Q. Good morning, Mr O'Connor. Our first witness this morning is Professor James Rubin.

MR O'CONNOR: Good morning, my Lady. I see.  So you were amongst the independent academic members of the committee but not, at least in your eyes, a full member in that regard?

LADY HALLETT: Morning, Mr O'Connor. Perhaps, a full member in that regard?

MR O'CONNOR: But I was attending to provide data from the surveys I was analysing. I see.  You said you were an ex officio member of that committee you think that you were asked to serve on SAGE and it was as a result of your involvement in that committee on behaviour and communications, which is the public were responding to the pandemic.

Q. So you were, as you say, serving on that committee, and it was as a result of your involvement in that committee you think that you were asked to serve on SAGE and it was as a result of your involvement in that committee on behaviour and communications, which is the public were responding to the pandemic.

A. As you said, it sounds like that was one of them.

Q. You said you were an ex officio member of that committee. What did you mean by that?

A. So at the time I was a post doctoral researcher. I was working on a project that was led by Professor Michie and it was compared by Professor Susan Michie throughout the swine flu pandemic, and it focused on providing advice through SAGE about issues concerning, as it says, behaviour and communications in the general public.

Q. We're obviously familiar with the structure of SAGE and its subcommittees, as that structure existed in 2020, and we've heard that very similar structures existed in earlier instances where SAGE was summoned and it sounds like that was one of them?

A. Yes.

Q. You said you were an ex officio member of that committee. What did you mean by that?

A. So at the time I was a post doctoral researcher. I was working on a project that was led by Professor Michie and it was compared by Professor Susan Michie throughout the swine flu pandemic, and it focused on providing advice through SAGE about issues concerning, as it says, behaviour and communications in the general public.

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A. Yes.

Q. You said you were an ex officio member of that committee. What did you mean by that?
the first page of my statement, I've been involved in various different disasters and public health crises over the years. I had also been, prior to the Covid-19 pandemic, on several SAGE exercises relating to other issues that might affect the UK, and so I think Patrick Vallance was aware of me, and I think those two things combined led to me being invited to attend the first meeting.

Q. Yes. As you say, as we know, in due course, the committee that became known as SPI-B was established a month or two later. Was it at least in part on your initiative that that committee came to be established in 2020?

A. I think it was convergent thinking in a way. Certainly at the time, because I was aware of SPI-B&c during the swine flu pandemic and the work it did, my feeling was we were probably going to need something similar for the Covid pandemic. I did raise it at one of the early SAGE meetings and I think Sir Patrick and Sir Chris took it away to think about, and I think they agreed that, yes, it was going to be needed. So I can't remember the exact dates but it was set up in February 2020.

Q. Yes. Well, I was going to show you, in fact, the minutes of the seventh SAGE meeting on 13 February, which was the meeting, as we will see, where the decision was taken to set up SPI-B.

So if we just look on, if we can go -- on that page we see, as I say, SAGE 7 on 13 February. If we can go over to the next page, please, we just can see that list of attendees at the top, many of the names becoming more familiar to the Inquiry at least because of the evidence we've heard.

The fourth name down, Brooke Rogers, Professor Rogers is also a behavioural scientist, I believe and we will hear that she became involved in your committee in due course; is that right?

A. Yes.

Q. Then running down the list, we see your name as well as some others with whom we're familiar.

If we could go over, please, to page 4 of this document, we see the subheading "Behavioural science", Professor, and there are then a series of numbered paragraphs which, in summary, describe the need for consideration to be given to matters of -- relating to behavioural science in the developing pandemic; is that a fair summary?

A. Yes, I think I was asked to explain what the basic behavioural science considerations were at that particular point of the pandemic. Bearing in mind this was quite early, that was my attempt to summarise them for the committee. And then, as you can see, it was agreed that a group focusing on these kind of issues -- and more, this is only, you know, a potted summary of the kind of things we looked at -- would be useful.

Q. Do we take it then that you drafted these paragraphs?

A. I didn't draft the paragraphs. This is a summary from the SAGE secretariat as what I said during the meeting.

Q. I see. I see. Well, I'm not going to go through it in fine detail, Professor, but just one point I wanted to pick up from these paragraphs was, for example, if we look at paragraph 24 what is said there is that:

"At this stage, public messaging should stress the importance of personal responsibility and responsibility to others, in order to drive positive public behaviours."

Then, just running one's eye down the following paragraphs, the idea of the importance of messaging is repeated many times, is it not?

A. Yes.

Q. Was the idea of messaging then one of the key things in your mind as to what -- the type of area in which this new committee might assist?

A. Yes. During a crisis one of the -- one of the primary tools the government have to help the public to engage in protective behaviour is to communicate with the public as to what those behaviours are, what they should be doing, why they should be doing it, and so on. I'd emphasise it's not the only thing we were considering. There are plenty of other things that aren't communication that are important behavioural science, but it is certainly one of them.

Q. So, for example, paragraph 25:

"Public messaging should stress the efficacy of certain behaviours ..."

Paragraph 26:

"National messaging should be clear and definitive ..."

And paragraph 28, the final sentence:

"HMG needs to understand the logic behind those behaviours in order to identify solutions and to improve messaging."

All these points about understanding the best messaging to provide as the pandemic progresses?

A. Yes.

Q. If we can look at the passage immediately below, we see, as you've already indicated, Professor, under "Actions", the decision recorded:

"SPI-B ... subgroup to be established to provide behavioural science advice via SAGE ..."

Just help us, is there any significance in the fact that
MR O’CONNOR: If you look at paragraph 4.1 of your witness statement, on page 24. You attempt a definition of behavioural science in that paragraph of your statement, Professor. You say: “Behavioural science’ is a catch-all term that describes the use of theories, models and evidence to understand human behaviour.”

You, of course, as we’ve said, are a psychologist by training. Can you expand on that description, just a little bit, with particular regard to the work that was undertaken by your committee?

A. Absolutely. I mean, it is slightly tricky because behavioural science, it’s not quite a discipline in its own right. I think it’s moving in that direction but actually it’s, as it says on the tin, it’s the science of trying to understand human behaviour and what influences it.

Q. Yes.

A. It draws on these various different disciplines. Psychologists, many of us are very interested in behaviour, but we approach that with a particular lens, a particular set of models and theories. Other disciplines, anthropology, sociology, they bring a different perspective on matters, looking at how culture or how structures within society can guide behaviour and limit behaviour. In terms of how SPI-B pulled all that together, we had quite
a multidisciplinary selection of professors.

Q. Yes. Just to interrupt you, we'll come in a minute -- in part of your statement you have a very interesting list of all the different disciplines that were represented and we will come to that in a moment.

A. Certainly. We were looking at the specific behaviours that would be important during the pandemic. We were looking, for example, at self-isolation, what governs whether somebody is able to adhere to self-isolation or not, or we would look at matters of adherence to social distancing in specific groups. Young men, for example, what are the particular challenges for that group around adhering to social distancing?

I think over the course of the pandemic we produced 94 advice papers or contributed to 94 advice papers for government, they tended to focus on specific topics, specific areas, with a few more general papers about a whole range of different behaviours thrown in. But we kind of looked at individual behaviours in some depth and tried to understand: are people adhering? What are the challenges in adhering? And how can government support people to help them adhere better?

Q. Yes, thank you.

The words that you use in this paragraph, and which you used a moment ago, is "understanding human behaviour". Understanding why people act in a certain way is, of course, something that can be done after the event. Retrospectively, you look at what someone's done and try and understand why they've done it. But as the SAGE minutes that we looked at a moment ago suggest, at least one of the things that was important in the context of the pandemic was predicting how people would behave in given circumstances, and then seeking to influence their behaviour prospectively, for example through messaging.

Professor Woolhouse gave evidence to this Inquiry earlier this week, and one of his observations was that "behavioural science is not predictive". Is he right about that?

A. Partially. I think if you asked us to predict what percentage of people will adhere to the following behaviour next week, we don't have a crystal ball and I can't give you a number. If you ask us what will influence whether people are more likely to adhere or less likely to adhere and therefore what interventions should we put in place to help people to adhere to this recommendation, we can do that.

So we can tell you what factors predict someone's behaviour, but I can't give you a prediction of, "It will be 37.8% of young men who are going to be washing their hands", no.

Q. Yes. Professor Woolhouse of course is a modeller, and so perhaps from his point of view you can't provide him with the types of data or statistics that he could feed into one of his models, but I think what you're saying is that you are still able to give some sort of indication as to the likely impact, for example, of certain messaging or direction from the government?

A. I think that's fair. I'd expand slightly. We can also help understand current levels of adherence, current levels of behaviour. I was one of the team that helped Professor John Edmunds, who I think you might take evidence from, looking at his CoMix study, which was a survey looking at how many contacts do people have during their day-to-day life. Designing the kind of questions to capture that is a behavioural science issue, so behavioural scientists can help in understanding the levels of human behaviour. It does become quite tricky, because of the complexity involved, in predicting, you know, next month or next week it's going to be 38%.

Q. Yes. Yes.

Just moving on a little bit, Professor, behavioural science, particularly in the context of large organisations, for example the government, is often associated with so-called nudge theory. You explain in your witness statement, and perhaps we can look at it, it's paragraph 21.7 on page 91, you explain that SPI-B wasn't a so-called nudge unit. You say: "Instead of nudging, SPI-B's work focused on providing support to people to help them to engage with the measures that were openly recommended by public health experts."

Can you help us with this area, Professor: first of all, simply explaining what nudge theory is and, secondly, perhaps expand on that statement that SPI-B wasn't in the business of nudging?

A. Sure. So, first of all, nudge theory isn't a theory, it doesn't have a set of hypotheses, it's a -- it's a term for a set of interventions that can be used to help people to engage with certain specific behaviours. Those largely relate around making some behaviours easier for people to do. So the classic example is pension auto-enrolment. So rather than having people opt in to receive their pension, instead you say that people will automatically be opted into that pension and you don't have a crystal ball and can't give you a number. If you ask us what will influence whether people are more likely to adhere or less likely to adhere and therefore what interventions should we put in place to help people to adhere to this recommendation, we can do that.

So we can tell you what factors predict someone's behaviour, but I can't give you a prediction of, "It will be 37.8% of young men who are going to be washing their hands", no.
A. Broadly, yes. So we did take commissions from SAGE, so SAGE would ask us to write a paper on X, Y or Z, and we would do that. We also had commissions, particularly later on in the pandemic, that came directly from departments in government, and again we would tackle those.

We were able to write self-initiated papers, and there are examples where we have done that. Those particularly came about where participants felt there was a particular issue in danger of being overlooked. I could see in Professor Yardley’s statement she gives an early example of easing of restrictions and the need for SPI-B to advise on that, and we did write a paper on that. I can remember our police and security subgroup became quite concerned part way during the pandemic about the rise in tension within certain sections of the public and the potential for public disorder arising from that. They came to me with that issue. I took it to SAGE. We agreed they should write a paper on that and it was discussed in a SAGE meeting and then sent to the Home Office.

So we could and did self-initiate papers. The more normal route was for it to be reactive and to receive commissions.

Q. Yes.

A. I would also -- if I can, I would also say it gets a bit blury as well because there were also, particularly later in the pandemic, issues where a government department would ask us a question and we would say, “We don’t quite like that question, we’d like to change it to something on this”, and there would be a bit of negotiation that would go on. There would also be instances where we would raise a problem and it would
then be on the radar for a government department because we had raised it, and then they would ask us what we could do about it. So there was a -- it became a bit of iteration, particularly later in the pandemic, that I think was very useful.

Q. Sure. On a similar topic, again we've heard from SPI-M-O members about the idea of producing a consensus report back to SAGE, the idea being that, rather than reporting back with a document which demonstrated the variety of views held by members of the committee, they would try to arrive at a single consensus position which would then be reported back on whatever the question was.

