
4 purposes it was intended to be produced at that point in
5 time and what their driving factors were. Like you,
6 I have read the guidance but some of the information
7 behind that I'm not aware of.
8 Q. Picking up on that answer and in fact some of the
9 questions that you were posed by Mr Scott at an early
10 stage, given that you weren't there and you are not
11 aware of what impacted that guidance at the time, has
12 there been any reflection in the Public Health Agency,
13 about gaps and missed opportunities at that very early
14 stage?
15 A. I think it's fair to say no, that we haven't, I think
16 that was probably picked up as we went on. And the
17 further guidance that would have been more reflected in
18 further guidances that came out during the progress of
19 the pandemic. More as it happened as opposed to in
20 a retrospective way.
21 Q. Looking then at what happened at later stages in the
22 pandemic and actually coming to a point in time in which
23 I think you took up your post, although I'll be
24 corrected if I'm wrong, can we move in time then to
25 summer into autumn 2021, July in particular.

1 At paragraph 102 of your statement you tell us
2 about the Expert Advisory Group drafting a paper in
3 relation to testing support in relation to hospital
4 visiting?
5 A. Yes.
6 Q. And that paper concluded that testing of visitors should
7 be used in addition to other mitigations such as PPE,
8 and it observed that there was no consistent approach
9 across the UK, having done some analysis.
10 The paper -- and again for the Inquiry's reference
11 it's at your tab 15, INQ000343958 -- again, it's
12 a 3-page document. And within it, it observes that
13 individuals from within the Northern Ireland testing
14 team had met with officials from NHS England in January,
15 so six months previously. And at that time in January,
16 NHS England had offered testing to visitors to maternity
17 settings and to end-of-life care as a means to
18 facilitate visits at those very important times. This
19 document that's discussing those visits is dated
20 July 2021, so six months on from those discussions. And
21 you go on in your statement to indicate that it wasn't
22 until September 2021 that the CMO issued a letter
23 outlining then the availability of lateral flow tests to
24 support visiting in hospital settings.
25 Again, can you understand the concern of the

1 Northern Ireland Covid bereaved, many of whom were
2 denied access to their loved ones, that there was
3 a failure to appreciate the detrimental impact of those
4 restrictions on visiting at an early or a rapid enough
5 stage?
6 A. Yes, I can understand that.
7 Q. And can you understand why that chronology of January to
8 July to September gives the impression that there was
9 a lack of urgency or understanding in the PHA which was
10 leading on this in relation to both the plight of
11 patients and their loved ones?
12 A. Yes, I can understand that. Again, it's not
13 a discussion I have had with that team so it's hard for
14 me to understand what their considerations or things
15 that were going through their head as to why they
16 were -- why that took that period of time. But I do
17 understand that that is seen as a lack of timeliness on
18 our part.
19 Q. Well, can you also understand why the Northern Ireland
20 Covid bereaved might be so concerned that you haven't
21 had those discussions with those teams, and that again
22 there appears to be a lack of reflection and therefore
23 identification of areas of improvement going forward?
24 A. Yes, I can.
25 Q. And what's going to change?

1 **A.** I think as I leave today, I will discuss that with our
2 team, as to how we are better prepared to reflect on the
3 things that have happened during the period of Covid.
4 **MS CAMPBELL:** Thank you.
5 **LADY HALLETT:** Thank you, Ms Campbell.
6 Ms Iengar. I hope you're not going to get me into
7 trouble today.
8 **Questions from MS IENGAR**
9 **MS IENGAR:** My Lady, no.
10 Mr Dawson, I appear on behalf of the Long Covid
11 groups, I have some questions on the response to Long
12 Covid in Northern Ireland.
13 You've said to Mr Scott that data on staff deaths
14 and staff illness wasn't recorded in -- with reference
15 to the spreadsheet in tab 3. To confirm, does it follow
16 then that the Public Health Agency wasn't collecting
17 data on the number of healthcare staff with Long Covid?
18 **A.** No, it hasn't that I'm aware of.
19 **Q.** So there wasn't and still isn't a clear picture of the
20 harm Long Covid causes to healthcare staff?
21 **A.** That is correct.
22 **Q.** Do you agree that it's necessary to bridge that data gap
23 so that healthcare workers can be better protected from
24 long-term harm?
25 **A.** Yes.

1 **Q.** And, finally, Mr Dawson, you've been asked some
2 questions about the steps the Public Health Agency took
3 to support staff health and well-being and quite some
4 detail in your statement is provided on that,
5 paragraphs 72 to 84. Did the Public Health Agency take
6 any steps to support the health and well-being of
7 healthcare staff with Long Covid?
8 **A.** As I sit here, not that I'm specifically aware of but
9 again I'm quite content to discuss that with the team
10 and address that going forward and come back to the
11 Inquiry, Ma'am.
12 **Q.** Do you know why the impact of Long Covid on healthcare
13 staff was overlooked?
14 **A.** No, I don't.
15 **MS IENGAR:** Thank you.
16 My Lady, I'm grateful.
17 **LADY HALLETT:** Thank you very much for your help.
18 Thank you very much, Mr Dawson. I appreciate it.
19 It can't have been easy answering questions before you
20 were in post but obviously you've done your best. Thank
21 you for your help.
22 **THE WITNESS:** Thank you.
23 **(The witness withdrew)**
24 **LADY HALLETT:** I shall return at 1.50.
25 **(12.47 pm)**

1 **(The short adjournment)**
2 **(1.50 pm)**
3 **LADY HALLETT:** Mr Scott.
4 **MR SCOTT:** Good afternoon, my Lady. May I please call
5 Laura Imrie.
6 **MS LAURA JANE IMRIE (sworn)**
7 **Questions from COUNSEL TO THE INQUIRY**
8 **LADY HALLETT:** I hope you haven't been kept waiting too
9 long.
10 **A.** No, thank you.
11 **MR SCOTT:** Good afternoon. May we have your full name,
12 please.
13 **A.** Laura Jane Imrie.
14 **Q.** And you are the clinical lead for NHS Scotland Assure
15 and Antimicrobial Resistance & Healthcare Associated
16 Infection Scotland, commonly known by the acronym ARHAI?
17 **A.** That's correct.
18 **Q.** And that's a position you've held since 2018?
19 **A.** Yes.
20 **Q.** Could you please give us a little bit about your
21 professional background and qualifications?
22 **A.** Yes. I qualified as a nurse in 1993 and then went into
23 healthcare-associated infection surveillance quite
24 quickly in 1997. And then undertook a BAC in nursing
25 with a specialist practitioner called Vocation Infection

1 Prevention and Control and then took up an infection
2 control national job in the year 2000 and that's where
3 my career in infection control really started.
4 I completed a master's in infection control at the
5 University of the Highlands and Islands. I have held
6 jobs in large health boards in Scotland, NHS Glasgow,
7 NHS Lanarkshire, as lead infection control nurses, and
8 I came to Health Protection Scotland as the clinical
9 lead for their healthcare associated surveillance
10 programme and being there a few years I then became the
11 interim lead consultant and then I got my current post
12 in 2018.
13 **Q.** And so just a little bit about ARHAI. So ARHAI is
14 a clinical service providing national expertise -- in
15 that circumstance is "national" within Scotland?
16 **A.** Yes.
17 **Q.** -- for infection prevention and control, antimicrobial
18 resistance and healthcare associated infection. It's
19 part of NHS Scotland Assure which is a directorate
20 within NHS National Services Scotland.
21 Could you give us a little bit of relationship
22 between ARHAI and NHS Scotland Assure, please?
23 **A.** So in 2020, NHS Scotland Assure was formed as
24 a directorate within National Services Scotland and it
25 took -- which was the HAI Group and Health Protection

1 Scotland and Health Facilities Scotland and brought them
2 together as one directorate within NSS.
3 That came around after the cabinet secretary had
4 been involved in two children hospitals and there's
5 currently an inquiry ongoing into -- Scottish hospitals
6 inquiry, around the buildings of hospitals, and it was
7 concluded that facilities and infection control had to
8 work more closely together and to allow this to happen
9 it was felt that a national group, team, should be
10 responsible for looking at the guidance and the process
11 that was put in when we were building new hospitals or
12 kind of any kind of infrastructure builds to ensure that
13 infection prevention and control and engineering science
14 worked together.
15 **Q.** And is it working?
16 **A.** Yes, there's a number of projects we've supported. So
17 ARHAI Scotland has six priority programmes. One of them
18 is clinical assurance, where we have infection control
19 consultant nurses and some time of a consultant
20 microbiologist who support what we call key stage
21 assessment reviews, so KSARs. So when we work with the
22 board who is commissioning the build and NHS Assure
23 looks for the assurance that at the design stage, the
24 procurement stage, that they are meeting the guidance,
25 and that we are not progressing, spending money in

1 developing a build that would not meet the guidance for
2 facilities or IPC.
3 So, I think the feedback we have received from the
4 boards supported so far is that it takes a lot of
5 resource, it's a new process, but it's supporting the
6 board to build hospitals and support the local infection
7 control teams, the local facilities teams, to do a lot
8 of the translation of the guidance, and put that into
9 place when they're signing contracts as well.
10 **Q.** And part of ARHAI -- we'll come a little bit later on to
11 how it makes guidance, but part of ARHAI's role is to
12 produce the national IPC manual?
13 **A.** That's right.
14 **Q.** And when was the national IPC manual brought in in
15 Scotland?
16 **A.** It was first published in 2012.
17 **Q.** And obviously we've heard a lot of IPC guidance over the
18 course of this Inquiry. Did the Scottish IPC guidance
19 in relation to Covid-19 and particularly about routes of
20 transmission, use of masks, healthcare workers, did it
21 follow the UK IPC cell guidance throughout the course of
22 the pandemic or did it differ at any point?
23 **A.** So the IPC guidance, that was a decision that was taken
24 by NERVTAG, for what infection control guidance were
25 going to be in place.

1 **Q.** Just in terms of whether there's been any diversion
2 between Scottish guidance -- is it right that the
3 Scottish specific guidance first came in in October
4 2020?
5 **A.** Yes, we developed our own guidance in 2020, but I think
6 it's quite important for the Inquiry to understand
7 what -- when we developed guidance in 2020, how we got
8 to the guidance that was already in the UK.
9 **Q.** I'm going to approach this chronologically, so maybe
10 when we get to October 2020 we'll touch on it then,
11 rather than it take out of sequence, if that works.
12 **A.** Okay.
13 **Q.** I just want to ask you a couple of very broad questions.
14 On reflection, do you think that the IPC
15 guidance -- and when I talk about IPC guidance, I'm
16 going to be focusing on routes of transmission, use of
17 masks of healthcare workers primarily, and also the use
18 of ventilation -- was it always correct as that guidance
19 developed over the course of the pandemic?
20 **A.** Was it always correct?
21 **Q.** Yes.
22 **A.** The mode of transmission?
23 **Q.** The IPC guidance about how it assessed what the mode of
24 guidance was, about what masks should be used by
25 healthcare workers. When you look back on the guidance,

1 would you change anything?
2 **A.** I think it was an evolving situation. There was
3 evidence that had to be reviewed continuously. We had a
4 very small team of scientists, but they were working
5 7 days a week to try and keep on top of the evidence
6 that was coming out. I think we did respond to evidence
7 either from groups like NERVTAG, SAGE, the Advisory
8 Committee on Dangerous Pathogens, international
9 evidence, I think there was a constant review of the
10 guidance, and there was changes made as we understood
11 the pathogen and the transmission routes throughout the
12 course of the pandemic.
13 **Q.** So the answer yes, as the guidance changed over the
14 course of the pandemic at all times, you made the right
15 changes at the right times?
16 **A.** Yes.
17 **Q.** And so I assume, based on your answers, you're satisfied
18 that it accurately reflected scientific understanding
19 throughout the pandemic?
20 **A.** Yes.
21 **Q.** Do you think it took a sufficiently cautious approach to
22 the risk of airborne transmission or aerosol
23 transmission when AGPs or aerosol-generating procedures
24 are not being used?
25 **A.** I think the position we were in, it was very constrained

1 by the dichotomy of describing something as "droplet" or
2 "airborne". My position today would probably align with
3 that of the technical group, the World Health
4 Organisation, where although they can't come to
5 a consensus whether there's traditional airborne or
6 droplet, they did come to the consensus that it would be
7 more helpful to start to describe things as transmitting
8 through the air. And in fact, ARHAI have completed the
9 systematic literature review now on transmission, it's
10 that would also support in -- a transmission through the
11 air rather than describing things as "droplet" or
12 "airborne".
13 **Q.** So it appears from that that the fundamental starting
14 point was that airborne-droplet dichotomy; is this where
15 you're talking about there's that boundary of size and
16 everything underneath it is considered to be aerosol,
17 and everything over, I believe it was 5 micrometres, is
18 a droplet? Is that the genesis of this?
19 **A.** Yeah, I think, on reflection, to describe by size isn't,
20 for the people using the guidance, always an easy way to
21 understand what you're asking them to do. I think going
22 to there was transmission through the air of a pathogen
23 and a risk-assessed approach of what environment you're
24 in, what procedures are you doing, what is the
25 pathogen -- if you know -- that there needs to be a more

1 risk-based approach.
2 **Q.** Okay, I'm going to come and look and see how some of
3 those appeared in practice.
4 If we can please have on screen INQ000474276.
5 That's page 50, paragraph 129. And this is the expert
6 report provided by Professor Beggs to the Inquiry. And
7 it says that:
8 "Prior [to] the Covid-19 pandemic and up [until]
9 23 December 2021 when the WHO softened its stance
10 scientific consensus amongst the medical community (but
11 not ... physicists and engineers) was that SARS-CoV-2
12 and influenza were not airborne ..."
13 And then the classification of the WHO, and this
14 was reflected in the WHO guidance on the ventilation of
15 healthcare facilities.
16 To what extent did the IPC guidance seek to follow
17 the approach of the WHO?
18 **A.** We reviewed the WHO, any communication, any reports that
19 they put out. We did review it. We reviewed the other
20 international evidence, CDC, and as we touched on
21 earlier, Scotland moved to its own guidance in
22 October 2020, and through the Covid Nosocomial Review
23 Group we brought in international experts to join our
24 meetings and to listen to the discussions and the
25 challenges that we were having, and to offer us advice

1 based on their experiences as well. So I think we did
2 look widely to see what other people's experiences were,
3 if we could learn anything from that, and that included
4 the WHO, but much wider as well too.
5 As an emerging situation, you were looking to the
6 literature that was published, but quite often, by
7 speaking to counterparts in other countries, you could
8 get really good information that hadn't been published,
9 so we were really, as an infection control community,
10 looking to share learning as quickly as possible.
11 **Q.** Was there a desire to closely follow the WHO's guidance
12 over the course of the pandemic?
13 **A.** No, I don't think there was a desire that we were
14 sticking with the WHO regardless of what they said, no.
15 **Q.** So just on this point here. When the WHO softened its
16 stance on airborne transmission of SARS-CoV-2, in your
17 own mind, was there a connection between the WHO's
18 change of stance towards airborne transmission
19 in December 2021 and the change of the UK IPC guidance
20 in early January 2022 which appears to have followed the
21 WHO's change?
22 **A.** So, again, I'm thinking back to what the guidance in
23 Scotland said. In October 2020, in Scottish guidance we
24 had made FFP3 available for all pathways, for when we
25 were doing AGPs. And we made some changes, I think in

1 2022, there was actually a directorate level policy from
2 the government to say in Scotland you could wear the
3 FFP3 if you'd done a personal assessment, and that was
4 on our guidance.
5 I'm not sure the IPC guidance change was made
6 then.
7 **Q.** But as far as you can remember, you were still on the
8 IPC, UK IPC cell in January 2022?
9 **A.** Yes.
10 **Q.** So, given we're talking about the relationship between
11 the WHO and the UK IPC cell, was there a change in the
12 IPC guidance within the United Kingdom that had been
13 produced following the views of the UK IPC cell that
14 arose because the WHO had changed its stance in
15 December 2021?
16 **A.** I think there was a more robust approach taken to the
17 hierarchy of controls around that time, and that might
18 have been -- the WHO might -- though the evidence that
19 came out from the WHO might have, you know, been
20 something that was considered, and that -- I can't
21 remember exactly why those changes were made at that
22 time.
23 **Q.** Okay, because the CMO technical report was published
24 1 December 2022. I believe that you were a reviewer of
25 the IPC section of chapter 10 about improvements in care

1 of Covid, is that right?
2 A. Yes.
3 Q. And contained in the CMO technical report is a line that
4 it is important that UK Covid-19 IPC guidance remained
5 consistent with WHO recommendations. Why was it --
6 conceptually, why was it important that the UK's
7 guidance remained consistent with the WHO
8 recommendations?
9 A. I think it was important that as a minimum, the IPC
10 guidance within the UK was aligned with what the World
11 Health Organisation were saying. The World Health
12 Organisation are the experts across the globe, so they
13 are the people that have studied infectious pathogens
14 and how we control them, their whole careers. So
15 I think it is important that we trust that the minimum
16 of what is required by the World Health Organisation we
17 are consistently meeting.
18 Q. So does that mean that you were never likely to go below
19 a level of protection that the WHO were suggesting?
20 A. Yeah, I don't think we'd ever went below what the World
21 Health Organisation were suggesting.
22 Q. But it was entirely open to the IPC cell to take the
23 decision to offer additional protection to that
24 protection proposed by the WHO, is that fair?
25 A. Not the IPC cell. So the IPC cell had no role, remit or

1 authority to change the mode of transmission and the
2 mode of transmission that the controls were put in place
3 for healthcare were the same mode of transmission that
4 Public Health were putting public health measures in
5 place for, for the general public, other key workers
6 such as teachers, police, shopkeepers, so I don't think
7 the IPC cell had the role, remit or authority to change
8 what the mode of transmission was for a pathogen when
9 it's been decided internationally by international
10 experts and we have NERVTAG, ACDP, the senior
11 clinicians, UKHSA, so I don't think the IPC cell were
12 ever going to be the ones who changed how we controlled
13 a pathogen.
14 Q. That document can come down now, thank you.
15 But the UK IPC cell were the ones who were
16 providing effectively their views on what the guidance
17 should look like in terms of IPC guidance in the
18 United Kingdom, isn't that right?
19 A. Yeah, so that -- I think that's an important point. So
20 NERVTAG who are the governance advisory group to the
21 government and they have the structures around it, they
22 had done the assessment and it was decided long before
23 the IPC cell was set up that the guidance that we would
24 do would be the pandemic influenza guidance.
25 Now, this is a group that assesses new and

1 emerging respiratory pathogens so we would take counsel
2 from them as to what the IPC -- and then we would look
3 at the evidence and write the IPC for healthcare
4 guidance around that. The IPC cell was, if you like,
5 an informal cell, it hadn't been set up as part of the
6 pandemic structure for response. It was, if you like,
7 the UK leads in each of the four countries saying: let's
8 come together and try and put some guidance together
9 rather than us all doing something separately.
10 We reported informally to the chief nursing
11 officers, but it wasn't an advisory group the same as
12 ACDP, NERVTAG, SAGE or the senior clinical group, so we
13 didn't have the authority to start changing the mode of
14 transmission. We can give consensus that the mode of
15 transmission and the evidence that we are reviewing both
16 in our local epidemiology, from the hospital local
17 teams, and the evidence that's published in
18 international journals, we could then give a consensus
19 to say, well, actually, we're seeing signs now that the
20 controls we are putting in place around droplet are not
21 working.
22 But we would never be the ones who would have
23 changed the modes of transmission.
24 Q. The reasons I'm asking the questions is to have
25 an understanding of how you and how you thought that the

1 IPC cell functioned and effectively what its role was
2 within providing IPC guidance.
3 So, the fact that the IPC cell was set up at all
4 was as a result of a perceived gap in the response to
5 the pandemic?
6 A. Yes.
7 Q. So it was clearly doing something above and beyond what
8 NERVTAG was doing?
9 A. Yes.
10 Q. And it had the four public health bodies, so it had the
11 IPC specialty and specialisms across the United Kingdom
12 who were all members of it?
13 A. Yes.
14 Q. And guidance was produced as a result of the consensus
15 view of the IPC cell, is that right?
16 A. So NERVTAG had made the decision that we --
17 Q. I'm not talking about the specifics, I'm talking just
18 generally that IPC guidance, after the initial guidance
19 had come through from the pre-pandemic that was based on
20 the influenza, everything subsequent to that, any
21 changes that may arise would have been following
22 a consensus view expressed by the UK IPC cell, is that
23 right?
24 A. Yes, we make the guidance thereafter.
25 Q. And so you would have been aware and other members of

1 the cell would have been aware, as far as you know, that
2 you were the ones who were providing that core advice as
3 to what the IPC guidance was going to look like?
4 **A.** Yes, in consultation with other organisations, groups
5 and feeding up. We didn't come to a consensus and then
6 publish the guidance. So if there was changes to be
7 made to the guidance, for instance in Scotland I would
8 have taken that back. If there was changes that I felt
9 were going to affect the kind of principles of the
10 guidance that would affect Scottish guidance that would
11 have come back to the Covid Nosocomial Review Group
12 which was a multi-agency, multi-disciplinary group. We
13 had consultants in public health, virologists,
14 microbiologists, occupational physicians, workforce,
15 Scottish Government. A wide, wide variety of
16 specialists and organisations and those changes would
17 have been discussed in depth at that group. That was
18 our governance about if we accepted.
19 So there was no decisions, discussions being made
20 at an IPC cell on guidance.
21 And likewise, other members of the IPC cell,
22 whether they were Public Health England or NHS England,
23 they would have went back to their, whatever their
24 governance was around guidance for their country and
25 then brought that back to the IPC cell for discussion.

1 **Q.** Yes, but given that you were a pan-UK body that was set
2 up specifically to respond to the pandemic that has
3 effectively the lead knowledge of infection prevention
4 and control in the United Kingdom, the consensus view of
5 that body was always going to carry the most weight
6 about what that guidance should look like; isn't that
7 right?
8 **A.** Well, not necessarily. We have the specialty of
9 infection prevention and control but if I took something
10 back to the infection control doctors network in
11 Scotland and infection control nurses network and they
12 said to me, "That's never going to work, that's not
13 practical, you can put that in your guidance but we
14 can't follow it", then that needs to be fed back and
15 then we need to address what's going into the guidance.
16 So it's always in consultation and all through the
17 pandemic there was a lot of consultation done with a lot
18 of groups to understand what it meant.
19 And it was a two-way conversation. So ARHAI
20 facilitated weekly meetings with our networks and the
21 boards and the special health boards and the issues that
22 they brought back were then considered at both CNRG and
23 we'd feed back into the IPC cell, and that was things
24 like -- the networks were feeding back that although
25 staff were wearing masks, and this was quite early on in

1 the pandemic, that they'd discovered there was a lot of
2 car-sharing going on and when they investigated staff
3 clusters it turned out that they were car-sharing and
4 that was fed back and then very quickly it went into the
5 guidance and into policy about car-sharing and masking.
6 **LADY HALLETT:** I missed the word and so did the
7 stenographer.
8 Did you say "cashiering"?
9 **A.** Car-sharing.
10 **LADY HALLETT:** I am so sorry.
11 **MR SCOTT:** But that information would then have been fed
12 back into the IPC cell, it wasn't that there was
13 somebody -- it wasn't there was another level who would
14 have said, "Well, thank you very much for your advice
15 but we're going to do something different." Isn't the
16 practical reality that the advice that came out of the
17 IPC cell which said "This is what our advice is", was
18 going to be followed across the United Kingdom?
19 **A.** Yes, but it didn't just come from the IPC cell members.
20 What came out of the IPC cell was as a result of wide
21 consultation with CMOs, CNOs, you know, NERVTAG, and
22 each country had its own nosocomial group that was
23 considering what the guidance changes would be alongside
24 the local Epi and other evidence.
25 **Q.** Did anybody in any part of the United Kingdom ever

1 change or not adopt a view that had been expressed as
2 a result of consensus of the UK IPC cell or were those
3 always implemented?
4 **A.** No, I think there was some colleges that developed their
5 own IPC guidance that might have been different.
6 **Q.** Yes, but that's separate. I'm talking about when
7 consensus advice had been provided by the UK IPC cell to
8 the four different nations to the United Kingdom or any
9 other Senior Clinicians Group, did anybody ever change
10 it or did they just say, "We've taken that advice, thank
11 you very much", and it got adopted?
12 **A.** Well, I think that was one of the things that led to
13 Scotland developing their own guidance in October 2020.
14 Some of the feedback we got from our service providers
15 and stakeholders was around they wanted, you know, more
16 flexibility in using FFP3 across all pathways. There
17 was some kind of local guidance that they felt their UK
18 guidance couldn't provide and therefore it left gaps for
19 the Scottish workforce.
20 So there was feedback like that. And I think
21 there was maybe a couple of occasions where the CNOs
22 came back to ask for more information or to understand
23 the evidence better.
24 **Q.** Okay. Why was it ARHAI was providing rapid reviews to
25 the UK IPC cell?

1 A. We weren't providing them to the IPC cell.
2 Q. Then why were they being looked at by the IPC cell?
3 A. Because there was nothing else available.
4 Q. So does that mean it was only ARHAI providing scientific
5 advice that was considered by the IPC cell?
6 A. No. That means that very early on in the pandemic, both
7 infection control professionals and clinicians were
8 coming to ARHAI to say, "I've seen this article online
9 today, and it tells me that if you smoke, you're less
10 likely to get Covid", and there it was, it was
11 published, they didn't -- it didn't feel right, there
12 was a lot of information coming through quickly. That
13 was one example.
14 So ARHAI decided to do rapid reviews so that we
15 could provide our Scottish stakeholders with a single
16 place to go and see what's been published online, and
17 again, we were doing a lot of pre-print publications.
18 So, normally, if you have a publication in a peer
19 reviewed journal that has went through quality
20 assurance, you're quite reassured that the methodologies
21 used and the outcomes have been checked with peers.
22 During the pandemic, in order to get intelligence out
23 quickly, a lot of journals were doing what they call
24 pre-print publications. So we --
25 Q. We'll come to look at the methodology, I'm just trying

1 to have an understanding about who was providing rapid
2 reviews --
3 A. Yes.
4 Q. -- (Unclear: multiple speakers) -- of the IPC cell,
5 because ARHAI were providing rapid reviews?
6 A. ARHAI were providing rapid reviews to allow infection
7 prevention and control specialists in Scotland to go to
8 one place so they could see what had been published and
9 what the scientists had reviewed. We chose to publish
10 them rather than just share them through email so they
11 were easily accessible.
12 We never intended that we would be the
13 organisation that done rapid reviews for the next
14 two years on IPC. We thought that an international body
15 or UKHSA, or -- you know, somebody would then take over
16 looking at the international evidence that was out
17 there, but nobody did, so we continued to do a rolling
18 programme of rapid reviews.
19 My reflection on that is that we filled a gap and
20 we continue to do that, and maybe it would have been
21 more beneficial if the IPC cell had had a separate
22 subgroup, an evidence subgroup that maybe brought people
23 from some of the other groups, say it's NERVTAG, and it
24 was a UK group.
25 Q. Different -- would that include different -- groping for

1 the word here -- experts, thank you -- of different
2 then -- so physicists or engineers or anyone of that
3 category, or so just simply the IPC?
4 A. No, it would include -- it would be a separate evidence
5 group that could look at the evidence and then provide
6 recommendations or conclusions for guidance development,
7 the same way that we use the methods in the manuals.
8 Now, albeit you would have to reduce some of the stages,
9 but I think on reflection that might have helped other
10 UK nations feel that there was a sense of belonging,
11 that it had been more of a collaboration, that they were
12 more -- it was more clear to them how the rapid reviews
13 had been done, if that was the only thing that was
14 available for the IPC cell to use.
15 Q. Did you get a sense that other bodies did feel like
16 that?
17 A. I think sometimes, when you're working across the UK, it
18 can be challenging if there's a piece of work just done
19 by one country and the other countries are asked to
20 adopt it. So -- maybe because they don't buy into it
21 the same because there's not been the same involvement,
22 maybe because they don't understand or they don't know
23 the people who have done the rapid review and they don't
24 know the people that have done that bit of work, so
25 there's maybe the confidence on how it's been done.