A. Yes. And our papers did report the consensus of the group. Where there were differences of opinion within the group we would simply say that within the paper. And there are some examples, for example whether it was a wise idea to allow alcohol in large gatherings when they were re-opened. There were different views on that within the group, and we simply said, "We have divergent opinions on this".

Q. Did you then, to take that example, explain what the minority views were or did you simply say that they existed without expanding on them?

Yes, people did drift in and out of things for --

Q. As we've all discovered, Zoom meetings are very easy to attend, aren't they?

A. Yes.

Q. But the list, then, we see here the first few, I'm not going to read them out, but psychologists, epidemiologists -- if we can go over the page -- you mentioned anthropology, criminology, marketing, paediatrician, ethicist, so a very broad range of expertise represented on the committee?

A. Yes. And I should apologise to my colleagues as well if I've miscategorised them in this list. It can be difficult with experts to pigeonhole them as "You're an epidemiologist" or "You're a sociologist" but this is my best shot.

Q. Well, you haven't put any names in anyway, so no one knows exactly what you're calling them.

A. May I just ask, if we can -- I think it's on the same page, actually, if we can go down a little bit, in fact it's on -- yes, down a little bit.

You indicate at paragraph 7.5, so at the bottom, you refer there to the committee having been involved in undertaking work in the context of inequalities and stratification. Is that right?

A. Yes.

Q. Then if we can look over the page, you give some examples of papers that the committee produced in that area, so, for example, number 2 there, the impact of school closures on children from minoritised ethnic communities, and a little bit further down, number 4, unequal policing of communities and of specific groups within those communities, and, underneath that, unequal access to outdoor space according to socioeconomic circumstances.

First of all, with particular regard to these types of papers, Professor, were you aware of any policy changes taking place as a result or driven by the work that your committee did?

A. That was always a particular difficulty for the group.

We didn't see what impact our papers were having, so the papers would be delivered either up to SAGE or they would be delivered direct to the department, and then we wouldn't see what would happen behind that curtain. And I genuinely don't know whether -- you know, I assume they were read, but I don't know whether they were weighed up against other conflicting priorities within government or other data they were aware of that we weren't, how it influenced policy. We didn't get feedback on those issues, or where we did get feedback, it was very top line, it was, you know, "Your paper has
Q. The phrase you use in your statement is that your papers seemed to disappear into a black hole?
A. Yes.
Q. Did you ask for more detailed feedback on what had happened?
A. We raised it on several occasions with the secretariat. I didn't push for specific feedback from government departments on the basis that, you know, they are very busy as well trying to deal with this stuff and if they wanted to give us feedback, if they wanted to tell us, "You've misunderstood this issue" or "Why aren't you talking about this paper from Southampton that we're aware of that you don't seem to be aware of?", they would have done that.
Q. Sorry, does that answer your question?
A. Yes. Yes, it does, thank you.
Q. Just sticking with this area of inequality for a moment, did you ever consider issues relating to domestic abuse in the home during isolation and lockdown?
A. It may be that --
Q. I genuinely can't recall, I'm afraid.

the committee worked, Professor, what contact, if any, did you have with the devolved administrations in Scotland, Wales and Northern Ireland?
A. So the committee provided advice to the UK Government, rather than to the individual DAs. We did have observers from each of the DAs who attended the group sessions. Occasionally they would voice issues about, you know, "We don't think that would work in Northern Ireland, for example, because we have a different community set-up that you haven't considered". We also had two members of the group who sat on the Scottish and the Welsh advisory groups, Professor Stephen Reicher and Professor Ann John, who was one of the co-chairs, and I think that was the extent of our involvement. So we were primarily an advisory group for the UK Government.
Q. You mention the Scottish and Welsh advisory groups.
A. I believe Professor John and Professor Reicher cover this in their statements. I think they would be better sighted to give you advice on that.
Q. Fine. Well, as you say, we have their statements and we can pick that detail up there.

I next want to cover with you, Professor, just a few points you make in your statement about the remit of the committee and the boundaries of what it was and wasn't doing. So for those purposes if I could take you first to paragraph 6.3 of your statement at page 37, you make a series of points about the way in which the committee worked.

We see here, at the top of paragraph 6.3 you make it clear that: "... SPI-B focused on behavioural issues relating to the pandemic and on the impact of interventions on wellbeing."

Which we've discussed.
"It did not advise on what interventions should be pursued to reduce transmission rates, except in the context of pointing out where adherence to specific guidance was already high ...

And so on.

So is the point you're making here that there was no, as it were, epidemiological theme to your work?
A. Yeah, absolutely. And it would have been quite odd if there was, given that we had a panel of world leading epidemiologists also in the group, so we didn't want to step on their turf.
Q. We did notice that there was an epidemiologist on your
Q. One of the other themes that comes up in your statement is actually a wish that you had had more access to government data. So perhaps you're making a slightly different point here, but tell us about -- perhaps not in the context of a rolling analysis of data, but were there areas where you wish you'd had more access to government data?

A. Yes, this cropped up a few times. There were issues where we would write a paper and we would submit it and we then discovered afterwards that there was already a report within government that covered that particular topic, or would have been useful for us to see, but because it was stamped "official sensitive" it wasn't shared widely enough, we didn't have access to it, we didn't see it. I'm conscious there are -- you know, we were one group within the government system looking at behavioural science of which there were many other groups. There was the Behavioural Insights Team, there were teams within UKHSA, there was the DHSC communications team, the Cabinet Office communications team. They were conducting a whole series of focus groups and polling and field trips. I often felt we weren't really seeing all of that data and it would have been useful to see it.

So no, I'm sure there were lots of other things floating around in the system that we could have used but we didn't see.

Q. I want to take you back to some of those other committees and how, as it were, you slotted into the larger picture in just a moment.

Before we do that, though, let's just finish this list of points you make here. So if we can go over the page again to paragraph 6.9, the last of these points you mention a few of them, and in fact you list them here, do you not?

A. Yes.

Q. So the Behavioural Insights Team, that is or at least was initially part of the Cabinet Office, am I right about that?

A. Yes.

Q. Then we see the other entities: the Government Communication Service, communications teams from the DHSC and Public Health England, and then Public Health England/UKHSA's Emergency Response Department and...
others.
You go on in your statement, Professor, to, in summary, describe a fairly arm’s length but good relationship with these various bodies. I want to come back to the point you were making, which is the sense that you may have not fallen out with any of these bodies but you weren’t perhaps quite sure of how you fitted in to the overall picture?

A. No, I don’t think that’s quite correct, if I may. So the -- we certainly didn’t fall out with these bodies, we had a good working relationship with all of these groups, and they did provide data to us and ask us questions and engage in conversations with us within SPI-B that was very useful. In -- apologies, I’ve forgotten your question.

Q. It was just really whether your committee -- the words I used were whether you didn’t know where you fitted in to the picture?

A. Oh, I see. No, we did. And I think it’s -- it would be a mistake to think that all of these groups do the same thing and SPI-B does the same thing and we’re all competing over the same space. That’s not the case. If you look at it, for example, you’ve got a communications service, a communications team, another communications team, well, it’s quite clear where their remit lies.

received more funding, and were able to ramp up their capacity to do the kinds of reviewing work and the kind of data integration that SPI-B was looking at, the need for SPI-B did start to fall away, and that was reasonable and fair.

So, yes, we very happily handed over the work to those teams.

Q. Thank you.

Just before we leave this list, a point you’ve already made, some of these entities at least are involved in communications, and so we’re back to that point we were talking about earlier about your interest in messaging, the fact that C wasn’t included in the name of the committee, operational communications not being for you.

I think it’s right that you did have a subgroup, I forget its name, but was it in fact a communications subgroup?

A. Yes.

Q. As I’ve said, this is something which we will ask Professor Yardley about more, but there was a problem, wasn’t there, at least some members of your committee did feel that SPI-B and the subgroup to do with communications was being cut out of involvement in government communications?

And as I’ve said, SPI-B looked at the science of communication, whereas these teams were working on the operationalisation of that science. So we would provide advice to them on, actually, if you phrase it in this way or you have this kind of trusted communicator, it lands better, and they would have to take that away and work out: well, what does our poster look like in that case?

Behavioural Insights Team, as we’ve discussed, they have a particular set of interventions they particularly focus on, and SPI-B goes much broader than that. So, again, I didn’t feel we were competing with the Behavioural Insights Team.

The PHE/UKHSA Emergency Response Department, I work with them a lot, they have a very good team, but initially very small, and the team that they had were employed on research grants, so specifically focused on that one particular problem rather than the whole broad range of issues to do with Covid. So, again, I don’t think we were in competition, and we were helping them to understand what to do.

And the test and trace working groups, well, they were set up during the course of the pandemic. Certainly as these teams, particularly UKHSA and Test and Trace and others, became more established, and...
Q. So there was a principle that everything that was being produced by the group would be published. The frustration was in the timeliness of that publication. And there were often delays, sometimes very lengthy delays, in putting things into the public domain.

A. I think there were -- as I understood it, there were two reasons for that. The first was where we had said something in a paper that was still being considered by policymakers, it was an ongoing policy decision, that paper would not be published because -- you know, I don't understand how policymaking works but I understand there is a principle of allowing a safe space for policymakers to weigh up different options before putting it in the public domain.

Q. That was one issue. The second issue was where we cited things in our paper, where we cited other reports produced within my role on the group, many other documents -- you know, I think I said government is awash with papers that are stamped "official sensitive" and I often didn't understand the reasoning for that protected marking and why it couldn't be released, there didn't seem often anything particularly sensitive about it to my eye.

So it was a frustration that -- you know, from an academic point of view, publication is built into us, it's what we do, it's what we're marked on. It helps the public debate, it helps our academic colleagues to understand what additional research we might need, it gives us peer review on our papers, it means colleagues from other countries can see the scientific considerations taking place in the UK and they can use it, occupational health teams in industry can use it. Withholding it was a negative thing and I was very keen for it to go out as quickly as it could. So, yes, a persistent frustration.

Q. Some of those examples you've just given us, is your view then that we're not just looking at perhaps a bit of a culture clash between academics who were inclined to publish things and civil servants who are a bit more backward in publishing things, but you felt there were important reasons, during the pandemic, for your research to be made available to as many people as possible as quickly as possible?

A. Yes. Yes. I think the two key things are, first of all, so that we can get feedback from our academic peers. If we've got something wrong in the paper, we want to know about that, so the peer review is useful. And that did happen when we published stuff: blogs would be written and we would read those and understand other data or things we may have missed, and that was very useful. And secondly, the stuff we were writing was helpful not just for government but for many other audiences as well, and I felt we were restricting it unnecessarily to government.

Q. It was, after all, a global pandemic?

A. Yes.

Q. These problems broke the surface on at least one occasion. I'd like to show you a newspaper article, if I might.

It's INQ000197125. So this is in May 2020. We will see a few episodes taking place around this time. You've already mentioned the tension over government messaging, but is it right to say, Professor, that those early months, May/June 2020, were difficult times for the committee?

A. I think that might be overstating it actually. There certainly were discussions about how we handled our.
approach to media, and I think it’s reasonable to say there is different opinions about that, but as a committee we continued to function very well and continued to quite very good papers. So yes, disagreements, but I don’t think it interfered with the functioning of the committee.

Q. 
A. Yes.

Q. -- being furious at what they see as an attempt to censor their advice on government proposals during the lockdown by heavily redacting an official report before it was leaked to the public. There is then a description of the report.

If we go over the page, there is a reference to: "Several SPI-B members [telling] The Guardian that the redacted portions of the document contained criticisms they had made of potential government policies they had been formally asked to consider in late March and early April."

Various quotes, one from Professor Reicher, saying: "Personally, I am more bemused than furious ... The explanation ...

they weren’t given advance notice:

"... we still haven’t been given a satisfactory explanation ...