1 Q. So how did it work? If you're a UK IPC cell member,
2 were you emailed the latest ARHAI rapid review after it
3 had become apparent that nobody else was doing these
4 rapid reviews?
5 A. No, no. Our rapid reviews were never commissioned by
6 the IPC cell. They were published every month, so they
7 were readily available to anybody, members of the
8 public, anybody. They were there.
9 Q. So it could be that a UK IPC cell member would arrive at
10 the meeting and wouldn't have read the rapid review?
11 A. It may be.
12 Q. In the absence of any member of the UK IPC cell not
13 having read something like the ARHAI rapid review, how
14 would they necessarily have had a sufficiently broad
15 understanding of what the current scientific basis was
16 for what the IPC guidance should be based on?
17 A. I don't feel I can comment on how others prepared
18 themselves to come to IPC meetings.
19 Q. I want to then look at the methodology that was used by
20 ARHAI on the basis of these rapid reviews.
21 It's right to say that prior to the pandemic,
22 ARHAI, or when you were creating the National Infection
23 Prevention and Control Manual, then, when you're
24 producing guidance, that would take a period of
25 a minimum of six months?

1 A. Yes.
2 Q. And that would form a well-established process and
3 a systemic -- systematic literature review?
4 A. Yes.
5 Q. And that's not something that was possible to do in the
6 context of the pandemic?
7 A. No.
8 Q. And so there was a different methodology that was
9 applied?
10 A. That's right.
11 Q. How did you choose the methodology that was used to make
12 those rapid reviews? Is there an international or
13 national standard, or?
14 A. No, there's no international or national standard for
15 doing rapid reviews. Rapid reviews are normally done
16 to -- and we do rapid reviews routinely. If you're
17 supporting an instant management team that is looking to
18 control an outbreak, you might make a rapid review for
19 them, so you're just quickly looking at the evidence.
20 But they wouldn't then go and -- to be published as
21 guidance.
22 During the pandemic, the evidence was emerging so
23 quickly that you would not have been able to do
24 a systematic review. By the time you finished, the
25 evidence would have changed, you would have moved on to

1 a different variant. So the methods that were chosen --
2 we chose to use for rapid review were really a cut-down
3 on the methods that we would do a systematic review, and
4 removing some of the kind of more resource-intense
5 steps, like normally in a systematic review we would
6 have two independent reviewers; we didn't have that, we
7 had two reviewers and they both reviewed different
8 publications. We cut down the number --
9 Q. Just when you're talking about two reviewers but they
10 reviewed independent -- different publications, so it
11 wasn't that --
12 A. There was no one -- there wasn't two independent
13 reviewers going through the same as we would for
14 a systematic, but the scientists were reviewing
15 thousands, thousands of articles every week.
16 Q. How much time did they spend doing that?
17 A. They're full-time, 7 days a week. They worked hours.
18 We only had access to four scientists at the time.
19 Q. Could you -- without naming them, are you able to give
20 broadly their qualifications for the role they were in
21 to be able to perform that task?
22 A. Yes. One of the scientists is actually a dentist who
23 left dentistry and had developed research interest
24 around healthcare-associated infection and came to
25 ARHAI. And the other scientist is the principal

1 scientist for ARHAI who has been working in the area of
2 healthcare infections for many years, and has been kind
3 of fundamental in the development of our methodologies
4 and indeed our kind of updated methodologies that we
5 published in 2024.
6 Q. Do you have any -- and this may be on reflection -- did
7 you have any concerns or thoughts about whether they
8 were necessarily the best qualified people to perform
9 those rapid reviews?
10 A. No, I don't have any concerns. They were following
11 science methodologies although it was cut back. They
12 are very experienced in both literature reviews,
13 guidance and working in healthcare. And developing
14 infection prevention and control.
15 We have very robust structures when we're doing
16 guidance. We publish. We are -- although we have
17 reflected on some of the criticism around how open we
18 were in the rapid reviews and which evidence we didn't
19 consider, and -- as I said, the lead scientist has now
20 developed a new methodology that we've piloted for the
21 last two systematic reviews, which is more open, as in
22 we would provide our kind of considered judgment forms
23 on -- we'll publish them as well so that people get
24 a better understanding of what evidence we reviews, what
25 messages we took from the evidence and how it became

1 a recommendation, and -- so they can really follow
2 through from the evidence we've reviewed, through to
3 what comes out in the guidance. So --
4 Q. Is that a lesson learned from the experiences during the
5 pandemic?
6 A. Yes. We fed back within our teams that a lot of the
7 criticism we got, and some of it was on social media,
8 some of it might have been coming in through questions,
9 that people couldn't really follow where the guidance
10 got the evidence from. So the rapid reviews, again --
11 and another thing we reflected on was -- in some of the
12 rapid reviews, there is the word "recommendation", and
13 it wasn't a -- which might have confused some people
14 into thinking that the rapid reviews in theirself were
15 guidance. So we've now made changes that in rapid
16 reviews, we will never say there's a recommendation from
17 a rapid review. And there will be more conclusions that
18 we've drawn that would then go on to be considered for
19 guidance.
20 So there, I think are kind of two things we've
21 changed.
22 Q. Would you change the -- because when you read the rapid
23 reviews, it doesn't appear in the way that you would for
24 a systematic review, that there is a kind of grading
25 that is assigned to any of the studies or any of the

1 conclusions. Doing a rapid review now, would you
2 include that grading?
3 A. So that's part of what I think, you know, if you have
4 an IPC cell then you need to resource that cell. So we
5 had an IPC cell that brought together the kind of
6 national leads and some of the staff within those
7 teams --
8 Q. So just at the moment -- maybe I'm talking about two
9 different things. At the moment I'm trying to talk
10 about those who were writing the ARHAI rapid reviews and
11 how that document looked when it's finished.
12 A. Yes, so we didn't have the resource to do that, to do
13 what -- you're talking about the grading and --
14 you know, that's part of why a systematic review can
15 take up to six months. We were turning these over and,
16 as I said, the scientists were reviewing thousands of
17 papers a week. So we were turning these over very
18 quickly, and the limitations are all there.
19 I think the lesson I would take for the future is
20 if you need to do rapid reviews because you have another
21 emerging pathogen and you don't have the evidence
22 historically, then you should resource an evidence
23 subgroup for IPC guidance that could then maybe take on
24 some of that, and have the grading, and make it more
25 clear and open for people to understand what the

1 evidence has said.
2 Q. Because that grading would also then help the readers to
3 have an understanding of the strength of the assessment?
4 A. Yes, yes.
5 Q. And it would help prevent any risk of bias?
6 A. Yes.
7 Q. And you said you were resourcing this evidential
8 subgroup. What resource do you think it needs? How
9 many bodies does it need?
10 A. I think, first, we need to look at what are the groups
11 that are set up for an emergency response when there is
12 an infection prevention and control or a healthcare
13 nosocomial element to it. And I think that came through
14 in some of the lessons learned both from CNRG and the
15 IPC cell about -- that the structures should be in
16 place, so, similar to SAGE, NERVTAG, ACDP and other
17 advisory groups. And the terms of reference should be
18 agreed outwith the group rather than the group coming
19 together and agreeing their terms of reference, and
20 asking CNOs and others, "Is that what you want to us
21 do?"
22 Q. Is that because it would provide better transparency and
23 openness by doing it that way? Is that the reason why
24 you think it would be a good idea, or?
25 A. I think it would be a good idea because when WHO or

1 UKHSA announced that we have an epidemic, a pandemic
2 response required that the structures are well
3 understood and the roles and responsibilities are well
4 understood of what groups are going to be asked to
5 deliver.
6 Q. I want to then talk about the start of the pandemic, so
7 moving away from how the rapid reviews were conducted
8 and have a look about what the guidance actually said.
9 You were talking about the NERVTAG guidance from,
10 I believe it was around 13 March, and that was the
11 pandemic influenza guidance that had been adapted; is
12 that correct?
13 A. Yes.
14 Q. Why do you think, at that point in time, that in terms
15 of the understanding the route of transmission, so
16 whether aerosols could be generated outside of AGPs, why
17 do you think that that evidence, that that guidance was
18 right at that time?
19 A. Sorry, I don't understand the question.
20 Q. I'll rephrase. I phrased that very badly.
21 The NERVTAG guidance said that you should be using
22 FFP3s because there could be a route of transmission via
23 aerosols when there are AGPs. It didn't suggest using
24 FFP3s when there wasn't the use of AGPs; that's right,
25 isn't it?

1 A. Yes.
2 Q. And so, effectively, that's suggesting that there's no
3 risk of aerosol transmission when there's no AGP?
4 A. Yes.
5 Q. And did you agree that that was a correct analysis based
6 on the science at the time?
7 A. Yes.
8 Q. And why do you say that was?
9 A. That -- the droplet transmission?
10 Q. Yes.
11 A. Historically it involved the use of fluid-resistant
12 surgical masks. It has been used for influenza
13 outbreaks in healthcare for many years. I think the
14 science behind it was that not that you're not expelling
15 aerosols, it's just that only when you were doing
16 aerosol-generating procedures was there enough expelled
17 that would then be a risk.
18 Q. Is that based on a presumption or is that based on clear
19 unequivocal scientific evidence?
20 A. So I think there's lots of gaps even today and the
21 evidence between droplet and airborne, and I'm sure
22 you're aware even the technical group at WHO that
23 published in April brought together experts from
24 engineering, aerosol science, IPC, and I think the first
25 thing that the chief scientist said is they were unable

1 to agree on many of the key points and I think today
2 there's still not agreement from everybody around
3 whether aerosols actually cause the transmission outwith
4 AGPs.
5 **Q.** Can I take you to the CMO technical report. If we can
6 go to INQ000203933, page 51. And it's the second
7 substantive paragraph up from the bottom, it's just
8 following on from footnote 214. It says:
9 "Even transmission at close range was subject to
10 prior assumptions, with the belief that the risk was
11 posed by large droplets rather than the more
12 concentrated small aerosols, resulting in reduced
13 focus on masks for protection against inhalation for
14 people at close proximity."
15 Do you agree with that analysis contained in the
16 CMO technical report?
17 **A.** Yes.
18 **Q.** Do you believe now that what's classified there as prior
19 assumptions, are they a correct representation of the
20 scientific position or actually has the science today
21 shown that those assumptions are wrong, or potentially
22 wrong?
23 **A.** I think there needs to be more research to truly
24 understand and I think that's why I would agree with the
25 approach that WHO are taking to stop using the dichotomy

1 of droplets and aerosols and move to a more risk-based
2 assessment of the patient, the pathogen, the procedure
3 and the environment, and the staff member as well.
4 I don't find it helpful, and I did, I have seen another
5 bit that says, it suggests we move the droplet size or
6 the aerosol size but I don't think that will make it
7 less confusing.
8 **Q.** Does it come down to, do you not need to protect against
9 a route of transmission where there might be a risk that
10 that pathogen will transmit via that route? It doesn't
11 really matter about the science behind it, if a risk
12 exists, you protect against it, particularly at the
13 early stages of a pandemic?
14 **A.** So they start off -- Covid-19 started off, as you know,
15 as a disease of high consequence and then it was
16 reviewed by NERVTAG and others to be downgraded,
17 I think; yes, if you have an emerging pathogen then we
18 should take the highest precautions.
19 **Q.** Do you think you did in the way that the IPC guidance
20 was first looked at and first reviewed by the UK IPC
21 cell, whether or not NERVTAG had originally provided it,
22 did you not look at it and then think maybe we need to
23 change this, quite early on?
24 **A.** There is still no evidence in healthcare settings that
25 you, to recover viable viruses from aerosols -- I mean,

1 we've recovered RNA, there is always a risk that yes,
2 that can be a route of transmission, but you have to
3 weigh that up against all the unintended consequences
4 when you apply that precautionary principle.
5 **Q.** I just want to look at the way Health Protection
6 Scotland dealt with aerosol-generating procedures.
7 If we can go, please, to INQ000189647, and it's
8 page 2.
9 Did you have any involvement in creating this in
10 your role within ARHAI?
11 **A.** No.
12 **Q.** If we can please go to page 7. And it's that second
13 page, sorry that second paragraph. So:
14 "In the systematic review completed by
15 transaction ..."
16 We heard from Professor Beggs that this is
17 effectively the genesis of AGPs, that there was believed
18 to be an increased risk of transmission of SARS.
19 "That said, some of these procedures are
20 considered to have a theoretical risk of
21 aerosolisation, and therefore are listed as AGPs based
22 on the consensus of expert opinion, specifically,
23 induction of sputum."
24 Is it not there that Health Protection Scotland in
25 the context of AGPs are saying that you need to take

1 a cautious approach to whether these AGPs do produce
2 aerosols, yet even at the time that they recognise that
3 aerosols could be produced by the human body outside
4 AGPs, they weren't taking such a cautious approach?
5 **A.** Yes, I think attributing risk to any single procedure
6 is -- with any level of certainty is very challenging
7 and we've seen that throughout the pandemic where
8 several independent AGP panels internationally looked to
9 describe what an AGP was and the risk was to a single
10 procedure and they found it very challenging that the
11 evidence was sometimes missing. And again that's why
12 I would say we should be moving towards allowing staff
13 to make that assessment on the risk based on the
14 procedure, the patient, the pathogen.
15 **Q.** Yes, but I am more talking about an approach. Because
16 if we just go slightly further down in this document,
17 it's the bottom paragraph, it says:
18 "Although there is an absence of strong evidence
19 to support some of the procedures listed as AGPs in
20 this document this does not mean that there was
21 an absence of risk. A precautionary approach should
22 be taken for all AGPs specified as potentially capable
23 of generating infectious aerosols from patients
24 suspected or known to have respiratory infections."
25 So that was the view taken in March 2020, so in

1 the paragraph above which was talking about only
2 theoretical risk of aerosolisation, would you agree
3 that's taking a cautious approach to AGPs in March 2020,
4 that's what that document is doing?
5 **A.** Yes.
6 **Q.** If you were to read that bottom paragraph again, and you
7 were to replace "AGPs" with "aerosol transmission by the
8 human body outside AGPs", why wouldn't exactly the same
9 paragraph apply? So if you were to read it:
10 "Although there is an absence of strong evidence
11 to support [aerosol transmission outside of AGPs] this
12 does not mean that there is an absence of risk.
13 A precautionary approach should be taken for [aerosol
14 transmission outside] ... AGPs ... as potentially
15 capable of generating infectious aerosols from
16 patients suspected or known to have respiratory
17 infections."
18 Isn't the same true?
19 **A.** No, because you're talking about transmission. So
20 there's no evidence that -- in healthcare there's no
21 studies that have actually found viable virus in
22 aerosols. And if you're working on the theory if you're
23 doing AGPs you're producing such a large amount of
24 aerosols. So if you imagine an aerosol that's tiny and
25 a droplet is ten times its size then the theory being

1 they are inoculating those depending on what that is,
2 the droplet will carry more of the virus, but if you're
3 doing an AGP and you're doing it in lots of these small
4 particles at the same time then the risk is that you're
5 generating but you're saying it's transmission.
6 **Q.** Apologise. I'm not following the logic of that. So
7 you're saying that there's no evidence that there's
8 viable viruses in aerosols?
9 **A.** In healthcare. There's not been any studies that -- so
10 we've found RNA, we've found that there is -- now, that
11 doesn't mean that it's not happening, it's just that the
12 number of studies that are done we have still not got
13 that evidence.
14 **Q.** So -- but, again, I want to go back to the logic of what
15 you were saying that there's no evidence in healthcare,
16 there's no studies that have actually found viable virus
17 in aerosols yet you're saying that AGPs because they
18 produce such a large amount of aerosols it was presumed
19 there was a risk of transmission?
20 **A.** So that would be the highest risk.
21 **Q.** But isn't the logic of that that you can have viable
22 viruses in aerosols?
23 **A.** Yes, at that time when you're doing your AGP but how
24 long they last and how long they're viable for -- most
25 of the studies that have shown staff transmission

1 through aerosol-generating procedures have been done in
2 very -- and by the very nature that you're doing
3 an aerosol-generating procedure, you are very close, in
4 very close proximity and normally for an extended length
5 of time.
6 So, again, we're going back to the procedure
7 you're doing, the time you're spending. It's not the
8 same as some of the other risks that may have been
9 described.
10 **Q.** But --
11 **LADY HALLETT:** Can I just -- what you actually said was
12 there's no evidence in healthcare that viruses are found
13 in aerosols. Do I understand what you're really saying
14 is there's no evidence in healthcare that viruses we
15 need to worry about in sufficient quantity are found in
16 aerosols; is that what you're saying?
17 **A.** So the studies that have been done to look at aerosols
18 and I'm specifically talking about Covid-19, although
19 they have recovered RNA they have not recovered the kind
20 of viable virus that could go on to transmit. So -- and
21 I'm not saying it doesn't happen, I'm saying there's
22 a gap in the evidence.
23 **MR SCOTT:** But I'm trying to understand -- let's leave aside
24 Covid-19 because this was a view taken prior to the
25 pandemic, isn't that right, about AGPs had a risk of

1 transmission via aerosols but non-AGPs didn't. That was
2 the basic dichotomy, is that right?
3 **A.** And droplet.
4 **Q.** Yes, yes. So there wasn't the strong evidence prior to
5 the pandemic to support that there was transmission in
6 aerosols?
7 **A.** No.
8 **Q.** So why was there not an equivalent approach taken to the
9 risk of transmission between AGPs and non-AGPs when
10 aerosols might be produced by the human body? I'm
11 struggling to understand the reason why you're drawing
12 a distinction between the two if they're not based on
13 strong evidence either way.
14 **A.** I'm not sure I'm following you.
15 **LADY HALLETT:** I think you may be going around in circles.
16 I'm not sure I'm following questions or answers at the
17 moment.
18 **MR SCOTT:** It was known about how to protect against the
19 risk of aerosol transmission. That was use of FFP3s,
20 that's right?
21 **A.** Yes.
22 **Q.** Along with all the other IPC measures, I'm talking about
23 the difference between droplet transmission and aerosol
24 transmission is that you use FFP3 for aerosol
25 transmission, is that right?

1 **A.** Yes.
2 **Q.** What would have been the harm at the start of the
3 pandemic of using FFP3s if there wasn't any issues in
4 relation to supply? Would there have been any concern
5 about using FFP3s in those circumstances?
6 **A.** I don't think we were in a position to use FFP3s widely
7 in the NHS. As you're aware, due to the UK legislation
8 to advise the use of FFP3 means that someone needs to
9 have a face fit test. I know roughly in Scotland at the
10 start of the pandemic there was around 7,000 staff
11 members who had an up-to-date face fit test which is
12 a drop in the ocean. And I believe that the other UK
13 countries would have been in a similar position. That
14 was one of the considerations.
15 And there was also -- I am assuming what you're
16 talking about is applying a kind of precautionary
17 principle. There was also supplies. If we wrote
18 guidance as a precautionary principle to put everybody
19 into FFP3 then not only would they have had a large
20 amount of the workforce that couldn't comply with the
21 guidance, and therefore couldn't come to work, we would
22 also have had high risk areas where we had identified
23 for intensive care units, high-risk pathways that might
24 have been left without the FFP3s.
25 They were probably two of the main constraints if

1 you were looking at putting in a precautionary principle
2 of an FFP3 without the evidence, but -- the evidence
3 that, you know, we didn't have staff face fit tested and
4 there was at the beginning of the pandemic a very quick
5 and a rapid stocktake of what stock we held and what was
6 required, and from my understanding that would have made
7 it really difficult to supply the FFP3s to the ITU units
8 and the other areas we deemed high risk.
9 **Q.** So was supply and practical considerations driving the
10 advice that's being given?
11 **A.** No. It was a consideration. If you were looking at the
12 precautionary principle which was discussed numerous
13 times across the course of the pandemic but at the
14 beginning of the pandemic I think that would have been
15 two of the main considerations, that would have been
16 taken into account was the face fit testing and what
17 stocks were available from the pandemic stock.
18 **LADY HALLETT:** Ms Imrie, you said some time ago that you
19 should take the highest precautions subject, obviously,
20 to the considerations that you've just been outlining
21 with masks. Face masks are just one aspect --
22 **A.** Yes.
23 **LADY HALLETT:** Of taking the highest precautions and I'm
24 afraid at the moment what I don't follow, and I wonder
25 if you could help me, is, if, when the pandemic starts,

1 you don't know if it's aerosol or droplet --
2 I appreciate you say that you wouldn't go there any
3 more -- but at the time that's where people were going,
4 and it sounds as if people still aren't agreed as to
5 whether it was droplet, why don't the people issuing
6 guidance and advice say "Well, we don't know, too early
7 in the pandemic for us to tell you if it's airborne or
8 if it's droplet", as seemed to matter at the time, "and
9 therefore we suggest that you take the following
10 precautions if you're able"? It may be that you can't
11 do the masks for the reasons you've given, although
12 I think others might argue to the contrary, but surely
13 there were other things that people could do, or did
14 they all have unintended consequences and downsides?
15 **A.** I think what we need to, or what I certainly reflect,
16 going back at that time, was we were asking people to go
17 to work and look after infectious patients and,
18 you know, with all the media attention and all the death
19 that surrounded them, if you had said "We think you
20 should bring in an FFP3", and they would take that as
21 the guidance, "but actually we don't have the masks to
22 give you", I think that would have been an unbearable
23 anxiety for somebody going into work and looking after
24 Covid.
25 **LADY HALLETT:** I understand that. I'm just trying to move

1 beyond masks for a moment.
2 **A.** Yes.
3 **LADY HALLETT:** If you tell people it could be airborne, it
4 could be droplet, then essentially you're telling people
5 who know about these things, "Keep Your distance when
6 you can. Try to avoid contact. When do you have
7 contact try to make sure you're wearing at least some
8 kind of mask. Be careful in staff areas".
9 Surely that kind of advice might help stop the
10 spread?
11 **A.** No, I think that's really important. I think,
12 unfortunately, at the beginning of the pandemic we
13 neither recognised presymptomatic carriage or
14 asymptomatic carriage, and we didn't have the testing
15 either. So if there was another pandemic tomorrow,
16 would I wait to see if there was evidence of
17 presymptomatic or asymptomatic, no, I think we would go
18 into enhanced mask wearing straight away.
19 Would we -- and we did during the pandemic,
20 because in Scotland, from March we collected local
21 Epi data on all our amber and green, so -- not the Covid
22 areas but the non-Covid areas, any areas where we had
23 clusters, so unexpected clusters, we asked the local
24 teams to go in and look at what are the lessons learned,
25 did something go wrong? And there was things that came

1 through around, as you said, staff areas. I mean, some
2 hospitals had airlines set up first class lounges where
3 they invited staff to have breaks and take their mask
4 off, and they weren't doing anything, you know, contrary
5 to the guidance because at the time we didn't understand
6 all the presymptomatic and asymptomatic.
7 But even as we moved through the pandemic, we
8 still seen a lot of the lessons that were learned from
9 the cluster was staff were removing their masks in
10 changing areas and duty rooms. And Scottish Government,
11 through CNRG, commissioned the University of Edinburgh
12 to do some behavioural insights work with some of the
13 medical and nursing staff, frontline staff. And they
14 did -- their findings were that the clinical teams
15 viewed patients at a far higher risk than they did their
16 colleagues, so their behaviours were adjusted when they
17 were in a staff-only area. I think in hindsight we knew
18 all that and certainly if there was another similar
19 pandemic I think we would go in quite strong and say
20 it's masking for everybody all the time.
21 **MR SCOTT:** Is there any harm in including in guidance the
22 fact that there might be some uncertainty about
23 circumstances in which issues may arise?
24 **A.** I think you'd be raising anxiety within frontline --
25 without any evidence to do that.

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1 **Q.** Isn't that an assumption, because there was anxiety
2 raised by the way the guidance was used, was applied
3 anyway?
4 **A.** But there is no evidence to support you asking staff to
5 wear, or advising staff to wear PPE that they can
6 neither access nor they feel comfortable wearing.
7 **Q.** Can I please show you it's the WHO guidance of
8 1 December 2020, just as an example of what guidance can
9 look like. It's INQ000349135. Page 1, and this is mask
10 use but I think it comes back to her Ladyship's point
11 about using things as a package of measures. If we can
12 just have a look at the first paragraph at tab 25 of
13 your bundle if you're following paper. The first tab of
14 key points. It's the paragraph underneath that.
15 So it's that first tab where it's talking about
16 use of masks as part of a comprehensive package, even
17 when it's used correctly, it's providing adequate
18 protection or source control. So, setting out there it
19 need to be part of a comprehensive piece.
20 And then if we can just go down, please, to
21 page 4, and WHO sets out in quite a lot of detail what
22 the reviews have shown, and if we just look under the
23 guidance, it talks about the WHO guidance on the type of
24 respiratory protection is based on -- sets out the basis
25 for these, for the guidance. It sets out -- if you can

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1 just go down a fraction. So it's talking there about
2 all available evidence, it's discussing considerations
3 that have been taken into account, and then it says that
4 there's a majority of members. So the WHO has not shied
5 away there of showing that the members who are creating
6 this guidance have disagreed.
7 And then it goes down to the bottom page. So the
8 bottom paragraph on this page and it says:
9 "In general, healthcare workers have strong
10 preferences about having the highest perceived
11 protection possible ... and ... may place high value
12 on the potential benefits about of respirators in
13 settings without AGPs. WHO recommends respirators
14 primarily for settings where AGPs are performed;
15 however if health workers prefer them and they are
16 sufficiently available and cost is not an issue, they
17 could also be used during care for COVID-10 patients
18 in other settings."
19 What would have been the harm of using a paragraph
20 like that in the IPC guidance within the United Kingdom?
21 **A.** We did include that in our Scottish addendum that
22 a preference and individual risk assessment could be
23 done, and in FFP3 and -- just last month, we published
24 our winter campaign which also follows this -- so we
25 roll out to stakeholders to let them know that we've