So questions, for example, about process and so on. So it does appear that this was a serious incident. What was your sort of reflection on it?

A. My understanding of the reason those redactions were in place was to allow the paper to be released. So this was one of those areas where what was underneath the redactions were issues that were still being considered by policymakers, and the decision that was made by the secretariat to release the paper with redactions was precisely to allow it to go out but withholding those bits that couldn’t go out because they were still under consideration, and the alternative would have been it doesn’t go out at all until those are all sorted.

That said, yes, I completely agree it was heavy-handed and it was not a good look. We did discuss it with Sir Patrick, I raised it with Sir Patrick, and he agreed and he made it very clear that he wanted as few redactions to papers as possible and the revised version of that paper was released pretty quickly afterwards with lots of that taken out.

Q. 
A. Yes.

So I kind of agree with my colleagues in that thing, it was not a good look and I think it did need to be explained better when it was released as well. To be fair to the secretariat, it is true that they did alert the committee a couple of weeks in advance that the redactions had been carried out by officials, suggesting that members of the committee had been told about this, although, as we see further on down the page, they said it was not a good look. We did discuss it with Sir Patrick, I raised it with Sir Patrick, and he agreed and he made it very clear that he wanted as few redactions to papers as possible and the revised version of that paper was released pretty quickly afterwards with lots of that taken out.
Q. Then, picking it up a few lines further down, you say: "[Your] impression was that, within Government, there was some disquiet about this. The group received suggestions from Sir Patrick Vallance that vocal, public criticism of Government policy might not be the best way to encourage policymakers to engage with [your] advice."

Is that a fair description, then, of that, the start of that concern about members of the committee speaking publicly about government policy?

A. Yes. And it was a legitimate tension, it was a difficult issue, and I still don't have an answer to it. Academics have academic freedom, and we fight very hard for that, and it's part of our identity, and I think it's very important in forming the public debate, and part of that academic freedom is the freedom to comment on public policy. At the same time, if the committee is to be trusted by government and we're going to have government departments come to us and be frank with us about the quandaries that they have or the dilemmas or the uncertainties and to give us information that they may not necessarily want to disclose in the public domain, while it is making those kind of -- a running commentary on public policy, does that detract from the government's ability to approach the group? So there is that tension there and...

Q. Moving on, though, just reading on in the statement, in terms of impact on your committee, there is the suggestion that this sort of leak, if that's what it was: "... was taken very seriously within Government and that if SPI-B was viewed as 'leaky' then it might reduce the desire of people within Government to engage with us."

So that was one of the problems that was raised by this sort of matter?

A. Yes, it -- it's all part of the same kind of issue:

the need for us to maintain the trust of government so that they will approach us and ask us for advice and to feel comfortable doing so.

I think a leak obviously oversteps the boundaries, it was an official sensitive document, it should not have been leaked, I'm quite clear on that, but it also combined with other issues around more general comments about public policy which I think played into the same kind of issue.

Q. Yes.

A. And we were certainly told on at least three, possibly four occasions by senior members within the secretariat that we did run the risk of losing the trust of government over these issues.
A. Yes, that's fair, and various members joined all sorts of different committees, joined the British Psychological Society committee or the World Health Organisation or Independent SAGE in this case, but this was again raised with me specifically that, as you can see in the quotes there, it raises real issues of trust for policymakers -- or government departments are now becoming very wary of putting anything to SPI-B. So it did raise a tension.

Q. Let's look, if we may, at a couple of emails, which I think are probably those that are quoted in that paragraph.

First of all, if we just look at INQ000197131. We can just look at the top half of this page. This is an exchange between you and someone called Stuart Wainwright, who we have heard evidence from, certainly a member of the secretariat, of the SAGE secretariat, possibly rather more senior than that, I forget, was he in fact the senior member of the SAGE secretariat?

A. Yes.

Q. Yes. You're discussing here, are you not, the understanding early in the story that, as we can see from the bottom email on the screen, one or two of your members were going to join Independent SAGE; is that right?

A. I think one or two members had joined Independent SAGE earlier than this --

Q. Right.

A. -- which wasn't seen as an issue, but I think when multiple members on the same day said that they were joining, that -- obviously I had to alert the secretariat to what was going on, and this is the communication about that.

Q. We will come to an email a few days later, but here we see in the bottom emails Mr Wainwright making this point:

"... one or two members involved with alternative sage was one thing but as more get involved I do think policy makers will be more reluctant to be open with the committee about the challenges they are facing. So as more get involved with alternative sage, then [I think he means SPI-B's] ability to have impact will reduce I fear."

A. Yes, and you can -- you can see the tension. So absolutely academics have a right to talk to whomever they want to and to provide their input into more than just SPI-B, but at the same time, as the co-chair of SPI-B, it was my responsibility to make sure that the group's impact within government was maintained. And that then was a difficult thing for me to balance up, hence the conversation with Stu.

LADY HALLETT: But if they didn't open -- I mean, I can see how in reaching their own conclusions about policy they may have been influenced by data they'd seen, but if they didn't mention in public the data that they had seen or didn't mention the discussions that SPI-B members had had, then why can't they just comment using their academic freedom without relating it to SPI-B?

A. They absolutely could, and they did do that. They didn't overstep -- I want to be clear, they did not overstep the terms of reference at all by joining Independent SAGE or by commenting on government policy, and I think you can see in this email chain, actually, Stu saying, "Let's see if there is a conflict of interest here", and there wasn't, but nonetheless there was a feeling that the willingness of government to engage with SPI-B would decline --

LADY HALLETT: That I follow, yes.

A. -- and that is the issue that we're talking about. They were within their rights to do this, absolutely within their rights, and I didn't argue that they shouldn't, but it did have implications -- or I was told it had implications in terms of government engagement with the group.

LADY HALLETT: Should they have said, for example, "As a member of SPI-B", that seems to me to be crossing...
the line which they shouldn’t do, because if they say
"As a member of SPI-B" then they appear to be linking
their personal comments with SPI-B membership?
A. Yes, no, they shouldn’t have said that, and again that
was quite clear. And I think very few members ever did
that and where they did it was normally a slip.
That said, I think the media did that job for us,
and any time any of us made any comment it was always
“senior government adviser says this”.
MR O’CONNOR: Can I -- I want to move on to another email in
a moment, before we do, could I just ask you about
a slightly earlier part of the discussion on this email
chain between Mr Wainwright.
As you say, the discussion was about whether there
was a conflict of interest and what might be done about
it. Right at the bottom of this page, do you see it’s
your email to Mr Wainwright, you say:
“DHSC will presumably want us to adopt nervtag style
membership arrangements...”
Then you talk about a refreshed terms of reference.
What do you mean by NERVTAG-style membership
arrangements?
A. So with -- NERVTAG had a much more formal way of
appointing members, with much clearer terms of reference
and a formal interview process, and I -- my

people and then it leapt up to eight.
Q. All right, so he is catching up here with what you were
discussing with Mr Wainwright --
A. Yes.
Q. -- a week or so earlier? I see, thank you.
If we can go back to the first page, then, we see, if we can look at the email from Patrick Vallance saying
"The effect is", Patrick Vallance is making very much
the same point that you had been discussing with
Stuart Wainwright:
"The effect is that Government departments are now
becoming very wary of putting anything to SPI-B because
of a risk of leaks or misuse. We should think about how
to deal with it. Frankly it is bizarre behaviour don’t
you think?"
On the same day, in his evening diary,
Patrick Vallance recorded or described this action on
the part of the SPI-B members as “totally inappropriate
behaviour”. Do you think it was totally inappropriate?
A. No. As I say, they weren’t in breach of the terms of
reference, there wasn’t a conflict of interest issue,
and they retained the right to talk to anybody who was
interested. So I think there’s -- I think there’s
a valid difference of opinion as to what the best thing
to do here was. I think I would -- I mean, obviously

assumption -- if you see, we’re in June 2020, so we had
moved out of the immediate crisis period of
February/March, my assumption was that that would be
the way that SAGE would evolve, towards a more kind of
formalised mechanism. It didn’t, in practice, but
that’s what I was referring to there.
Q. Yes. Thank you.
Just to finish off this topic, if we can look at one
more email, please, INQ000196969. The previous emails
we were looking at were dated 9 June, so this is
ten days later, and if we just look at the bottom -- in
fact I think, sorry, we need to go on to the next page,
for the start. Yes.
So the start of this email chain is an email from
Patrick Vallance to you where he says:
“I gather that 8 members of SPI-B have formed
an independent SPI-B reporting into independent SAGE.
Do you know about this? Are they using the government
papers they see? This seems like an odd thing to do and
may cause problems.”
So we were looking previously at a time when it
seemed to have escalated from one or two to a few more,
but ten days later there were even more than that who
were joining Independent SAGE.
A. Yes, I think initially it was one person and then two

I didn’t go down this route and I didn’t engage very
much with the media during the pandemic either. I think
it was a different view and I -- still, in my head,
I don’t know how to balance those two issues.
I’d hope the Inquiry can hopefully give us some
advice on how to deal with this in your report.
LADY HALLETT: I’m not sure.
MR O’CONNOR: Just before you hand the problem over to us,
Professor Rubin, just lastly on this, were there to be
or when there is another pandemic, and if committees
like this are being set up, having had this experience,
would you go about the setting up of the committee in
a different way? Would you, for example, from
the outset use that slightly more formal NERVTAG style
procedure that you mentioned?
A. I don’t know. I genuinely don’t know. I think there is
a challenge there, because you want to have the best
possible people on the group, and we had the best
possible people on the group, these are world leading
experts in their field, and I wouldn’t want to do
anything that would put people off who we need providing
that evidence, and if this puts them off doing that
advice to government will suffer.
I think what might be required is a better induction
rather than a better terms of reference, a better
understanding early on about, you know, "If you want to
provide advice that is going to influence government
policy, this is the best way to do it, and it does mean
you may have to restrain yourself in doing this, that or
the other".
Not blocking them from doing that, but potentially
thinking further about what will the downstream
implications be.

Q. We will all recall that that was the week during which,
behind the scenes, pressure was mounting for a change of
tack away from the mitigation strategy towards
the suppression policy. We heard plenty about that from
Professors Riley and Ferguson yesterday.

A. Yes.

Q. In particular, as we will see, Chris Whitty's reference
to behavioural fatigue was made in the context of
justifying and explaining a delay in imposing NPIs until
what he would have described as close to the peak of the
epidemic?

A. Yes.

Q. Let's look, if we may, at precisely what he said, first
of all, and as I've said, there were two press
conferences a few days apart where this language was
used.

A. Yes.

Q. Let's go back to that first press conference on Monday,
when he talked about the Chief Medical Officer,
professors Riley and Ferguson yesterday.

A. No.

Q. Have you ever discussed it with him?

A. We -- we discussed it -- after he made the comments on
12 March, we raised it in SAGE the following day. We
discussed whether there was a basis within
SAGE for the -- and in
behavioural science, because it was before
the announcement of the lockdown had been made.

A. That's right, isn't it?

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justifying and explaining a delay in imposing NPIs until
what he would have described as close to the peak of the
epidemic?

A. Yes.
the conclusion that first of all this hadn't come from
SPI-B, and secondly we didn't think it was a valid
reason to delay the lockdown or delay implementation of
measures that were necessary. So that was where we
discussed it, it was in the SAGE meeting the next day.

Q. Right. And you've made it clear, I think, in
the context of that answer, that certainly your
committee's view was that his remarks were not supported
by behavioural science?

A. No, we had discussed individual behaviours,
self-isolation or shielding, we had discussed
the challenges that people would face in doing those
behaviours, but we hadn't come up with any kind of
general overarching principle of fatigue or loss of
enthusiasm, and we wouldn't have done. Individual
behaviours have individual factors that feed in to them.
It would have made no sense to say it's all enthusiasm,
and it will wane at around about the time of the peak
either, we wouldn't have been able to be that specific
even if we had said it. So, no, it wasn't us.

Q. I would like to show you, Professor, a couple of
paragraphs in the witness statement we have received
from Susan Michie. Now, she is someone whose name has
come up a couple of times. It is right, isn't it, she
is a professor of health psychology and, in fact, the

A. Yes.

Q. If we look down at paragraph 9.2, she goes on:
"SPI-B was not asked for our views on the notion of
'behavioural fatigue'. Had we been, the response would
have been that there was not such a concept in the
behavioural science literature, not in published
evidence nor in theories of behaviour nor in
measurement. SPI-B never mentioned this term apart from
a discussion I recall concerning its source and use.
The source of the introduction of the term ... into
discussions around Covid-19 is unknown, but it certainly
did not come from SPI-B."

A. Yes, I would.

Q. Can I just ask you about one more passage in her
statement, then, and it's over the page,
subparagraph (e) there, please.

Professor Michie here is listing the consequences of
this reference by the Chief Medical Officer to
behavioural fatigue, and here she says:
"In my opinion it caused behavioural scientists to
be blamed for the delayed first lockdown which cost many
lives. For example, in a private meeting with MPs on
16 June 2021, Matt Hancock was reported in the press as

A. Director of the Centre for Behaviour Change at -- is it
University College London, or King's College London?

Q. And you mentioned that she was the chair of SPI-B&C back
in 2009, so a senior member of the academic community?

A. Oh, absolutely, yeah.

Q. During the 2020 pandemic, she was a member of SPI-B?

A. Yes.

Q. Did she also sit on SAGE or not?

A. She attended SAGE I think on three occasions.

Q. Right. But not a regular attender?

A. No.

Q. As you were in your capacity as chair of SPI-B?

A. That's correct.

Q. So if we can just look at her statement, and in
particular a couple of paragraphs where she addresses
this issue, I'm going to go to paragraph 9.1 first,
thank you, and she says this:
"As I explained in my Witness Questionnaire [which
is a questionnaire she provided to the Inquiry], the
term 'behavioural fatigue' is not a behavioural science
term; that is to say it did not feature in behavioural
theories and there was no measure of it."

A. From what you've said, I take it you agree with
that?
...including the Chief Scientific Adviser, do you think it was made sufficiently clear that this concept had not arisen from SPI-B advice?

A. Well, as I say, we put it in the SAGE minutes and I was quite clear it needed to go into the SAGE minutes, that these issues were not a reason to delay lockdown. Beyond that, I don’t know what government thinks.

Q. There was at around this time another step taken to push back, as it were, against what Chris Whitty had said, and that was in an open letter that was published on 16 March, so early the following week. We have it up on screen. I’m sure you’re familiar with that letter, Professor.

A. Yes.

Q. I’m not going to read it out, but we can see it is a letter essentially encapsulating what you’ve already said, which is that the concept of behavioural fatigue is not one that’s known to behavioural science. And at the last paragraph we see there is a challenge: “If ‘behavioural fatigue’ truly represents a key factor in the government’s decision to delay high-visibility interventions, we urge the government to share an adequate evidence base in support of that decision. If one is lacking, we urge the government to reconsider these decisions.”

...and you on 13 March, so it’s the Friday at the end of that week, the day after the second of Chris Whitty’s press conferences, and I think the same day as the SAGE meeting that you’ve just mentioned.

A. Yes.

Q. If we look at the first of the emails in time, so at the bottom of that page, it’s from David Halpern.

Just tell us who David Halpern was.

A. David Halpern is the director of the Behavioural Insights Team.

Q. Which, as we said, it has a slightly strange status, but it certainly was founded within the Cabinet Office and was working to support government at the time?

A. Yes.

Q. We see the email is sent to Chris Whitty, but copying you and Patrick Vallance, and its title is "Important -- academic article that may support Chris Whitty quarantine fatigue point". We see that the message itself is very short: "Chris -- paper I mentioned. Also interesting [I think that means "with regard to"] second peak (though from different historical period)." Then there is sort of cut and pasted on some paragraphs relating to the 1918 flu epidemic. And I think the relevant parts from our point of view are -- yes, if we see at the top there, the last sentence of the paragraph that’s cut off at the top: "Some governments did not re-impose social distancing measures during the second wave of the epidemic because of the major disruption they had caused."

Sorry, actually I have gone to the wrong part of it, I think we need to go back to the page before -- no, we’ve changed it. So it’s the beginning of that paragraph -- no, sorry, we do need to go back to the page before. So the page before, please. Yes.

So do you see at the bottom where it says: "1918 influenza pandemic."

A. Yes.

Q. Then:

"Regarding the effectiveness of [NPIs], one of the difficulties was public compliance. Compliance was seen to wane with time (when the preliminary wave of fear declined), for environmental reasons (keeping people indoors on hot nights), for reasons of psychological stress due to isolation or quite simply once they were no longer compulsory."

Do you see that? That is perhaps what David Halpern was driving at when he said that that analysis of behaviour in the 1918 flu pandemic may, in his words, ...
support Chris Whitty's fatigue point. Is that how you understood this message?

A. Yes. I'm not entirely sure it did support Chris's fatigue point --
Q. Before you expand on that, Professor, let's have a look at your -- so you replied back to David Halpern, copying
Chris Whitty and Patrick Vallance, and you said:
"Thanks David
"You might also be interested in rates of public worry during swine flu..."
So that's much more recent, 2009.
"... based on DH...
"Is that Department for Health?
A. Yes.
Q. "... polling. High(ish) worry during first wave, then a habituation during the second wave."
You go on:
"But the problem is that by then it was seen as a mild illness. We might get a similar habituation with Covid. But the number of deaths reported will be much higher than swine flu so it is not necessarily a good parallel."
So with those in mind, can you tell us, first of all, whether you think that David Halpern's point was a good one, and secondly what you were trying to get across in your own email?

A. So these emails came following the SAGE meeting of that day. We had been discussing Chris's point at the podium about behavioural fatigue being a thing that was influencing the decisions about when to implement lockdown. We had pushed back on the idea, but, as you can see, conversations continued as to: actually, is there any evidence base for what Chris had mentioned?
I think David was providing something he thought might support it. In terms of why I don't think it does actually support it, as I understood it, and one of the challenges around this, is the kind of -- how nebulous the term Chris used was in terms of fatigue. The reason it's not used within behavioural science is because there are a wide range of factors that affect behaviour, and to merge them all together and stick the label "fatigue" on it is just not helpful. That's not how it works. It's kind of going 50, 70 years backwards in time in terms of behavioural science.

In terms of David's email, you can see within that a range of different factors that might have been affecting behaviour during the 1918 pandemic, including the weather, including governments not putting into place the legislation to maintain lockdown, including potentially a loss of motivation, but a whole range of different things. And to stamp all that and say, "Well, we can call all that fatigue", it's not right and it's not helpful. So I don't think it did support his point. In terms of the point I was making in my one, again this was in the spirit of kicking the idea around and seeing if it had legs. While that was the most up-to-date parallel I could think of, as you can see in terms of worry, if you take worry as kind of public interest, public concern, it does seem to flatline in the second stage of the swine flu pandemic. But as I also say, it's not a very good parallel. You can't -- I'm not sure we could extrapolate from that to what we were about to go into.
Q. Because what you anticipated in the Covid pandemic was far more serious in terms of people getting unwell and dying?
A. Absolutely. I think the reason people were not worried in the second wave of the swine flu pandemic was because by then it was understood in the public's mind as a mild interest -- a mild illness, sorry, and there wasn't particularly a reason for anybody to worry about it or react to it. It wasn't going to be the same in Covid, as I said there.
Q. Yes.
LADY HALLETT: Can we go back to the SAGE meeting when you made the points that you're making now. Was any basis put forward at the SAGE meeting for the rationale of behavioural fatigue or fatigue?
A. I think Chris raised the point around risk perception, that -- so one of the drivers of behaviour is whether you perceive yourself to be at risk, and as risk perception goes down, as people feel more comfortable and no longer perceive themselves as being at risk, you would expect behaviours to reduce as well, which makes sense. I think Chris raised that as a point that might support his argument, but again, for the same reasons I'm saying here, I wasn't sure that was completely valid. I think risk perception might have stayed quite high for quite a long time during the pandemic precisely because it was going to be quite severe for a lot of people. But that was the argument that was advanced.

LADY HALLETT: And then it takes it to the next day when Mr Halpern finds one study that might potentially justify or provide the basis for the comment?
A. Precisely. We were at that point, as I say, kicking the idea around to see if there were any legs. I think in the conversion(?) of those two emails, no.
David Halpern and/or his team, also were not part of the genesis of this remark from Chris Whitty. Were you confident about that?

Q. I went backwards and forwards in my mind over those months as to where it had come from and who had said what and why. I don’t think it was David.

A. We’re really in the thick of it on trying to make ... testing and tracing work ...

Mr Halpern, I should say, is coming to give evidence to the Inquiry in a couple of weeks’ time, so we’ll be able to ask him about all of this.

He then says: “They seem to be pushing us partly because there are delays in the lockdown.”

Q. Sorry, that was my misreading of the email.

A. I think that was more behind-the-scenes stuff.

Q. Well, exactly as I say: Chris as a non-psychologist trying to explain a complex net of things that might affect behaviour by making a metaphor out of it and

A. That’s you, as it were, rebutting and saying it wasn’t you that was the genesis of the remark by Chris Whitty. You could only do that:

Q. ... if [Chris Whitty] CMO joined us and said words to the effect of ‘this is getting silly. It was a rather clumsy attempt at a metaphor by a non-psychologist to explain why quarantine is unpleasant and which conflated frustration, distress, motivation, economic stressors etc.’

A. Is that actually how you saw it at the time?

Q. Yes, my thoughts at that stage were it’s presumably well, exactly as I say: Chris as a non-psychologist trying to explain a complex net of things that might affect behaviour by making a metaphor out of it and getting it slightly wrong.

A. I don’t know whether that’s true or not, I don’t know actually what was going on in Chris’s mind, I don’t know what the conversations in COBR were, but that at that time was what I thought might be happening: it was just a metaphor.

Q. It’s what you said at the time. Have you gained any further information or reflected any further since then?
or can we take it that that remains more or less your
best guess about what happened?

A. I don’t know. I think all I can tell you is I don’t
know. At the point 14 March where I got assurance from
Patrick that behavioural science had not delayed
the implementation of lockdown, and would not do so, at
that point I drew a line under it in my own mind. I was
still interested, obviously still wondering what had
happened, but without reassurance, no, I haven’t pursued
it further.

Q. Thank you. I said that there were two issues arising
out of behavioural science that arose that I was going
to ask you about. That was the first one, behavioural
fatigue, and the second one, and in fact this will be
the last area for my questioning, is all about the
subject of fear.

It’s right, isn’t it, that there was this separate
issue that was, again, the focus of some debate during
the pandemic about whether SPI-B had advocated
a behavioural policy of fear, in other words of
frightening people into compliance during the pandemic?

That was a debate?

A. Yes, that came up on social media.

Q. And again, we’ll go to some of the detail, but at
the outset, first of all, do you think that cultivating

1 of how likely something is to affect you, so whether
you’re likely to catch Covid for example, and if you do
catch Covid how severe it will be for you, and your
perceived risk is the multiplication of those two
things. If you think you’re going to get it and you
think it will be bad for you, you’ll have a high level
of perceived risk. That then motivates you to engage in
various behaviours to reduce your perceived risk. So,
because I think I’m at risk, I’ll wear a mask, I’ll use
hand gel, I’ll self-isolate, because I perceive other
people around me to be at risk and so I’ll try and
protect those. So it’s a different concept to fear.

It’s not the same thing.

Q. So perhaps there is a distinction between, on the one
hand, accurately describing the risk and, on the other
hand, engendering fear?