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1 done a systematic review, but the stakeholder groups
2 that we meet with to develop the guidance had asked that
3 we did not change the guidance coming into wintertime.
4 But we've put out a position statement which is very
5 similar to what WHO have said here, that you can do
6 a personal risk assessment. So it's still directing you
7 to the hierarchy of control, so, you know, choose the
8 environment, think about the procedure, the pathogen,
9 this isn't just for Covid, it's winter preparedness for
10 all respiratory viruses. But -- and if you do all that
11 and you still prepare to use an FFP3, then that is
12 certainly included in the Scottish National Infection
13 Prevention and Control Manual as it is now.
14 **Q.** Yes, but I asked you earlier on, is there any harm in
15 including the fact there might be uncertainty in which
16 issues may arise, and your response was "I think you
17 would be raising anxiety within frontline without any
18 evidence to do that".
19 **A.** So I don't think there was uncertainty, I think NERVTAG
20 had reviewed the evidence and we're quite confident that
21 the influenza pandemic guidance should be used. I think
22 there was and still is many studies that were done
23 outwith healthcare that have concluded that there may
24 have been aerosol transmission. Now, whether or not
25 these are transferable into healthcare, you're comparing

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1 community settings where you have absolutely no control,
2 so no masking, no IPC education, no distancing, no
3 contact tracing etc to a very controlled healthcare
4 environment that did have universal masking, that did
5 have distancing and all of the other environmental
6 controls. So the uncertainty was, there wasn't enough
7 good evidence to say that we were uncertain.
8 **Q.** So you're saying that there was sufficient certainty
9 within the IPC guidance --
10 **A.** I don't think just within the IPC, I think -- and that's
11 why I'm referring back to NERVTAG and others, I don't
12 think they said go with droplet and influenza pandemic
13 guidance, but we're not certain about it. I think there
14 was an understanding, and there is an understanding,
15 that you need to be constantly reviewing the evidence
16 and that's why our National Infection Control Manual is
17 a living document, we do constant updates to check if
18 there's any evidence contained in it that is out of
19 date, or if there's any new evidence that contradicts
20 what's in it.
21 I think there was always an intention that these
22 groups would be reviewing the evidence in a recurring
23 basis, alongside looking at the local epidemiology so
24 locally what's happening in the hospitals. And we
25 followed quite closely both the clusters, so the

1 unexpected cases that we had, plus the hospital onset
2 which all the UK countries come together to put their
3 definitions together, and what we seen across the whole
4 pandemic, through all variants, was, as your community
5 prevalence went up, 10 days later hospital onset went
6 up, because people were coming in, and then we seen the
7 nosocomial infections going up as well, so --
8 **Q.** Can I bring you back to the start of the pandemic again.
9 There is just one final question before I move on
10 to a different topic, my Lady.
11 **LADY HALLETT:** I have a question about the hierarchy
12 control.
13 **MR SCOTT:** I'm entirely in your hands, naturally, my Lady.
14 **LADY HALLETT:** I'll ask it now.
15 I appreciate I'm a layperson, it's not my field of
16 expertise, but I have serious difficulties with the
17 hierarchy of controls. And I've been looking at the
18 guidance on the ARHAI website and it says, it's
19 a well-established protocol, which is why I am
20 commenting with diffidence as a layperson in this area,
21 but it sets out, as I've heard earlier, the levels of
22 protection, the elimination, substitution, engineering
23 controls, administrative controls, PPE. And on your
24 website it says:
25 "PPE is seen as the least effective control

1 measure and should be implemented only if the other
2 four levels have been found or expected to be
3 infective at removing risk."
4 I find that really strange, that the use of PPE is
5 not considered to be part of the measures, the package
6 of measures that you would use to eliminate the virus.
7 In other words, step 1.
8 **A.** Yes. For a non-clinical person that's maybe had
9 background in IPC training and things, I can see that
10 that's not as clear. I think what you're looking for is
11 the highest level is not to have the pathogen in the
12 clinical environment, so, you know, you do telephone
13 consultations, you don't bring people into hospital that
14 don't need hospital care because we have had previously
15 the UK responds to things like swine flu was admit them
16 into an infectious diseases unit and we can contain them
17 in there, whereas I think most IPC specialists would
18 say, "No, please don't bring them into hospital because
19 you've introduced something."
20 It's not that you would look at the hierarchy
21 controls and just pick one. I think the hierarchy
22 controls are really designed, as well, for organisations
23 so what we were trying to get across to our
24 organisations was if you're going to have a high-risk
25 pathway, if you are going to have a ward where you are

1 going to put all your Covid patients then that ward
2 should have everything, it shouldn't be overcrowded, it
3 shouldn't have poor ventilation or no ventilation,
4 because if you're doing all this then the risk does
5 accumulate. And certainly within the Covid addendum, we
6 advised local infection control teams if they worked
7 through the hierarchy controls and they couldn't provide
8 the environment then they would -- they should be
9 considering FFP3 in high-risk areas.
10 So I'll go back and look at that wording and speak
11 to the team.
12 **LADY HALLETT:** I was going to say -- well, I'm challenging
13 the orthodoxy. I'm afraid whenever I dislike something
14 I say someone has been on a course, and "hierarchy of
15 controls" looks to me like someone has been on a course
16 and thought it's seemed to be a good idea.
17 I understand all that you said about keep your
18 distance, better ventilation, all makes perfect sense,
19 but that is not taking into account that if you want to
20 stop the spread of the infection and eliminate it then
21 if people are wearing appropriate PPE surely that would
22 be part of your elimination programme?
23 **A.** Yeah, and I will go back and look at it. You would
24 still wear a mask, yes. But if, for instance, you were
25 going shopping, you couldn't eliminate it, you can't

1 control the environment and everything so we ask you to
2 wear a mask, but I'll go back in the context that you've
3 raised it.
4 **LADY HALLETT:** Do you want to ask your question before we
5 break?
6 **MR SCOTT:** No.
7 **LADY HALLETT:** Are you sure?
8 Well, ask it and then I will break at 10 past.
9 **MR SCOTT:** Is the position that when the IPC guidance had
10 been produced by NERVTAG in terms of the pandemic flu
11 guidance that was then translated to become the Covid-19
12 guidance, is it the position that effectively you were
13 satisfied that there was no evidence that there was
14 transmission via aerosol outside of AGPs and so you
15 would only change your position about whether FFP3
16 should be advised when there is a risk -- in terms of
17 aerosols outside of AGPs, if there was strong evidence
18 to suggest that that was a route of transmission?
19 **A.** So I think we were constantly reviewing all the
20 intelligence --
21 **Q.** But in terms of was that the starting point?
22 **A.** I don't think anyone said this is the conditions that
23 need to be met for us to say the FFP3s is required. It
24 was much more a constant assessment rather than trying
25 to achieve a certain position before you would change

1 your stance. If NERVTAG or ACDP or the senior clinical
2 team in the UK had came and said "We want the IPC
3 guidance to reflect something different", then we would
4 have written the guidance based on the evidence that
5 they were showing. It wasn't the IPC that had a sole
6 remit, role and authority to say what was going to be
7 included in IPC guidance.
8 **LADY HALLETT:** I hope you were warned we take breaks,
9 Ms Imrie, and I shall return at 3.25.
10 **(3.08 pm)**
11 **(A short break)**
12 **(3.25 pm)**
13 **LADY HALLETT:** Mr Scott.
14 **MR SCOTT:** Ms Imrie, I think you said in your evidence
15 earlier on that if the pandemic started now, that you
16 would recommend widespread use of masks. Did I hear
17 that correctly?
18 **A.** Yes.
19 **Q.** Why would you do that now?
20 **A.** Probably for the same reasons we done it once we
21 recognised presymptomatic and asymptomatic transmission.
22 **Q.** Could you expand upon what that was?
23 **A.** That there was transmission events that when they were
24 followed up, some of the subjects didn't develop any
25 symptoms but their households went on to develop

1 symptoms, but they had tested positive first, indicating
2 that they were the index case. Or others who tested
3 positive and then went on to develop symptoms a number
4 of days later.
5 And I think that's part of continuously reviewing
6 the evidence to make sure that you are gathering as much
7 intelligence to inform the guidance, that you don't just
8 stick with "These are the signs and symptoms and this is
9 when you need to wear a mask", that we use the
10 epidemiology as well to advise the guidance.
11 **Q.** Okay, so I think the opening of your answer was "there
12 were transmission events", is that what it boils down
13 to? That there is now evidence of transmission events?
14 **A.** For establishing an asymptomatic or the -- somebody, up
15 until that point, globally, it was understood that in
16 order for transmission to occur, you would be having to
17 display symptoms.
18 **Q.** So when you say "universal masks", do you mean outside
19 healthcare or within healthcare?
20 **A.** I think if we have a similar situation everywhere, as
21 explained earlier, the community prevalence had a direct
22 effect on the infections that both came into hospital
23 and were transmitted in hospital. So if we want to
24 control the nosocomial infections, then we are really
25 highly reliant on the community controls that are put in

1 place.
2 **Q.** I just want to ask briefly about December 2020, and
3 there was an IPC cell minutes -- meeting on 22 December
4 that you attended, and there was a discussion there
5 about whether the understanding of aerosol transmission
6 had changed, and there was no change to the guidance,
7 but following that, there was an email sent round by
8 Lisa Ritchie that was asking for people's views about
9 whether that consensus should change, that's right?
10 **A.** Yes.
11 **Q.** And could we please go to INQ000348370.
12 And this is your email in response to that request
13 which was, "Please can any of the members let us know if
14 you wish to recommend the use of FFP3s in a high risk
15 pathway".
16 That's right?
17 **A.** Yes.
18 **Q.** And it was -- the consensus had been based on the rapid
19 review that there was currently insufficient evidence to
20 change precautions. You set out the rationale there
21 and, then it's the bottom -- we currently see on the
22 page:
23 "There is no clear evidence of airborne
24 transmission."
25 **A.** Yes.

1 **Q.** And then if we just go over the page, please. It says:
2 "There is a larger evidence base for the
3 assessment that also includes prospective sampling ..."
4 I think that's what you were talking about earlier
5 on, about that there hadn't been any air samples that
6 had found viable viruses -- even though they had found
7 viruses, they weren't necessarily viable, is that
8 correct?
9 **A.** I'm not sure all of what I'm referring to there, but
10 yes, I believe that's ...
11 **Q.** Because -- it's the middle line of that bottom paragraph
12 that says:
13 "This evidence base is in line with the SAGE
14 position, which states that 'the evidence that aerosol
15 transmission is significant compared to other routes
16 is not sufficiently strong to recommend that
17 respirators are used in locations other than high risk
18 clinical areas where aerosol generating procedures
19 take place."
20 And at that point in time, you say that the
21 Scottish had produced their own guidance and that was in
22 October 2020?
23 **A.** Yes.
24 **Q.** And what was the difference between the Scottish
25 guidance and the UK guidance at that time?

1 **A.** In that time you could choose to wear FFP3 if you were
2 doing an AGP in any pathway.
3 **Q.** And why was it that Scotland had made that decision?
4 **A.** I think there was feedback from stakeholders that staff
5 felt that testing, universal testing and things, hadn't
6 yet been implemented, certainly we didn't have the kind
7 of near-point testing that allowed staff to test
8 somebody. We were doing a lot of testing before people
9 came into hospital and then giving them advice to stay
10 at home, and protection, and not to have contact before
11 they come in so that they could enter a green pathway.
12 And the stakeholders fed back to us that staff felt if
13 they were doing an AGP, even in a green pathway, they
14 would like to be able to choose to wear an FFP3. And
15 that was then put into the Scottish addendum.
16 **Q.** Okay, and that was taken up following those views of the
17 healthcare workers?
18 **A.** Yes, as part of our connect comms between the NHS
19 boards.
20 **Q.** And is that very much in line with what the WHO's
21 guidance had been on 1 December, which is given that
22 healthcare workers want that high level of protection
23 and if there's no issues with supply, then there's no
24 reason they shouldn't be able to use them?
25 **A.** I think it goes some way towards that. It's probably

1 later on before the individual personal risk review
2 assessment was put into the guidance that allowed staff
3 even in non-AGP areas to choose to wear the FFP3, which
4 I don't think that ever made it to the UK guidance, as
5 far as I can remember.
6 **Q.** Because it doesn't appear in your email of 23 December
7 that you are suggesting here -- and tell me if I'm
8 unfairly categorising -- that actually at that point in
9 time, that there could have been, should it have been
10 wished, a change made to the IPC guidance which would
11 have allowed healthcare workers to wear an FFP3 mask
12 should they wish to do so?
13 **A.** Sorry, which part of the email are you referring to?
14 **Q.** Well, I'm saying it doesn't appear in the email.
15 I mean, you wrote the email. It doesn't appear that you
16 say, "Well, actually, this is what the WHO have
17 suggested, Scotland has taken a slightly different view
18 because we have been listening to our healthcare workers
19 and so maybe that's something that we could do if we
20 don't think there is any downsides to it."
21 That doesn't seem to appear in the email. That's
22 why I'm asking. Is that an unfair characterisation of
23 this email?
24 **A.** I'm not sure what you are saying doesn't appear in the
25 email. The use of FFP3s throughout or ...

1 **LADY HALLETT:** The use of FFP3s in -- when someone is doing
2 an AGP in any pathway. The way you changed the --
3 **A.** So we had that in Scotland.
4 **LADY HALLETT:** Yes.
5 **A.** So the IPC cell were fully briefed and understood what
6 the differences were within Scotland guidance and why we
7 made those decisions.
8 **MR SCOTT:** If we can just scroll down on this document,
9 please. So that second paragraph under paragraph 2 is:
10 "In essence we would be changing the high risk
11 event from a AGP to a Covid patient ..."
12 And the line above that:
13 "In the absence of supporting evidence a clear
14 understanding of the justification is required in
15 order to communicate the risks that exist to staff in
16 these areas that are not present in the other acute
17 pathways ..."
18 Again, it doesn't appear you're letting everybody
19 else, the other members of the IPC cell, following
20 a discussion in which PHE and others had said maybe we
21 should look to change the guidance, you don't seem to be
22 saying there, "Well, actually, do you know what, the WHO
23 on 1 December has said it has no issues, then let
24 healthcare workers use FFP3s if it makes them feel
25 safer." Is there a reason why not?

1 A. This was an email back to the IPC cell. The discussions
2 have been around that. So I wouldn't be recapping why
3 we're having the discussions in my email. I think
4 there's a general understanding that the people that the
5 email, the audience are aware of the WHO's -- if I'm
6 understanding.
7 Q. Right. I'm going to move on to a different topic and
8 talk about ventilation. Do you think more priority
9 should have been given to ventilation than air
10 filtration in the IPC guidance?
11 A. There was separate technical groups that were looking at
12 ventilation who were probably more qualified to look at
13 ventilation, including our engineering colleagues.
14 Q. Right, so how were you working with them to have
15 an understanding about the role that ventilation played
16 in terms of what the IPC guidance should be within
17 healthcare settings?
18 A. Within Scotland, Scottish Government commissioned
19 Health Facilities Scotland to look at the impact of
20 ventilation and the microbiologist from ARHAI was
21 involved in that group as was the nurse consultant that
22 leads infection control in the built environment, so
23 they were feeding in the kind of clinical
24 interpretations and aspects and heavily reliant on our
25 engineering and Facilities colleagues to pool together

1 but within Scotland, Scottish Government led on the kind
2 of ventilation review for healthcare settings.
3 Q. But Professor Susan Hopkins was asked, and she said she
4 felt that air filtration hadn't been given sufficient
5 priority in the IPC guidance. Do you agree with that or
6 not?
7 A. Yeah, I don't think it was an area that we really put
8 any kind of guidance around. I think traditionally
9 ventilation guidance is through the health technical
10 groups which -- there is UK and then Scotland kind of
11 put their slant on it and call it the Scottish technical
12 group.
13 So the ventilation guidance has not been written
14 by infection control but on our Covid Nosocomial Review
15 Group we did have architects and engineers and
16 Facilities so there was those discussions happening and
17 it had probably been led through a different group
18 rather than an infection prevention and control
19 guidance.
20 Q. Were the same discussions taking place in Scotland as
21 there were within the UK IPC cells or were these
22 discussions about ventilation only taking place in
23 Scotland?
24 A. I was taking place -- I was having discussions about
25 ventilation within the CNRG which was ultimately our

1 kind of nosocomial governance route for discussing the
2 IPC guidance. I don't think the IPC cell had
3 a membership that would have allowed in-depth discussion
4 around ventilation.
5 Q. But if ventilation was a part of the IPC guidance then
6 you had to make sure that there was sufficient
7 ventilation because I think it was well recognised that
8 there was a risk of aerosol transmission in poorly
9 ventilated places, isn't that right, at that time?
10 A. Overcrowded and poorly ventilated.
11 Q. Yes. So clearly the IPC guidance about the risk of
12 aerosol transmission had to take into account the
13 ventilation that was in place in these facilities, is
14 that right?
15 A. So we raised that ventilation was a risk to IPC but
16 during the pandemic there was probably very little that
17 could be done about the ventilation that we have in
18 healthcare and I think that is a reflection that we have
19 and certainly through the work of NHS Scotland Assure
20 are considering the ventilation in the guidance that we
21 currently have and the evidence around whether that's
22 sufficient or whether it needs to be improved and people
23 talk about ventilation opening a window. That's not
24 really ventilation. You've got to consider how your air
25 comes in and how it goes out, your air changes, your air

1 filtration, your pressure. So that is certainly not
2 an area that the IPC cell would have tackled.
3 Q. But if the IPC cell was having to consider the
4 possibility of the transmission of aerosols and it can
5 happen in poorly ventilated and overcrowded places, but
6 the view had been taken that it wasn't going to happen
7 in a healthcare setting, how did the IPC cell know when
8 they're considering whether to change the guidance about
9 what was good ventilation, what was the measure about
10 where the boundary was between what was overcrowding and
11 poorly ventilated and where actually there wasn't
12 a risk?
13 A. So the technical guidance that describes what's good
14 ventilation and in healthcare settings.
15 Q. But that was created prior to the pandemic?
16 A. But it is still a standard that will tell you air
17 changes and where you should be using the HEPA
18 filtration and things. I think it's widely understood
19 that if it's not in technical guidance that you should
20 have HEPA filtration there wouldn't be HEPA filtration
21 in a design plan for a hospital.
22 And indeed a lot of the assessments we do at our
23 hospitals don't even achieve the air changes that are in
24 the technical guidance either because they were about
25 prior to the technical guidance or they are failing to

1 achieve.
2 But I do not think that was the role of infection
3 prevention and control guidance to look at ventilation
4 and I don't think any member of the group felt that we
5 were qualified to comment on the ventilation.
6 What we did do is highlight to organisations that
7 if they were looking at the Covid-19 patients they
8 needed to take all this into consideration, and I've
9 taken on board my Lady's comments about the hierarchy of
10 control, that was why it was in the hierarchy of control
11 so that organisations took that responsibility to
12 appreciate that they needed to look at their facilities
13 and consult with engineers in their Facilities team.
14 **LADY HALLETT:** Can I just say before I get a flood of emails
15 from health and safety specialists, my challenge as
16 a layperson, and I emphasise that again, was to the
17 utility of the hierarchy controls in the healthcare
18 setting.
19 **A.** Absolutely.
20 **LADY HALLETT:** As long as everybody understands.
21 **MR SCOTT:** But again, if they were being provided -- if
22 hospitals' healthcare settings had been provided IPC
23 guidance, how are they meant to know, particularly if
24 parts of their hospital, parts of their facility are
25 falling below the technical standards, how are they

1 meant to know whether there is sufficient ventilation in
2 order to prevent there being a risk of aerosol in a
3 non-AGP setting? Because that doesn't seem to have been
4 given to them about where the boundary lies.
5 **A.** So each board trust will have a director of facilities
6 who has a legal responsibility for the health and safety
7 aspects of a building and for compliance with standards,
8 with building standards for healthcare, which there are
9 many of them and they'll set out within an ITU you
10 should have 10 air changes, whether you should have
11 negative or positive pressure depending on the patient
12 population that you're looking after, your
13 haemato-oncology units, what their specialist
14 ventilation will be, theatres, they'll understand, in
15 general wards what their mechanical ventilation is, they
16 should for ID units and things understand the air flows,
17 as well. So this is not a local infection control team
18 or a national infection control team to set the guidance
19 or the standards for ventilation.
20 The infection control team recognised where the
21 risks are within a healthcare setting. Now, that might
22 be the air, it might be water, but you don't expect
23 an infection control nurse to be able to go and examine
24 the pipes and to say, you know, that that's been set up
25 in the wrong way. They can say if this and this and

1 this occurs, then there's a risk from the environment
2 and this is how we address it. But it wouldn't be the
3 IPC cell that would be looking at ventilation guidance.
4 **Q.** Did the IPC cell, given you were just talking there
5 about infection prevention nurses saying "If this, this
6 and this occurs and there is a risk from the
7 environment", was there any guidance given to facilities
8 managers to say, "In this, this and this situation,
9 actually there is now a risk of transmission and so you
10 need to make sure you're taking steps to prevent that
11 occurring"? Was anything like that provided alongside
12 the guidance either in Scotland or UK-wide?
13 **A.** Yes. As part of CNRG, as I said, we had Health
14 Facilities Scotland, we had director of facilities, the
15 hierarchy of controls, set out that if you had a high
16 risk area, that you need to do an assessment of
17 overcrowding, of ventilation, and if you couldn't meet
18 them, then I had to go through a risk register and it
19 should sit as a corporate risk so that your executive
20 team are fully aware that they didn't have a facility
21 that was deemed safe.
22 So all of these things were put into the guidance,
23 and they were discussed widely certainly within the
24 Scottish CNRG group as well.
25 The -- as I said previous, ARHAI had weekly

1 meetings with the infection control managers, nurses and
2 doctors networks, all the boards were represented and
3 they would go back and speak about the guidance, about
4 the challenges they learnt from each other, from the
5 boards, if they had put anything in place or where their
6 challenges had been, so there was full discussions
7 around the environment.
8 **Q.** What lessons have been learned from your perspective or
9 from ARHAI's perspective about the creation, the
10 dissemination, the changes made to IPC guidance in the
11 context of the pandemic?
12 **A.** I touched on the actual structure and the remit, role
13 and a kind of authority into how that fits into
14 an emergency plan, a preparedness plan. CNRG did do
15 quite a lengthy "Lessons Learned" around the experiences
16 of CNRG. The IPC cell has also done a debrief of some
17 of the lessons learned.
18 I'd say some of the main challenges was around
19 publication, and there was a lot of red tape, so there
20 was sometimes decisions made to respond to either
21 international evidence or feedback we'd received, and
22 the guidance was agreed, updated, and we in Scotland
23 were updating our weekly meetings, sometimes we had them
24 twice-weekly meetings -- but then there was a delay of
25 a week or ten days before it actually got published

1 because of all the red tape it had to go through to be
2 published on the Public Health England website.
3 **Q.** Any recommendations you think the Inquiry should
4 consider?
5 **A.** Around the IPC cell?
6 **Q.** Ideally, yes?
7 **A.** I think as I said before, it would be beneficial for
8 there to be an established remit role as there is with
9 other advisory groups, and maybe not just for pandemics
10 and emergency situations, but for UK response to
11 anything. We've got two recent examples of measles and
12 Mpox where guidances went out and the IPC specialists
13 have -- went back to the people that wrote the guidance
14 to ask for some things to be changed or included. So
15 we're still not integrated into that response, so
16 I would like to see that we're at the table having the
17 discussions rather than, as we were, with the Covid,
18 told that "This is the guidance you should use" and then
19 we go away and write it.
20 **MR SCOTT:** My Lady, those are the questions.
21 **LADY HALLETT:** Thank you, Mr Scott.
22 Ms Polaschek, who is that way.
23 **Questions from MS POLASCHEK**
24 **MS POLASCHEK:** Good afternoon. I will now ask the questions
25 on behalf of Clinically Vulnerable Families. And you've

1 discussed in quite a lot of detail the IPC measures in
2 relation to healthcare staff, and I have just two
3 specific questions about the IPC measures for patients
4 who were particularly vulnerable to the effect of
5 Covid-19.
6 And the first is, did ARHAI at any time give or
7 consider giving guidance on the IPC measures for
8 clinically vulnerable or clinically extremely vulnerable
9 patients in healthcare, such as those patients wearing
10 FFP3 or FFP2 masks, or the use of portable air
11 filtration around those patients?
12 **A.** Thank you. ARHAI Scotland were never involved in the
13 development of the guidance around shielding our
14 clinical vulnerable. What we did do is work with the
15 clinical cell to identify some of the vulnerable groups
16 and the measures that we should take in the green
17 pathways to try and ensure that they could access
18 healthcare in an environment where people had been
19 tested prior to coming in that were reducing the
20 exposure -- and that was for both clinically vulnerable
21 people and people that required a general anaesthetic,
22 because it was understood at the time that if someone
23 was Covid-positive and had the general anaesthetic, then
24 that was very high risk. So there was a protective
25 pathway that we worked with the clinical cell to advise.

1 There was not the recommendations, as far as I'm aware,
2 from any group for FFP2 or 3 to be worn.
3 **Q.** Thank you. Given the particular risks to the clinically
4 vulnerable and clinically extremely vulnerable who were
5 accessing healthcare including through green pathways
6 because of nosocomial spread, do you agree it was common
7 sense that there should have been some additional
8 measures for their protection?
9 **A.** Yes, I think possibly there could have been more done in
10 these areas. I think it was a real challenge, it is
11 a real challenge for patients to wear masks, and I could
12 see how that would be quite worrying if you're
13 a clinically vulnerable person in a room and someone
14 else is not even wearing a fluid-resistant mask, so,
15 yes, there were real challenges around that. An FFP3
16 would be very difficult for somebody who maybe has other
17 clinical conditions to wear. An FFP2 may be slightly
18 more comfortable; however, we are governed by the health
19 and safety legislation, and therefore we were not
20 allowed to recommend FFP2 for either patients or staff.
21 **MS POLASCHEK:** Thank you.
22 Madam, those are my questions.
23 **LADY HALLETT:** Thank you very much.
24 Mr Simblet. He's just behind you, but if you
25 could make sure your answers go into the microphone.