A. Yes, absolutely. And -- yes. Fear is also, or can be,
an outcome of that risk perception. So where you have
a high level of risk perception and you don’t think
there’s anything you can do to protect yourself, that
might generate fear. But where you think you can
protect yourself and take steps to protect yourself and
your loved ones, that should mitigate that process. So
it’s not the same thing, it’s a different -- a different
aspect of behavioural science.

Q. Let’s look, because it’s right, isn’t it, there was one
particular paper produced by SPI-B that was the focus of
some --

A. Yes.

Q. -- criticism and debate on this issue?

A. Absolutely.

Q. If we can look at it, please, it’s INQ000196761.

We see at the top the date, which is a notable one
in the sense that it’s 22 March, so it’s actually
a Sunday, before the lockdown was announced on Monday,
23 March.

So was this paper produced urgently?

A. I think we were asked for it on the Friday, the team
worked on it over the weekend, as you can see it's
signed off on the Sunday, before the lockdown was announced on Monday,
I think it was Monday morning. So it -- yes, it was
quick.

Q. You describe in your statement that in fact I think
there were two papers that you were asked to produce
within that short timescale?

A. Yes, that's right. So we had one paper looking at: what
do we think are the current levels of adherence to
the voluntary guidelines that the government have put in
place at that time? And we had another paper on: what
are all the options the government might want to

20 Pages 77 - 80
consider in terms of ways of increasing adherence?

Q. You took the lead in drafting the first of those papers, and Professor Michie took the lead on the second one, which is the one we're looking at?

A. Yes, that's correct.

Q. As you say, the focus of the paper was then how to increase adherence to the existing social distancing measures, so what we have in mind is not the lockdown that was announced only a day or so later, but those other NPIs about distancing, isolating, working from home, and so on, that had been announced in the week or so beforehand?

A. Yes. And for context, virtually all of those NPIs were voluntary, there was no legislation that someone had to do something or had to do a different thing --

Q. Yeah.

A. -- it was all guidance.

Q. If we look then at the note, we see at the top the paper addresses two quite separate categories, one is the general social distancing by everyone, and that's those NPIs I think we've just been describing, the other is rather separate, it's about shielding vulnerable people. The first part of the paper was devoted to identifying a series of angles or means by which it was suggested those -- that first category of measures, the voluntary, there was no legislation that someone had to do something or had to do a different thing --

among those who are complacent, using hard-hitting emotional messaging. To be effective this must also empower people by making clear the actions they can take to reduce the threat."

The focus of the debate was on the last sentence or so, the language of "The perceived level of personal threat needs to be increased among those who are complacent, using hard-hitting emotional messaging". It was suggested, was it not, that that amounted to SPI-B recommending a policy of frightening people into complying with this guidance?

A. That was the suggestion from others, yes.

Q. What's your response to it?

A. It's not correct. So, this isn't a paragraph about raising fear, this is a paragraph about complacency, as it says. At the time it was written, there were data suggesting that still at that stage of the pandemic, 22 March, substantial numbers of people did not seem to appreciate the genuine level of risk that they faced, both in terms of Covid and also in terms of the other non-Covid risks, the knock-on risks that might affect them, things like if you come off your motorbike and you need emergency admission to hospital and the NHS has been overwhelmed many times over, which is what the risk was, that also poses a risk to you. So it wasn't just about Covid.

So the idea behind this paragraph was: how can we -- how can we break through that scepticism? How can we break through -- the word we used was "complacency", and arm people with an appropriate understanding of the genuine level of risk that they did face, and also, as it says, empower them at the same time with knowledge about the steps they could take to protect themselves. So it wasn't a case of taking people who had an appropriate appreciation of the level of risk they faced and raising that further, it was the opposite. It was taking people who didn't really appreciate, didn't fully understand the risks that were coming down the line, and trying to find a way to explain that to them.

Q. So making clear the risk, educating people, rather than frightening them, to go back to the distinction we were discussing earlier?

A. Absolutely. If you wanted a paper on the attitude of the committee towards fear, this is the wrong paper. The right paper is the one we wrote a week later that went to the Cabinet Office on 3 April. The very first bullet point -- that was a paper entirely about messaging, and the very first bullet point of it was:

don't use fear, it won't be effective.
Q. As in fact you mentioned when I started asking you about this, you emphasise in your statement that throughout the pandemic the message from your committee, not just in that paper you just told us about, was that fear was not an appropriate mechanism for securing compliance with the rules?

A. We said that in our papers, we said it in the research that my team did that went straight to DHSC communications teams, we said it in personal conversations with members of the government. Yes, it was repeated many times.

Q. Can I just ask you, why not? Why was fear not something that should be pursued?

A. I mean, there’s a few reasons. To start with, during lockdown, in a way there is no point, because if people can’t go to the pubs or the night clubs because they’re shut, well, it’s not an issue about motivation any more, so it kind of changes the – it changes the considerations.

Also there is a challenge of people can turn off if you give them fear-based messaging, because it can be distressing and so the way to cope with that is not to pay attention to the messages.

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There are also other issues raised in terms of communities where actually they don’t have control over fear/disgust will also likely be ineffective", was that the paper you mentioned a few moments ago that went to the Cabinet Office shortly after the paper we were looking at?

A. Yes, this was a -- this is one of the kind of core principle papers that we put together where we outlined what we thought about what an effective communication strategy in a public health crisis like this would look like.

As you can see from the date, it’s only a few -- and apologies, I think there’s a typo in the date, it’s not 2022, it’s 2020.

LADY HALLETT: I was just about to ask you that.

A. Yes, apologies.

So this was only a few days later, and it was sent direct to the Cabinet Office.

MR O’CONNOR: So those are examples, and the list goes on, of papers where you are, as it were, rejecting the fear as a tool.

If we can just move forward to page 75, please, at paragraph 17.18 you make the point that, as well as rejecting the fear suggestion, you proposed a different approach. You say:

"In fact, SPI-B spent its time trying to work out how to support members of the community, not scare the level of risk that they're facing, in which case simply frightening them, and if there's nothing they can do about that risk, well, that's not a productive thing to do either.

So there's lots of reasons not to do it. It's a slightly different thing in terms of risk perception, but I think that's the point around this, people did need to be armed with an appropriate understanding of the genuine level of risk that they were facing, but I think that's a different thing to fear.

Q. Let's just look briefly, then, at a couple of paragraphs in your statement, Professor. First of all, can we look at page 73, please.

At paragraph 17.16, you refer there to the article we’ve just been looking at, the report we’ve just been looking at, and you are rejecting the suggestion that was raised, as we’ve discussed, that that report was about engendering a culture of fear.

A. Yes.

Q. But you go on to say that that allegation made against SPI-B ignores many quotations from your work and others in the same field that repeatedly argued for the exact opposite, and then you list a series of papers on that very theme, and it may be that the third of those, "Messages based solely on information, authority or

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activities should or shouldn't be prohibited.
Mr Hancock says:
"Yep. I think the problem is that the levers not in
the hands of [No 10] & DHSC are harder to pull."
He says:
"I honestly wouldn't move on any small things unless
we move on a lot.
"The only big remaining things are nurseries and
workplaces."
Then this from the Cabinet Secretary:
"I agree -- I think that is exactly right. Small
stuff looks ridiculous. Ramping up messaging -- the
fear/guilt factor vital."
"Ramping up messaging -- the fear/guilt factor
vital", that seems to be completely in contrast to
the advice you had given Ben Warner a few days before?
Mr Hancock replies:
"Yeah, it's a specific instance of it. And I want to be
clear, I don't in any way think that Ben was pro-fear,
I think he was quite right to come to the committee who
specialised in that and ask for advice on it, and we
gave him the advice and he accepted that and took away
a different way of doing it. So I think it's an example
of the system working.
Q. Well, certainly as far as your communications with
Ben Warner are concerned, but just noting the date
there, the early 2021, if we can have a look at, please,
INQ000197157, these are some WhatsApps from
Matt Hancock's phone, Professor. If you look at the
91
thing. At the ministerial level, I don't know. I've never met a minister, I don't know how they operate, I don't know what they read or what they don't read, I don't know who they take advice from. I'm not sure I can help you with what they're thinking when they're putting together policies or communicating like this.

MR O'CONNOR: Thank you very much, Professor. My Lady, those are all the questions I have. I know that there are some questions that will be asked by, on behalf of core participants.

LADY HALLETT: I think is it Mr Dayle going first?

MR O'CONNOR: It's a matter for you, my Lady, but certainly as far as the families are concerned, Ms Morris will be asking questions first, but --

LADY HALLETT: Are you ready to go, Ms Morris?

QUESTIONS FROM MS MORRIS KC

MS MORRIS: Good afternoon, Professor Rubin, I ask questions on behalf of the Covid Bereaved Families for Justice, and I've got two topics I'd like to ask you about, first. The first is advice on mass gatherings, and the second is some work you did around social greetings, handshakes, fist bumps. So, looking at the first of those, please, and I'd just like to have on screen, please, a paper from SPI-B from 4 March, INQ000196744, 93

A. Yes, because the -- if we think about it in terms of what the public believe is the most effective thing to do --

Q. Yes.

A. -- and which has the fewest costs, and bearing in mind these all have very substantial costs to members of the public, but still looking at -- hence "easiest" in scare(?) quotes -- yes, because data at that point was showing that members of the public believed they'd be effective --

Q. Yes.

A. -- and they would be relatively easy to explain, then yes, from a behavioural point of view, they would be the easiest ones to do.

Q. Thank you.

Is it correct that by 4 March some polling done by the Department of Health and Social Care showed that around 60% of the public believed that an effective way of preventing the spread of the virus was to keep away from crowded places? I think that actually went up a few weeks later to 73%.

A. I would need to check my notes on the actual numbers. It sounds right.

Q. Okay. We'll look at the 12 March minutes in a moment and that does include the 73% polling rate, so we can identify that in due course.

As part of that understanding of the public's view, did SPI-B advise that there would be a sort of expectation on behalf of the public that mass gatherings should be banned?

A. Yes, we did say that, on a couple of occasions, that the public clearly expected this to happen, and if the government's decision was that they were not going to do that, that would lead to a kind of a mismatch between what the public thought should happen and what the government were deciding, and that mismatch would need to be well explained if the government wanted to maintain trust.

Q. Thank you.

We can move, then, please, to the 12 March minutes, and that's INQ000196748, please, and if we start at page 2, please, paragraph 14 -- there is no paragraph 14, they are bullet pointed, forgive me. Let me just identify the correct point.

Sorry, it's page 1, and it's the 73% figure I just wanted to reassure you with, Professor. Page 1, there is a paragraph that says there's some DHSC polling.

I think it's the penultimate paragraph. Thank you very much.

This just confirms that as of 12 March:

94
DHSC [has] been conducting some polling of approximately 2,000 people ..."

And, just towards the bottom there:
"... whether they agree or disagree that keeping away from crowded places generally is a good way to prevent the spread of coronavirus ... 73% of respondents agree with the statement. This proportion has risen since [your] last report from SAGE."

As of 12 March it's 73% of people polled.

Thank you.

Staying on page 1, please, I think a little further up to the top -- it's very small on my screen, forgive me, but the second bullet point, please, the summary of the position there is that:
"SPI-B cannot comment on the impact of gatherings on disease transmission."
Is that because it's outside the remit of the committee?

A. Yes.

Q. "In this report, we list behavioural factors to weigh-up when making decisions. In particular, we reiterat our point from 4 March that, if a decision is made not to ban or discourage public gatherings, a clear explanation should be given to the public."

You've just mentioned that important context.

OKAY, BUT YOU THINK THAT WOULD HAVE COME LATER, AFTER 12 MARCH?

A. Well, we did have -- we did have papers on policing that particularly looked at how enforcement of these kind of issues could be carried out. I would need to check on the timing of those as to whether we made that advice at this point or not.