1 **A.** Okay.
2 **LADY HALLETT:** Thank you.
3 **Questions from MR SIMBLET KC**
4 **MR SIMBLET:** Thank you, my Lady.
5 Ms Imrie, I'm asking questions on behalf of the
6 Covid Airborne Transmission Alliance or CATA, and CATA
7 was specifically name-checked by Mr Bowie KC in his
8 opening address when he said that you and ARHAI Scotland
9 would not shrink from the important issues that they
10 raise, so I hope you will be able to help us with the
11 two topics I'm going to ask about.
12 The first topic is the IPC guidance and PPE
13 supply. Now, that's been extensively covered with
14 Mr Scott this afternoon, and we've -- the Inquiry has
15 heard various evidence about PPE supply and IPC
16 guidance.
17 In your statement, you say that ARHAI had no
18 concerns on the 1 March 2020 over PPE supply. Is the
19 reason that you had no concerns because you expected the
20 infection and prevention control guidance to reflect the
21 state of supply?
22 **A.** Thank you for your question. No, that is not the
23 reason. In the statement the question that I was
24 answering was, prior to the pandemic, did we have any
25 concerns about the PPE. Prior to the pandemic, our

1 understanding was, what I said was a pandemic stock that
2 was held UK-wide, and rightly or wrongly we assumed that
3 that stock would be sufficient for whatever controls
4 were put in place.
5 **Q.** Were you aware of minutes from the IPC cell around that
6 time, not -- in fairness, not at meetings at which you
7 attended but you would have got the minutes, where it
8 was observed that guidance on changes to PPE could
9 affect PPE supplies, and that was to be noted as
10 an issue going forward? Was that a consideration for
11 either you or other members of the cell?
12 **A.** If you say I wasn't at the meeting, I wouldn't be aware
13 of the discussions, but what I am aware of is very late
14 at night telephoning ITU units to find out how many
15 FFP3s they were going to need for the following day
16 depending on how many Covid patients they had admitted,
17 how many times they had to phone them, counting it up,
18 going back to national procurement. So there was a real
19 issue that maybe prior to March we weren't aware of what
20 the stock was held, and what we had. We certainly
21 weren't aware of how many members of staff hadn't had
22 a recent face fit test. And one of the reflections that
23 we've had in NSS, as myself and ARHAI working with
24 national procurement, put a proposal up to
25 Scottish Government that we should have mandatory face

1 fit testing, and it should be an agreed period for all
2 boards, and that national procurement should have access
3 to all of these tests so that they hold the stock that
4 is required for service rather than what is thought to
5 be required.
6 **Q.** Thank you. I'm going to move to a different topic now
7 and you're very politely looking at me when you answer,
8 but I think it is important that you speak into the
9 microphone, so I shan't mind if you do that.
10 In the -- this is about the IPC minutes of
11 a meeting on 12 May 2021 which you were at, and I'm
12 going to ask for the first page of that to be put on the
13 screen. It's INQ000398232 and the first page of that.
14 **LADY HALLETT:** I have a document headed "12 May 2021".
15 **MR SIMBLET:** Thank you, now it's on mine. Thank you. As
16 long as my Lady and the witness have it then I suppose
17 that should do.
18 The first thing to observe is this is a meeting at
19 which you are in attendance. There's a number of people
20 whose names are redacted -- I'm not going to ask you to
21 say who they are, that's why they've been redacted and
22 generally it's understood that people have their names
23 redacted if they are at -- depending on levels of
24 seniority and so on, so those are relatively junior
25 people in this meeting.

1 There was some discussions about revisions to the
2 IPC guidance and the fact that Public Health England was
3 feeling -- well, unable to sign off on the cell's
4 proposal.
5 If we can turn to the next page, please, where
6 that discussion begins at the bottom of the page. Can
7 you see it on your screen, Ms Imrie?
8 **A.** It's just come up now.
9 **Q.** Thank you. So then we see feedback from -- we see in
10 the middle of page there:
11 "... PHE wish to move this issue forward ... it
12 would be inappropriate to provide a decision statement
13 prior to a decision from ... evidence review ..."
14 And the next -- page 3, please. I think it's the
15 feedback -- no, it is still on this page, it says --
16 there you are, it's your comment, so I have highlighted
17 it on mine, but not -- what you said was:
18 "LI suggested all nations involved as well as PHE
19 should be involved in the work raising concerns in
20 relation to the cell losing independence and work driven
21 by the PHE agenda only. One organisation should not
22 have the final say on UK IPC guidance."
23 So the first question about that is: what did you
24 mean about the cell losing its independence?
25 **A.** I'm just looking at the notes above.

1 I think this is around the respiratory evidence
2 panel review that Public Health England came to present.
3 We had presented a number of studies done outwith
4 healthcare that showed there may have been transmission
5 but not in healthcare where we had the controls.
6 I'm not really sure --
7 **Q.** Can I summarise it this way. Was it that Public Health
8 England was taking a view that the cell's consensus
9 view, or perhaps more accurately what ARHAI was saying,
10 that Covid-19 was spread by the droplet route of
11 transmission but that was the cell's position, that that
12 was being undermined by these studies and you didn't
13 want that idea, as it were, to catch on?
14 **A.** No, that's not accurate. Public Health England had done
15 a review that excluded healthcare settings and then they
16 came in with recommendations that we should consider
17 putting more controls into healthcare settings. I think
18 the discussions that took place were around Public
19 Health England providing a separate statement, which we
20 agreed with, and the point was up until then we had done
21 everything by consensus, and had been quite open in our
22 consensus when we fed up to the CNOs or the senior
23 clinical team, that we might not have had full agreement
24 but this was consensus we agreed.
25 And I think what I'm saying here we can't have one

1 organisation leading the IPC cell. There wasn't that
2 remit for one organisation.
3 **Q.** So was -- did you regard consensus as being more
4 important than accurate science?
5 **A.** They weren't presenting accurate science to show
6 healthcare transmission. They actually excluded
7 healthcare studies when they'd done their review. So it
8 might have been more appropriate for them to increase
9 controls in the community where the studies were
10 conducted rather than in healthcare.
11 **Q.** All right. And now something that I hope you will be
12 able to agree with. Since, as your last sentence there
13 records, you believed one organisation should not have
14 the final say on UK IPC guidance, do you consider that
15 discussions about guidance and PPE measures should have
16 involved stakeholder organisations such as CATA?
17 **A.** So within Scotland we had CNRG which was
18 multi-organisation or multidisciplinary. Through CNRG
19 we also took any recommendations and changes to guidance
20 to the Scottish Government senior workforce which was
21 represented with the unions and staff site
22 representatives, so we did have full consultation. We
23 also met other networks on a similar basis.
24 **Q.** So do you agree with my question then, do you think it
25 should involve stakeholder organisations?

1 **A.** I'm not agreeing that it should be CATA. I'm agreeing
2 that we should have a good consultation process that
3 allows many people to give in their challenges and how
4 they would implement the guidance. Unfortunately, when
5 we do consultation we can't do consultation with every
6 party that has an interest. We try and now certainly
7 our reflections are that we will try and demonstrate how
8 the evidence is reviewed and put into guidance in a much
9 more open and transparent way that allows people with
10 invested interest to understand how the guidance came
11 about.
12 **MR SIMBLET:** Thank you.
13 Well, those are my questions, thank you.
14 **A.** Thank you.
15 **LADY HALLETT:** Thank you, Mr Simblet.
16 Ms Stone, who is there.
17 **Questions from MS STONE**
18 **MS STONE:** Thank you, my Lady.
19 Good afternoon, Ms Imrie. I ask questions on
20 behalf of Covid-19 Bereaved Families for Justice UK.
21 Can I take you back, please, I have a couple of areas
22 which relate to the overarching topic of aerosol
23 transmission and its impact on IPC guidance.
24 The first of those is liaison with the
25 Chief Medical Officer in Scotland, Professor Smith.

1 For context, would you agree that during the
2 course of 2020 the evidence in respect of aerosol
3 transmission developed, and you were aware of that?
4 **A.** Developed as in we were learning more about the
5 pathogen?
6 **Q.** Yes, so there was emerging evidence which tended to
7 suggest that aerosol transmission was taking place?
8 **A.** In healthcare, that was not the evidence that we were
9 seeing. It was close range.
10 **Q.** Well, I think in your evidence today this afternoon you
11 referred, for example, to a report from the CDC at the
12 beginning of October 2020, which identified
13 circumstances in which airborne transmission appeared to
14 have occurred. Do you remember that report?
15 **A.** Not that I'm aware. Do you know what report -- was it
16 WHO or CDC --
17 **Q.** It was a report by the CDC in the USA, which I think you
18 made reference to earlier in your evidence, in relation
19 to airborne transmission.
20 **A.** I'm sorry, I'm not ...
21 **Q.** There was also in July 2020, for example, WHO
22 acknowledged that airborne transmission could not be
23 ruled out, do you recall that?
24 **A.** I think there was the WHO around the AGPs, and when
25 you're in the very beginning of a pandemic you can't

1 rule anything out, and I think that's why it's so
2 important that you do continue to review the evidence,
3 both for controls for staff but also for patients.
4 **Q.** In his evidence, I'll move to the question,
5 Professor Smith told the Inquiry -- and my Lady, for
6 your note should you need it it's the Day 11,
7 25 September, and it's pages 35 to 46 -- but
8 Professor Smith said that he had had concerns about the
9 possibility of aerosol transmission and in relation to
10 the WHO's messaging in the earlier stages of the
11 pandemic, or at least by summer 2020. Did you know
12 about that evidence?
13 **A.** I wasn't aware of Professor Smith's concerns.
14 **Q.** No. Well, that was my -- you've anticipated my question
15 which was whether you or ARHAI were ever made aware,
16 whether directly or indirectly, of those concerns on
17 Professor Smith's behalf.
18 **A.** No, I wasn't made aware are of his concerns, no.
19 **Q.** What lines of communication existed, please, between
20 ARHAI and the Scottish Chief Medical Officer?
21 **A.** There were a few meetings where ARHAI would present
22 around the IPC guidance, Public Health Scotland held
23 a weekly IMT which was attended by Professor Smith and
24 other members of CMOD, alongside the Chief Nursing
25 Officers Directorate as well, and other directorates

1 from the Scottish Government, where there was the
2 situation assessment governed, and the IPC ARHAI had
3 an agenda at the weekly meeting to discuss any changes
4 or what the guidance was.
5 **Q.** So would you have expected to have been made aware of
6 those concerns on Professor Smith's part?
7 **A.** Yes. Also there was a number of occasions where the IPC
8 guidance went up through the senior clinical team, which
9 was all of the CMO, CNOs, and discussed there, around
10 the healthcare controls, so ...
11 **Q.** In your view, do you consider the lines of communication
12 between ARHAI on the one hand, the Chief Medical Officer
13 on the other, to be adequate, or could your work have
14 been assisted by greater engagement with the
15 Chief Medical Officer or indeed direct engagement with
16 him?
17 **A.** I think communication can always be improved, and it
18 certainly could have been improved during this emergency
19 situation. People were working 7 days a week, people
20 were working, you know, crazy hours, and sometimes you
21 would find that a decision had been made late at night
22 and you were catching up. It wasn't your normal kind of
23 lines of communication, so I would, yes, say that we do
24 need to improve both internally within our devolved
25 country, but also wider than that, our communication

1 lines.
2 **Q.** Can I move to ask you a little more, please, about the
3 position as at the end of -- or is it December 2020, you
4 were asked a few questions about this by Mr Scott
5 earlier.
6 **A.** Mm-hmm.
7 **Q.** We know from your statement, Ms Imrie, that in 2020
8 there were 3,389 nosocomial infections with Covid
9 identified. Would you agree that the level of
10 nosocomial infection of Covid-19 was of itself evidence
11 tending to suggest that IPC measures were inadequate in
12 not preventing transmission in healthcare settings?
13 **A.** Yes, so I think during that time, that was -- 2.6% of
14 all the positive Covids were nosocomial, so I think that
15 gives you -- it demonstrates how community transmission
16 directly influenced what was happening in hospital and
17 the controls within the community. Because as community
18 prevalence went up, and that happened for many reasons
19 that, you know, some of the measures, the public health
20 measures were eased off, schools went back, do you know,
21 we've soon different peaks and ten days later you have
22 seen people coming in -- not coming into hospital
23 because they needed treatment for Covid, that they were
24 an incidental finding.
25 **Q.** I understand the point, I think you've made it, that

1 hospital infection tended to go hand in hand with levels
2 in the community. But the question is slightly
3 different, which is that -- which is to say, do you
4 accept that the levels of nosocomial infection of Covid
5 in 2020 indicated that IPC measures weren't working? Do
6 you agree with that?
7 **A.** It indicates that there was onward transmission, so if
8 you have onward transmission, then the field --
9 **Q.** Yes.
10 **A.** -- and that's why we done the kind of "Lessons Learned"
11 with the local teams to try and understand, and some of
12 that comes down to some hospitals were unable to put in
13 the distancing. We didn't have -- in December 2020 we
14 were only starting to roll out the testing, so, as
15 I spoke earlier about presymptomatic, people might have
16 been put in a room and they developed symptoms
17 thereafter.
18 **Q.** Was it known by December 2020 that nosocomial infection
19 was at concerning levels in Scotland and throughout the
20 UK?
21 **A.** Was it known what the nosocomial levels were?
22 **Q.** Did you consider that nosocomial infection, as at
23 December 2020, was a matter of concern?
24 **A.** I think healthcare-associated infection is always
25 a concern. The difficulty here was the epicentre for

1 this outbreak was outwith the healthcare, and it was
2 very difficult to put the -- for the infection control
3 teams working locally, very difficult for them to put
4 controls in.
5 **Q.** You've got to work with what you can control in the
6 hospital; is that correct?
7 **A.** Yes.
8 **Q.** And one of those things would be the masks that
9 healthcare workers are wearing, for example, would you
10 agree?
11 **A.** Yes.
12 **Q.** And you've agreed, I think, earlier in your evidence
13 that FFP3 masks are a primary means of protecting
14 against aerosol transmission; would you agree with that?
15 **A.** Yes.
16 **Q.** And so, as at December 2020, notwithstanding the levels
17 of nosocomial infection that you were aware of, and the
18 evidence that there was at least a risk of aerosol
19 transmission, the UK IPC cell maintained its existing
20 position on FFP3s and didn't recommend wider use, is
21 that right?
22 **A.** Yes.
23 **Q.** Can you explain why there was a reluctance on the part
24 of the UK IPC cell to depart from earlier guidance, and
25 recommend that wider use of FFP3 masks, despite those

1 factors ie nosocomial infection, plus emerging evidence
2 about aerosol transmission?
3 **A.** So the use of FFP3 masks would have had no impact
4 whatsoever in nosocomial infections. So most of the
5 nosocomial, where it was patient-to-patient
6 transmission, was about the environment so that we'd
7 have beds that are too close together, that we have
8 waiting rooms that are jampacked full, that we didn't
9 have testing at that time, so you were putting people
10 in. And, recorded frequently in the CNRG notes are
11 discussions around patients being unwilling to wear
12 masks, so an FFP3 may have reduced occupational exposure
13 and transmission but I don't -- there might have been
14 some improvement, but I don't think that would be the
15 main factor in reducing nosocomial, I think it was about
16 testing and accommodation.
17 **Q.** But it would be a factor, wouldn't it? Because it would
18 have the potential effect of -- well, it would have the
19 effect of protecting -- providing greater protection for
20 healthcare workers, firstly, you've already explained
21 that it's the primary mitigation measure against aerial
22 transmission, but it would have also had a potential
23 impact on nosocomial infection, wouldn't it?
24 **A.** It wouldn't be where I would focus for reducing
25 nosocomial transmission.

1 **Q.** Do you consider that too high a threshold was imposed by
2 the UK IPC cell for evidence of aerosol transmission and
3 changing IPC guidance as a result?
4 **A.** I don't know that we imposed a threshold. As I said
5 earlier, there wasn't a criteria that we were waiting to
6 reach. We reviewed the local epi data, the intelligence
7 that we were getting elsewhere, and we had those
8 discussions with other groups, and you know,
9 international experts as well.
10 **Q.** I think earlier in your evidence when you were talking
11 about early in the pandemic, you said "There wasn't
12 enough good evidence to say we were uncertain". That
13 wasn't the position by December 2020, was it; it was
14 clear that there was evidence suggesting aerosol
15 transmission?
16 **A.** I don't know if it was clear that there was evidence
17 suggesting aerosol transmission. I think, again, the
18 position that I would say now is, it is constraining to
19 talk about aerosol or droplet.
20 I think there was certainly a lot of evidence
21 where we didn't have distancing or consistent and
22 correct use of PPE, that there was transmission. Or
23 where we had patients who were too close together or who
24 were housed in the same room as somebody that there was
25 certainly evidence of transmission.

1 **LADY HALLETT:** I'm sorry, we are going to have to leave it
2 there, Ms Stone, I'm really sorry, it's not your fault.
3 **MS STONE:** I only have one question, my Lady, but I'm in
4 your hands.
5 **LADY HALLETT:** All right.
6 **MS STONE:** I am grateful.
7 Final, final, final, Ms Imrie, do you now agree
8 that the precautionary approach ought to have led to the
9 wider recommendation of FFP3 masks, at least, by late
10 2020 as that evidence grew?
11 **A.** No, I don't think so we should go to a blanket approach.
12 I think we should look at a risk-assessed approach,
13 taking into account all the different factors and that
14 is what we're having discussions with our stakeholders
15 since we've done the systematic literature review but
16 we're acknowledging that we need to probably do a lot of
17 education and develop resources to allow people to do
18 those risk assessments.
19 **Q.** Going back to the time, shouldn't the precautionary
20 approach have led to a recommendation, I accept it's not
21 a blanket approach, but a recommendation for wider use
22 of FFP3 masks?
23 **A.** I think, given all the reasons that I gave earlier, that
24 was why we didn't go to a recommendation that the
25 evidence was weak to say that you would reduce the risk

1 and it's not a control you'd put in place for the kind
2 of nosocomial. I think there's other things we could
3 have focused on.
4 **LADY HALLETT:** Define "final, final", Ms Stone.
5 **MS STONE:** My apologies.
6 **LADY HALLETT:** I will let you off. Thank you.
7 Ms Mitchell.
8 **Questions from MS MITCHELL KC**
9 **MS MITCHELL:** I'm obliged, my Lady.
10 I appear as instructed by Aamer Anwar & Company on
11 behalf of the Scottish Covid Bereaved. I was looking at
12 ARHAI's remit and it says it was to provide
13 evidence-based guidance and expert advice on infection
14 and prevention and control to reduce
15 healthcare-associated infection, so obviously very
16 important for the Scottish Covid Bereaved.
17 The first thing I want to ask you about is that
18 collection of evidence and consultation process that
19 ARHAI takes part in. It's the evidence of the Scottish
20 Covid Bereaved that there was a significant disconnect
21 between guidance on what was to happen and in fact what
22 was actually happening within hospitals in relation to
23 infection control, for example the use of PPE.
24 Would it have been a sensible idea to include
25 patients and families to be part of the consultation

1 group to capture this type of information?
2 A. I think there could have been strategies explored to try
3 and gather patient and family experience and I do think
4 that is a lesson that many have taken on, not just IPC,
5 but -- no access the hospitals and things, so yes, it
6 could have been considered and it may have helped give
7 some of the intelligence that would be required to truly
8 understand, as you say, what's in the guidance and what
9 was happening in reality.
10 Q. And also as a result of that another experience was that
11 nurses were being -- it's the experience of the Scottish
12 Covid Bereaved that nurses were being asked to work in
13 wards where they had not been briefed on, for example,
14 cleaning or nursing protocols. Again, is this the sort
15 of information ARHAI should have been or would have been
16 able to capture had they looked for it in that way?
17 A. Each of the NHS boards in Scotland have an infection
18 control team and an ARHAI executive lead that look at,
19 if you like, compliance. Cleaning and protocols for
20 infectious patients have been in the National Infection
21 Control Manual since 2012 so that's quite disappointing
22 that that was your experience and I'll certainly take
23 that on board and take it back to the guidance
24 development teams as well.
25 Q. But would that have been helpful experience for ARHAI to

1 have captured at the time to have assisted?
2 A. I do agree, if we had had some sort of process in place
3 to gather people's experience and not just, you know,
4 the patients but the carers, I think that's not just
5 from an IPC point of view, but there's obviously been
6 a lot of discussion around the psychological effects and
7 things like that. So I do think that there could have
8 been more done to try and capture some of that
9 experience.
10 Q. Moving on. A lot has been asked of you already about
11 droplet and transmission, etc, and the Scottish Covid
12 Bereaved were allowed an opportunity to ask you about
13 the criticism in that regard.
14 I wonder if my Lady might allow me to ask
15 a question that is pertinent to it, but I don't think
16 the answer has been given yet which my question would be
17 this, I posit it to my Lady first so she can see if
18 she's interested.
19 The question was about criticism about acting too
20 slowly in relation to droplet and transmission, etc, and
21 we've heard from my learned friend, Counsel to the
22 Inquiry, he posited the view that it was the World
23 Health Organisation that caused the change, and I think
24 the witness resisted that as a reason, and what I don't
25 think we've come to is, actually, what was the tipping

1 point? If it wasn't the World Health Organisation and
2 it wasn't the wealth of information that was coming
3 before ARHAI to see aerosol as a real problem, what was
4 it that made ARHAI change its mind?
5 **LADY HALLETT:** Everyone is pushing their luck today, aren't
6 they, Ms Mitchell? All right, you may ask it.
7 A. Sorry --
8 **LADY HALLETT:** What was the tipping point?
9 **MS MITCHELL:** What was the tipping point for ARHAI to say,
10 "Okay, we are now going to consider that aerosols are
11 an issue in hospital settings"?
12 A. At what period are you referring to?
13 Q. When the guidance was changed.
14 A. The guidance --
15 Q. When ARHAI took the view, when it changed from just
16 talking about hospital settings, droplets, to "We now
17 accept that aerosols are now an issue too"?
18 A. So we've done a systematic literature review on
19 transmission, not just aerosol and droplet, but it's a
20 transmissions-based precautions literature review that's
21 been published online. I think we are looking not just
22 at Covid, we're looking at all respiratory viruses, and
23 we are now agreeing, if you like, with what the
24 technical group and WHO are saying, is around -- that
25 it's not helpful to describe it as airborne --

1 Q. No, I appreciate that and I don't want to go into that
2 again --
3 A. I don't know what part in the guidance or when you're
4 referring to the change.
5 Q. I think I shall just leave it there because I don't
6 think it's going to assist my Lady in any event.
7 Moving on, many of the Scottish Covid bereaved
8 families suffered loss of their loved ones through
9 nosocomial infection, as you will know, and the IPC
10 guidance again, as you will also know, has come under
11 significant criticisms. You've told us about a few
12 lessons learnt by ARHAI to improve its ability to
13 respond. One of them is showing your working in
14 explaining where decisions have come from, and how you
15 come to your guidance, and also the fact that you're not
16 using the word "recommendations" any more.
17 Criticism was also made of the speed of ARHAI and
18 the speed at which they were able to respond to the
19 changing circumstances, as you've described it,
20 an evolving situation and evidence had to be reviewed
21 continually.
22 Is there anything that has been changed or
23 anything that has been considered to allow ARHAI to
24 respond to things more speedily?
25 A. I'm not aware of the criticism around inability to

1 respond speedily. As I said, we were the only
2 organisation in the UK that was putting these rapid
3 reviews out on a monthly basis, so I think our response
4 to trying to get the evidence out to our stakeholders
5 was done quickly and efficiently. There may have been
6 some criticisms of how we had done that, but we
7 certainly were the only organisation to do it, and to
8 continue to do it for 25 months.
9 I think the healthcare science team and the
10 National Programme for Guidance and Evidence have
11 learned a lot through the pandemic about -- and some of
12 it were discussed today about how you pool resources, we
13 should be pooling from the UK and have a remit so it was
14 a UK response to that emerging threat.
15 ARHAI Scotland are quite fortunate in the resource
16 we have in HAI, and that is really as a result -- in
17 2002 we had the work report into Salmonella outbreak in
18 Glasgow Hospital, which had recommendations about
19 putting more resources into infection control, that they
20 shouldn't be a subgroup of public health, that they were
21 a specialty and they should be -- and then we have, of
22 course you will be aware of the Vale of Leven Inquiry
23 that followed on, and the recommendations that came from
24 that.
25 So ARHAI Scotland probably thought of the four UK

1 countries it was the best resourced and most able to
2 respond in that way. We were the only UK country that
3 was, on a daily basis reporting in all the Covid
4 clusters and monitoring that very closely as well.
5 So we did respond rapidly, maybe there were some
6 areas that people would like to have seen us respond
7 differently or quicker, but I think around the evidence
8 it would have been beneficial if we had pooled resources
9 within IPC across the four countries to make that more
10 efficient.
11 **Q.** So more efficient, it would be more speedy if there was
12 more collaboration, effectively.
13 **A.** Yes.
14 **Q.** Finally, in trying to work out how ARHAI works and how
15 it fitted into the whole system, I must confess
16 I personally found it quite a challenge, I don't know if
17 other people did, to see where it properly fitted in.
18 And what I was wondering was, would it help ARHAI if
19 there were clearer governance and reporting structures
20 or supervision so that it was clear to people looking at
21 it exactly where you fitted, what your status was, who
22 you were reporting to? It's like you said about,
23 earlier on, when you had the word "recommendations" and
24 you changed it to "guidance" because you weren't
25 recommending things, it seems a bit diffuse and woolly.

1 Would governance structures assist you?
2 **A.** Earlier on I was referring to rapid reviews where there
3 is no national or international standard for the
4 methodologies. So we were, if you like, learning as
5 others did during the pandemic what worked and what
6 didn't feel so comfortable for people when they were
7 reading rapid reviews.
8 I wouldn't like to consider supervision. You
9 know, all our staff are employed because of the
10 experience, skills and qualifications they have and we
11 kind of monitor that we're doing it, I would rather
12 portray it as like a collaboration, I think we could do
13 wider collaboration so that we're bringing in different
14 skill sets to help develop some of the guidance.
15 **Q.** And can I ask what those, if you had ideally someone to
16 bring in to help you to do that, who would it be? What
17 body?
18 **A.** I think that depends on what guidance you're writing.
19 So recently when we have done the transmission-based
20 precautions we've sought some international experts in
21 aerosol science and infectious disease to go through the
22 research questions that we're setting and the other
23 literature review we've recently completed was water in
24 the healthcare environment, the risks of water in the
25 healthcare environment, where we sought water and

1 engineering expertise to help write the research
2 questions.
3 So I think it depends on what guidance you're
4 writing.
5 **Q.** So it would simply be the ability to be able to access
6 these resources as and when, would be the best way to
7 put it?
8 **A.** I think it's important, as well, that -- ARHAI has
9 a working group that develop guidance which although we
10 publish the final guidance there are
11 multi-organisational and disciplinary people on the
12 working group and they also help set the work plan for
13 the year for the evidence. So they're helping
14 prioritise what's important.
15 **MS MITCHELL:** My Lady, those are my questions.
16 **LADY HALLETT:** Thank you very much, Ms Mitchell, very
17 grateful.
18 That completes the questions for you, Ms Imrie.
19 Actually, no, it doesn't, I have one more, sorry, and
20 it's all to do with at the very beginning you told me
21 about your expertise. You said you'd qualified but you
22 didn't tell me you qualified as what.
23 **A.** Oh. I was a registered general nurse that qualified
24 with --
25 **LADY HALLETT:** I had guessed that might be the case but

1 I just wanted to check. Thank you very much for your
2 help.
3 **THE WITNESS:** Thank you.
4 **(The witness withdrew)**
5 **LADY HALLETT:** Very well. 10 o'clock tomorrow.
6 Just to alert people who haven't been aware,
7 because I wasn't aware until earlier, there is the
8 possibility that one of the unions is going to be
9 striking on the London Underground on Thursday, so we
10 just need to make our necessary arrangements. Thank you
11 very much.
12 **(4.29 pm)**
13 **(The hearing adjourned until 10.00 am on**
14 **Wednesday, 6 November 2024)**
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