Q. Okay, but you think that would have come later, after 12 March?

A. I'm sorry, I would have to --

Q. Okay. Not to worry. Not a huge amount turns on it.

But were you ever asked to look at or explain what other things could be put in place to mitigate that risk or what the public response would be to them?

A. Well, we did have -- we did have papers on policing that particularly looked at how enforcement of these kind of issues could be carried out. I would need to check on the timing of those as to whether we made that advice at this point or not.

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Q. Okay. Not to worry. Not a huge amount turns on it.

But you've highlighted here, haven't you, that there are some other considerations that need to be thought of, and that's your clear recommendation to the reader of this paper?

A. Yes.

Q. Thank you.

Topic 2, then, please, staying in early March and talking now about social greetings and handshaking in pubs.

So that was one of your concerns; is that right?

A. Yes, I wonder if I'm reading a different bullet point to you, is this the top bullet point?

Q. Sorry, it's still on page 3. I'd like page 4 up, please, if that's possible. If there is a page 4.

(Pause)

LADY HALLETT: There is only page 3, I'm afraid. I'm hoping that's the signal I'm getting.

MS MORRIS: Yes, I think it is, my Lady?

A. There was an addendum to this paper --

Q. No, it is bullet point 3 but it's within the top -- it's at page 3 but the top point:
"... could have complex and unforeseen effects ..."
"In our 4 March report, we highlighted the risk that applying multiple interventions concurrently (including the suspension of public gatherings such as football matches or restrictions of pubs or restaurants) could have complex and unforeseen effects, including the displacement of social activities to other venues."
Would that include pubs and other places to watch sporting events, for example?

A. Yes, although the example we give is restrictions on pubs, so it wouldn't have included pubs in this specific instance, but the general point is, closing lots of things at the same time, it may make it slightly unpredictable where people go next, and you just need to be careful in how you manage that.

Q. Yes.

"This would require careful management ..."

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A. Yes.
A. Yes, no, we wrote an opinion piece that went to the BMJ on -- I think we titled it "is it time to wave goodbye to the handshake?" We'd certainly continued with that and produced that piece. From recollection I think Richard was a co-author on it and we did then send that in to Public Health England for them to think about. And, as ever, I don't know what happened to it after that but we certainly published it.

Q. So what was the conclusion of that report?

A. That it would be -- essentially, yes, for the time being it probably was time to wave goodbye to the handshake. You know, we've welcomed it back again, but at that stage, yes.

Q. It suggests from the email chain that that had been authorized before the beginning of March, is that right?

A. I think we were working on the idea before the beginning of March, yeah.

Q. Okay. All right.

Were you aware from any public sources on 1 March the Prime Minister had shaken hands at a hospital and informed the public that he would continue to do so?

A. I mean, I know now that he said something along those lines at around about that time, what I knew at the time -- I think I did know that at the time, lines at around about that time, what I knew at that stage, yes.

Q. To the handshake? We'd certainly continued with that and produced that piece. From recollection I think Richard was a co-author on it and we did then send that in to Public Health England for them to think about. And, as ever, I don't know what happened to it after that but we certainly published it.

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Q. Okay. All right.
A. Yes.

Q. Two, do you report the findings of a report by an organisation called CORSAIR?

A. Yes.

Q. Could you tell us what CORSAIR is or was?

A. Yeah, CORSAIR is a study run by my team in tandem with UCL and UK Health Security Agency. We take Department of Health polling data -- so the Department of Health and Social Care were carrying out surveys of 2,000 people every few days throughout the pandemic, and CORSAIR's job, as a research study, was to analyse that data, add value to it by looking at specific issues within the data, and providing reports to the DHSC communications team.

Q. Then, before I get on to the key point of that sentence, you then go on to quote their findings that 87.9% of respondents knew if they had symptoms of Covid they should self-isolate, but only 62 knew the main rules of self-isolation?

A. Yes.

Q. Then you conclude the sentence by making the observation I want to ask you about, that knowledge of the key rules was worse in England than it was in Scotland, Wales or Northern Ireland?

A. Yes.
A. So we did do some work on healthcare workers and adherence to various forms of protective behaviour among healthcare workers in general. Within that, from memory, I think we did look at ethnicity as one of the factors that played into that, but it was a small sample, and this is one of the issues, is trying to draw out lessons where -- you have a thousand people, of whom only 200 are from ethnic minorities, of only a certain number --

LADY HALLETT: Can you be careful -- I know you're trying to be polite to Mr Dayle, but I'm losing your voice as you turn from the microphone. Mr Dayle won't mind, he understands.

A. Apologies, I'll address my Lady.

So we did have some data looking at ethnic minorities in terms of healthcare workers, not very much. I don't believe SPI-B wrote a specific paper on ethnic minority healthcare workers. We did write several papers looking at ethnic minority groups in general, and particularly around communication, how to communicate with culturally diverse communities. But I'm afraid I don't think we specifically took on that challenge.

MR DAYLE: Thank you for that.

If I can just push you a little bit more, just in understanding the drivers of those behaviours through co-production of guidance.

Q. Thank you. That's very helpful.

My second question, and you perhaps have touched on a little bit of it, but the question is: were there any specific challenges related to the use of ethnicity data in SPI-B's work, such as data availability or quality? And, if so, how were these challenges addressed?

A. I think there were -- I mean, there were challenges for data not just around ethnicity but throughout the pandemic on all sorts of different areas in terms of getting specific data around the specific issue that we were looking at.

In the absence of specific data about this group, and this behaviour, in this context, we were forced to draw on theoretical principles and apply those to the problem at hand, and then recommend that specific behaviour -- specific data, rather, should be gathered. And that runs through pretty much all of our papers, is recommendations for additional research to look at these specific areas. So I think that -- I think it was an issue that we wouldn't have had that data, I think we didn't have specific data on lots of different areas, and I think the solution was using theories to do the best that we could and then recommend somebody

MR DAYLE: I am, my Lady, thank you.

Professor Rubin, I ask questions on behalf of FEHMO, the Federation of Ethnic Minority Healthcare Organisations, and I have two discrete questions that will invite you to clarify or shed some light on some areas of interest.

A. Absolutely. If you forgive me, I'll direct to towards the microphone, my apologies.

Q. Certainly.

A. So in terms of -- apologies, specifically healthcare workers?

Q. That's correct, minority healthcare workers.

principle, in terms of how behavioural science would be of value to the question of vulnerabilities based on ethnicity.

A. Sure. So I guess specifically around what behaviours would protect healthcare workers of different ethnicities. One of the issues in this whole area, as I think I've alluded to, is there are different drivers of behaviours depending on what that behaviour is, and also what the group is that we're talking about. And it's important to understand the kind of -- the specificity of what those drivers are.

So where there are differences for, you know, culturally diverse communities or young men or pregnant mothers or whoever it may be, understanding the specifics of what is driving that behaviour is important.

One thing we did recommend, as I've said, throughout the pandemic was the importance of co-producing guidance with affected groups, precisely so that you could understand what are the particular issues that are facing that group. With masks, for example, do masks fit appropriately around beards, if that's a cultural issue, and understanding how to improve that, would involve talking to those communities.

So I think that would be the key issue, is around
Questions from MR METZER KC

MR METZER: Thank you, my Lady.

Professor Rubin, I ask a small number of questions on behalf of the Long Covid groups.

At paragraph 4.3 of your witness statement, I don't think we need to go there, you explain that PMT, protection motivation theory, was a core theory of SPI-B to motivate the public to protect themselves against perceived severe threats.

In that same paragraph you acknowledge and categorise Long Covid as an outcome that may be perceived as a severe threat.

The questions I ask are: was SPI-B asked specifically to advise decision-makers on how to minimise the risk of Long Covid?

A. Specifically I don't believe so, but we would have been looking generally at minimising the risk of catching Covid and the risk of adverse outcomes generally, so

Would this be an example of an instance where SPI-B raised an issue so that it is on the government's radar?

A. I don't think we were using it to raise the issue of Long Covid, I think we were using these as examples of the kind of things that -- this was a specific paper about young people, so looking at the kind of things that young people needed to be aware of in terms of the risks to them. As you can see, the two we have given as examples: risk to your family if you catch Covid and take it home with you and risk that Long Covid might be one of the long-term consequences for you.

Q. Yes, because you do spell out an example of Long Covid. So the extract of the paper I've taken you to focuses on messaging. Can you help, please: what impact would the absence of public messaging on Long Covid have on protective behaviours in the community to manage the risk of Long Covid?

A. So I would -- I could only speculate if there was substantial messaging about a high level of risk from Long Covid that it would reach more people who might potentially have the risk factors for that, and that protection amongst that group would increase.

Q. So, conversely, if there is an absence of public messaging, what does the impact have on protective behaviours in the community in those circumstances?
I believe you agreed?
Mm-hm.

Turning now to the pandemic, your involvement in the pandemic response and behavioural science advice began prior to your involvement within SPI-B; is that right?
A. Yeah.

It's dated 10 August 2023, and for the assistance of those following it's at INQ000236376. Don't worry so much about what's on your screen at the moment, Professor Yardley, I can take you through it.

The first thing I will ask you to do is to try to keep your voice up. There is a stenographer in the hearing room and so it may be that I ask you to take things a little bit more slowly so that she can make a note and accurately transcribe.

If you need a break, please just let us know. Now, Professor Yardley, you produced a witness statement for the Inquiry; is that right?
A. Yes, in fact I was a member of SPI, which is the Scientific Pandemic Influenza Committee.

Questions from COUNSEL TO THE INQUIRY

Indeed, my Lady. The next witness is Professor Lucy Yardley.

Professor Yardley, thank you for assisting the Inquiry today. I am Joanne Cecil, I'm one of the junior counsel to the Inquiry, and I will be asking you questions today.

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The first page is page 1 and it runnels to 26 pages in total with a declaration of truth. Is that right?
A. That's correct.

Thank you. As we can see, Professor Yardley, just to give some idea of your background, you were also a member of SPI-B; is that right?
A. That's right.

In fact you were the co-chair, along with Professor Rubin, for a period?
A. That's right.

I just want to deal with your professional background, just very briefly, if I may. You are a professor of health psychology at the University of Bristol and at the University of Southampton?
A. Correct.

You wear a number of different hats including being a senior investigator at the National Institute for Health and Care Research, and indeed you're the behavioural science theme lead for one of the teams there; is that right?
A. That's right.

In terms of background and its relevance in respect of the pandemic, you also participated in the earlier incarnation of SPI-B, SPI-B&C, during the swine flu pandemic in 2009 to 2010; is that ... I just want to deal with your professional background, just very briefly, if I may. You are a professor of health psychology at the University of Bristol and at the University of Southampton?
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A. Yes.

Q. And as a consequence of that, you subsequently became the co-chair on 12 April 2020, once it was set up?

A. Well, it wasn’t really a direct route from one to the other. At first I was just a SPI-B member, like all the other members, right up until just after lockdown, and then I emailed James because I thought a very urgent priority at that point was to start thinking immediately about how we could help people safely come out of lockdown. So I emailed James that topic. He took it to SAGE, and SAGE agreed it was an important and urgent topic, and so James came back and asked me to lead a paper on that. I then took that paper to SAGE and it was really that process of sort of participating in SAGE that led to me being co-opted as a co-chair.

Q. Thank you. You remained co-chair throughout that period, is that right, until you stepped down?

A. Mm-hm.

Q. Alongside that, you also participated in SAGE?

A. Yes. Well, it was in my role as co-chair of --

Q. Indeed.

A. -- SPI-B, yes.

Q. I understand that you attended 41 SAGE meetings in total over that period --

A. Yes.

Q. -- in that capacity. Thank you.

A. Just to get a sense of the output of SPI-B, we’ve heard a lot about its work already this morning from Professor Rubin, so I don’t seek to go over that, but can you just give a broad idea of how much assistance you provided in terms of volume, so reports, papers, advice?

A. Well, as James said, I think it was 96 papers that we produced, but actually our activities went way beyond that, so that -- for example, I was on several related committees, I represented SPI-B on the JCVI, which is the Joint Committee on Vaccination and Immunisation, when it was formed, then I was also on the Testing Initiatives Evaluation Board, we gave ad hoc advice on -- you know, to individual departments if they asked for it. But I think probably the most time consuming thing of all of our work was that in order to be able to give expert advice we had to try to somehow produce the evidence for that, and we didn’t have any resources or any --

Q. I’m going to bring you to that in just a moment.

A. Okay.

Q. No, not at all, not at all. I’m going to look at some of the challenges with you, if I may, that SPI-B faced during the pandemic, and indeed resources is one of those.

So perhaps let’s go there first, in fact. So with respect to SPI-B, you had some administrative support, as I understand it, from GO-Science, but your broader concerns were effectively that there was very limited support, is that right, to either the chairs or the members in terms of that work product that you were asked to effectively advise on, and the evidence that would underlie it. Can you just explain a little bit about that, please?

A. It’s -- really where the gap was in terms of collecting and collating the evidence that would inform our advice. So the evidence was all of the papers and even news reports that were coming out about what was happening around the world in terms of behaviour and strategies for containing the virus and how well those strategies were being implemented and accepted in different countries, and how effective they were being. And then there was -- James talked about a lot of data across government, which we actually didn’t have access to a lot of it, but even if we had, we wouldn’t actually have had the capacity to have looked through it all and collated it all. And in fact we were all aware of enormous behavioural evidence gaps, because it was an unprecedented situation. So you could look at what had happened in previous pandemics or in other related health conditions and try to draw parallels and inferences, which is what we did, but what you really needed was new research being done in real time at pace, and we all tried to do that, and in fact, you know, I had half a dozen studies at least, probably double that, probably a dozen studies that went forward during the pandemic that I initiated rapidly.

So, for example, from a qualitative study of the barriers that were faced by people on low incomes in adhering to self-isolation and how they couldn’t isolate in the home right up to massive clinical trials, so --

Q. We have effectively a very broad range --

A. Exactly.

Q. -- of research and --

A. Yeah, and also all SPI-B members were doing that, so we were all trying to do that in our -- not spare time, but to try to produce the evidence that was needed.

Q. Of course. And that was very limited resource in terms of additional resource from GO-Science or the government or any other --

A. We didn’t have any -- we had to apply for research funding, which of course added a lot of delay.

Q. Thank you.
In terms of those lack of resources, how, specifically, do you consider that impacted your ability to advise on measures within and the pandemic?

A. I think it was -- it had a real impact. It had a direct impact in terms of we didn't have as complete an overview of the evidence as it was coming in. It also impacted on who was able to provide the advice, and engage, because it was only people that were able to free up the time to be spending all their evenings and weekends doing this, which not everybody can, so yes, it definitely had an impact.

Q. That perhaps brings me to the second area that you identify within your witness statement, which is one of diversity within SPI-B, and you've just alluded to some of the external pressures in respect of individuals who could give up that time or couldn't because they had other additional caring responsibilities or whatever else it may be.

With regard to the composition of SPI-B, and certainly in the initial stages, looking back, how do you consider that to have looked in terms of diversity and was it at optimum diversity in your view?

A. The original diversity was limited because it was an ad hoc committee, really, that was sort of brought together at speed and somewhat informally through the research team, and in future that certainly should be a pre-existing infrastructure that is -- that should be refreshed?

Yes. With respect to that lack of diversity, in that area, can I just ask: do you consider that the absence of those perspectives on SPI-B had an impact on the advice you were able to provide? I appreciate it's an issue in hindsight now, but can you assist us with that?

A. Absolutely, yep.

Q. It's always best practice to have diversity on your research team, and in future that certainly should happen. Actually when you look at the advice that we gave, all of us, because we worked in public health, we were very aware of the differential impact of health problems and the measures that were taken to deal with them on different communities. So right from the beginning we were actually drawing attention to that, first as a risk and then, as it emerged, as something that was actually happening. And, you know, I was myself rapidly instigating research, reaching out and talking to communities that were affected, and so were other people on SPI-B.

So I think it probably didn't have a very bad influence on us. I think what was more of a problem was that -- I mean, James put it very well this morning, that it's not possible for any scientific team to represent all the sectors of the population, with all of their diversity, all their different circumstances. And that's why you really need excellent sort of community representation, so that all of the guidance that you're thinking about and all the recommendations you're making, you can involve members of the community that do have that broader representation, including representing people that don't have PhDs, which is important.

Q. It's an additional way of drawing in some diverse experiences into the work that you were undertaking.

Certainly one of your recommendations within your witness statement is that in the future there should be a pre-existing register, essentially, of individuals with expertise in this area that can be drawn upon, and that should be refreshed?

A. Yes, but that's only half of it. That's the kind of expert bit, but what I also recommend is that there should be a pre-existing infrastructure that is -- allows for that -- the expert -- experts and indeed the policymakers, to be involving a very wide, diverse sector of the community and especially people that are seldom heard and underrepresented, so that their voices and their concerns and the difficulties that they face will be taken into account right from the earliest stages of developing guidance.

Q. And that perhaps feeds into one of your key messages in relation to behavioural science itself, is a message or theme of co-production, essentially, with those individuals with lived experience or from the communities that are being focused or targeted by those behavioural changes?

A. Absolutely, yep.

Q. Now, the next topic I wish to move to with you, and
you've touched upon it briefly already, is about
the commissioning of advice from government or SAGE or
indeed other departments within government to SPI-B.
If I can summarise it this way: my understanding is
that the role of SPI-B was effectively to answer those
questions either posed by SAGE, which had in turn
responded to government questions, or those that came
directly from government but through, effectively,
GO-Science as a conduit?

A. That's right, that was written into our terms of
reference.

Q. You describe that within your statement as being an
arm's length, top-down process. What did you mean by
that?

A. What I meant was that we never had any direct
communication with the people that were asking for our
views. Of course we did -- as a co-chair, I did sit on
SAGE, so when SAGE was asking us questions I did have
an understanding of that, but we didn't have
an understanding of what the policymakers were
considering or what their views were of our advice. So
because it was arm's length like that, there was a lack
of dialogue and I think a -- therefore, a lack of
understanding about exactly why questions were being
asked, what the options were that were being considered,

Q. One aspect that you deal with within your witness
statement, and perhaps I can just bring that up briefly,
on page 10, paragraph 5.3, is clarity in commissions
from government. I'm just waiting for that to come up
at the moment. But what you say there -- perhaps I can
read it to you while we wait -- is that:
"Sometimes delay was incurred if questions from
government needed to be clarified or modified because we
felt they were not formulated in the most helpful way.
When this occurred, it usually seemed to reflect
an unsophisticated understanding of human behaviour, and
policymakers were open to our revisions."

So where you flagged those concerns back, were you
able to get a more refined commission coming back to
you?

A. Yes, I mean, we usually suggested ourselves the
refinements we thought were necessary that would make it
a meaningful question that we could use behavioural
science to answer.

Q. Overall, you've described it as effectively a reactive
committee as opposed to a proactive committee because it
was reliant on those commissions coming in from
government and being framed by government; is that
right?

A. Well, that is the way that it was set up initially, and
I would say certainly until the end of March that was
the way we seemed to operate, mainly. Towards the end
of March and from the beginning of April, we sort of
pushed back about -- against that a bit. That's when we
started saying, you know, can we make suggestions
ourselves, can we -- do we have to answer questions if
we don't think they're the right questions? And we got
clarification that actually we could ask questions
ourselves as long as we got them approved, and we could
push back and not waste our time on questions that we
thought were inappropriate.

Q. Indeed. Just going back to, in fact, an email that you,
believe, referenced at the outset of your evidence,
that's at INQ000188924.

What we see here is an email between you and
Professor Rubin, and it's a little bit cumbersome, isn't it,
but I'm just going to take it from the bottom,
because that's how we read through them, and you're
explaining that:
"[You] know that SPI-B tends to be reactive but in
terms of horizon scanning [you] would just like to
suggest that now is the time to prepare very actively
the measures and messages to be employed when the aim is
to slightly relax controls ..."

And you explain:
"... or we could end up in an undesirable situation
of having a bounce back risky behaviour as soon as the
extreme lockdown measures are eased, and having to
re-impose them unnecessarily."

If I can just then take you to the reply at the top,
what we see is Professor Rubin endorsing this,
effectively, and saying "this is an extremely good point
(as ever) from [you]", but it's really the last line of
his email, which is:
"Could we advise you [so this is obviously SAGE] to
ask us for advice on that?"

So, as I say, it's all a bit circular, isn't it, in
that respect? You're putting in a bid and saying "Could
you please advise us on these issues?"

A. It certainly was cumbersome. To be perfectly honest, we
were starting work on a paper on that anyway, and it
takes time to write a paper, so by the time they said
"Yes, definitely", we had at least had a chance to make
a start on the paper.

Q. Well, that's good news then at least.
So we can take that down now, please.
The other aspect that I wish to ask you about in respect of commissioning is the feedback. We’ve heard it certainly referred to by Professor Rubin as being a "black hole", your advice would go off, you wouldn’t know what had happened to it. What were the consequences of that in terms of your work and your ability to produce that advice and work?

A. Well, it didn’t put us off trying to feed the black hole. I mean, we were still keen to produce good advice and to publish it, and although we didn’t get specific feedback often about how it was received, sometimes you could just see signs that some of it had been received and been acted on, or that that’s probably what had happened, because, you know, sometimes what the government either did or said did seem to be concordant with what we’d advised. Of course they might have done that anyway, but it felt sometimes as if it was landing.

But, yes, obviously it would have been helpful if we’d known both when it was helpful but also when and why it wasn’t helpful, because if we’d understood better what the barriers were for the government, you know, that’s our specialist expertise, helping people overcome barriers, so, you know, we could have worked more constructively to work with those barriers.

What formed your view in relation to your comments regarding epidemiologists and their understanding?

A. That’s because I do actually work with epidemiologists quite a bit, and I did during the pandemic and -- you know, both in my research and sometimes I attended SPI-M meetings, and I had a very good relationship with them. But it comes back to the issue that was being discussed this morning about predicting behaviour versus changing behaviour, and epidemiologists are always trying to build models that predict, so they tend to ask the question: what are people going to do?

And I’m a behaviour change specialist, so my question is: how can we support people to do a certain thing, and how will the context of the support they have and the circumstances they’re in and the messaging and so on influence that?

So quite often I would find that the epidemiologists would be asking the question: will the, you know, people adhere to this? And my answer would be: well, it depends on how it’s presented, how it’s supported, what other organisations dealing with communications, for example, that you were working with, either based in the Cabinet Office, Number 10, government departments, and alongside that you were also working with SPI-M-O and other subcommittees in relation to SAGE; is that right?

A. Mm-hm.

Q. Now, we heard a little bit about behavioural fatigue and effectively what other individuals were expecting in terms of behaviour from the population, or from people in general. I just want to ask you a little bit about an email exchange that you were involved in with Professor Woolhouse -- so SPI-M-O -- who we’ve heard from earlier this week.

And it is INQ000103469, please.

What we have here, at the very outset at the bottom, is you’ve provided a summary of SPI-B proposals for consideration. We then have above it the reply from Professor Woolhouse thanking you, but explaining here that:

"SPI-M keeps ending up speculating that if you lift one restriction then people will be less diligent about observing the others. Not sure if that’s anything more than speculation."

So what we’re seeing here are assumptions within other committees and subcommittees of SAGE about behaviour by people and populations; is that right?

A. That’s what Mark’s saying. Obviously I wasn’t there, so --

Q. Of course.

A. -- you know, this isn’t -- hearsay from Mark to --

Q. No, no, of course, but what you do explain then quite clearly in your reply is you say:

"No problem -- I don’t think there is any evidence for changing one regulation undermining adherence to other regulations but that is exactly why we advocate trialling a very small behaviour change when safe to do so!"

You continue then to just comment on epidemiologists and their views of people’s behaviour and what can be expected from them, and you say:

"I find epidemiologists tend to underestimate to which what people will do is malleable and can be influenced by how things are introduced and supported.*
the pandemic, and that is one of airborne transmission

and the communication of risk.

Was the issue of airborne transmission and risk
communication ever dealt with by SPI-B?

A. Oh, very much so, but not mainly by SPI-B on its own,
because that would be very much a matter for other

groups. So, for example, I co-authored papers with
the Environmental Modelling Group on transmission in

various situations, and NERVTAG would have had,
you know, input into this kind of thing, because

the extent to which transmission was airborne and

the ways in which it was airborne weren't very well

understood at the start of the pandemic. Obviously it

was assumed there was airborne transmission, but how

important that route was wasn't known.

Q. May I just interrupt just to ask you a very specific

question. In fact it's been suggested by, and I'm sure

you'll be very familiar with, Professor Noakes, who is

the chair of the Environmental Modelling Group, EMG,

that one of the reasons as to why airborne transmission

was not made clearer at the outset of the pandemic to

the population was because of the fear of public

reaction.

Now, is that something that SPI-B could have

assisted on in advising with respect to communication,
and over again right from April to the end of -- well,
before, before lockdown we pointed out that this would
be a problem, and we continued to point it out
throughout.

Q. Now, the final area I would like to ask you some
questions about, Professor, is that of government
messaging, and we've heard already that SPI-B set up
a separate communications subgroup, and we have also
heard a little bit this morning from Professor Rubin, as
you know, about the terms of reference and why it was
called SPI-B and not SPI-B&C, albeit some of that work
continued, in fact a significant proportion of SPI-B's
work continued in relation to communications; is that
fair?

A. That's right.

Q. Various documents were produced for the assistance of
the government. I'm not going to take you through those
because you've set them all out very helpfully within
your witness statement, and within that you also set out
that you provided offers of help to all government
departments, checklists of how to develop good
communications and sets of examples as to how slogans
could be developed; is that right?

A. Yes.

Q. With respect to those core principles in messaging --

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those campaigns.

Were they broadly successful or were there real
problems?

A. I think there was a fundamental problem in the sense
that the strategy seemed to be based on issuing rules
and using fairly brief slogans, and the rules kept
changing, and the reasons why they were introduced and
why they were changed were not fully explained, and
people were not given enough education about
the pandemic and how we could all manage it best, to
really understand why things were introduced and why
they were changed.

So at the beginning of the pandemic, when we had to
lock down, a simple slogan was appropriate. But what
I and other SPI-B members, the communication people,
everyone, was advising was that in order to come out of
that, the general public needed a much more detailed
understanding of how infection spreads, how we all have
to work together to keep it under control, and how, if
we did that, it would reduce the need for the severe
lockdowns and all the harms that came with that.

So all the way through, people sort of had this idea
of these rules that were getting in the way of what they
wanted to do, whereas if -- and then we ended up with
lockdowns which really did seriously harm everybody's

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Q. So that triggered an email chain following on from that change.

Can I just call that up, please. It's INQ00197167, and can I go to page 10 of that very briefly.

On page 10 what we see at the very top is an agenda, just to put it into context, this is an agenda, we're looking at paragraph 6 there, and it's a "Release of documents and SPI-B support". And if we go then to page 8, please, we see a message from -- I'm going to summarise it if I may, as opposed to go through it all, but we see a message from Professor Michie asking that that item be brought higher up the agenda because they've been -- she's been informed about this new messaging. She continues to state:

"I sincerely hope that this is incorrect as it goes against several principles we have rehearsed many times in our advice to SAGE/Government ..."

It continues:

"If it turns out to be true, it would be helpful to understand why we were not consulted given we have a bespoke Communications group and have been raising the problem of Government communications for several weeks ..."

Then if I can go, please, to page 7, there is some support that takes place there from Professor Reicher, Stephen Reicher.

Go to page 6, please, and we see a proposal from a Professor Marteau, and her proposal is that Professor Rubin writes to the chair of SAGE documenting those concerns in the hope of intervention. But as we go then to page 5, please, we see a link, and it's a link to a tweet, and Professor Rubin saying "That ship has sailed", the tweet is already out, the message has already gone.

We then get a reaction on page 4 from Professor Michie, which begins to say:

"Oh gosh, [Prime Minister] communication to the nation by Twitter is now in the UK ..."

Professor Reicher:

"We have learnt so much from Donald Trump... But seriously, I think it would still be helpful for James to write such a message now and I think it is all the more important we discuss [it] ..."

Then we get to your intervention at page 3, which is really one looking for some calm heads to some extent, because albeit we have a large -- we can see a large number of emails on the screen, there are significant, it's a very significant and wide email distribution list, and it's gone to all sorts of different government departments, including the Cabinet Office and Number 10; is that right?

A. Mm-hm.

Q. You explain you don't think it's:

"... a particularly good slogan but [you] don't think you can have a behaviourally specific slogan given how many behaviours there are ...

That's your more nuanced point, presumably.

"... the tweet ... [specifies] several of them ...

lots of advice we have given that hasn't/probably won't be followed, not sure I would pick a fight on the messaging myself."

Then if we can go to pages 1 to 2 -- sorry, page 2, I think it's page 2 in the initial instance -- page 1, my apologies, because it goes over the page -- and go down to the bottom, we see an intervention from an official in the Cabinet Office, and what she says there is:

"I am happy to bring in some thoughts on Monday as well. I tried to understand how much the next phase of this kind of messaging can be more supported by SPI-B (or at least make sure the decisions are made having seen advice). The messages in this instance are kept so elusive by a small group of mainly No10 advisers -- these are agencies that have won their political campaigns and are now supporting this one too. My team was never consulted either and as soon as I heard the message I flagged our concerns which mirror those of the group -- only to be told it was too late now (and 'it tested well' which often means a shut down of discussion of any risks)!"

Then going over the page, please:

"... bottom line ... they won't change, they won't change the message now. Flagging concern is probably not wrong but I think it would be better to explore how to work with them next time."

In short. She continues to say:

"... I am so sorry that despite being the behavioural scientists inside the government communications service we don't have a handle on this either. It's so often partially political and in this case I was also told they wanted to keep it deliberately small so that there's not too many cooks which is also a cultural issue."

That email chain perhaps explains some of the challenges that indeed different groups involved in communications were having at that time; is that a fair assessment?

A. Absolutely, yes.

Q. Indeed, subsequently to that, if I can just move to...
a different email chain at INQ000197166, and that's
the middle, it's the one that I'm looking at, and
references there a call from Patrick Vallance and that
was about the email chain to express concern about SAGE
getting drawn into a government operational move and
losing its reputation as a result.

He also confirms that he has had "another call from
a person in the know to say that Number 10 is concerned
about [the] correspondence on this", and he says
"presumably because we cc'd half of [government] into it".
So were these challenges that continued then
throughout the course of the pandemic or did things
improve?
A. Things didn't improve in terms of being consulted
usually about messaging. I mean, we were consulted
occasionally by Cabinet Office, so, for example, they
did come to us to ask about how to message in
the autumn. They phrased it as to prevent pandemic
fatigue, but we managed to talk instead about sustaining
adherence to the needed measures.
But on the whole, the communications tended to go
ahead with very little input from SPI-B, even though we
were very happy to advise. And as James mentioned, we
might -- I think part of it probably was that people
actually did, in almost every paper we wrote, give some
advice on how communications around a particular topic
could be done well.
Q. I'm now going to ask you just to look at just a couple
of specific messages, if I may, and images that went out
with them.
You've already dealt with some of the issues that
are concerning the stay alert progression, effectively,
and we've seen them actually through the email chain
that we've just worked through, so I'm not going to take
you to that one, but can I take you, please, to the
"Stay home, Stay safe, Save lives".
That's at INQ000309556.
It's an image here:
"You're not stuck at home, you're safe at home."
"Stay home, Protect the NHS, Save lives."
In short form, what is your view of that in terms of
effective communication by the government?
A. That's interesting. That particular one I haven't seen
before. And at the very start of the lockdown, if
that's when this is from, we actually didn't feel there
was a problem with that kind of simple messaging,
because we felt that people needed that clarity, they
needed to understand the urgency, and it actually did
have the desired effect, which was to make everybody
feel that everybody was in it together, and that people
understood why staying at home would benefit everybody.
Q. Just to pick up on that for a moment, and I understand
what you're saying about clarity of messaging, this
specific campaign has been criticised by organisations
concerned with women and children facing domestic abuse
or harms, hidden harms in the home. Do you see any
difficulty with this and whether a more nuanced approach
was also needed?
A. Well, this is exactly why my own methodology for
developing messaging, I would always have co-produced it
with a wide range of the kind -- of the people that it
was aimed at.
Having said that, that might have happened, and
I don't know who produced it, and maybe they did test it
with people and found that it was actually not causing
any kinds of concerns. And to be perfectly honest,
I had my own reservations about the "Protect the NHS"
part of the slogan, because we know that during lockdown
and through the pandemic generally there was underuse of
the NHS by people who -- whose health suffered or some
people died because they weren't using the NHS
sufficiently. Now, part of that may have been because
of a realistic fear of infection, but part of it
might -- I think part of it probably was that people
felt they shouldn't use the NHS because we're trying to
protect it and so -- you know, I'm completely
speculating but, you know, I would have --
Q. You don't need to --
A. -- tested that message to check that every aspect of it
was working as it should with all different types of
people.
Q. Thank you.
A completely different one now, the freedom day
campaign. You explain in your witness statement that may
have reduced adherence to social distancing earlier than
would otherwise be the case, and certainly than was
ideal, and certainly at a point when it was prior to
people being vaccinated effectively; is that right?
A. That wasn't the freedom day slogan, it was the Eat Out
to Help Out slogan. Freedom day came after vaccination
so was less of a problem, but the Eat Out to Help Out
slogan, yes, that came at a really crucially problematic
time, because it was during the summer and that was
when -- it was a really missed opportunity, that was
when the infections were low and we could have all
hopefully kept them low if everybody had understood how
to resume activities safely, and had understood that
only if we did that would we be able to avoid or
minimise the need for further lockdowns.
Instead, the Eat Out to Help Out scheme made people think that it was safe and that actually it was your duty to meet people and that wasn’t going to lead to more infection spread. And we had warned back in April that, for example, if things were done for economic reasons, people would feel that they should be able to do them for social and psychological reasons, so that, you know, if to help out small businesses we could eat together, then to help out our family we should be able to eat with them.

So, you know --

Q. The --

A. -- to draw those wider conclusions.

Q. Then finally, if I can just ask you about this one, it’s a slogan that came out in August of 2020 into September of 2020, and it’s "Don’t kill granny". It’s a slogan that was repeated by the chief executive of various --

of Preston city council, directors of public health, and indeed on 7 September Matt Hancock saying "Don’t kill your gran by catching coronavirus and passing it on". Is that an appropriate form of messaging, from a SPI-B perspective?

A. Again, unless I’d actually pre-tested it with the target young people I couldn’t say for sure but my instinct would be probably not because it is -- it is trying to draw on fear and shame, and actually a lot of the reasons why infections were being transmitted from younger people to vulnerable older people was not due to people not caring if their granny died or, you know, being reckless, it was due to people not understanding the way that network, social networks interlock, so they didn’t realise that if they, for example, hugged a friend who was their age, that friend might nevertheless be living with somebody who was vulnerable, and so -- I actually saw some much, much better messaging on the same topic during the pandemic where it showed sort of three young people meeting, and it showed the hidden links that each of them had to vulnerable people, so that even though it looked like three people that were not vulnerable meeting, actually they were all connected to vulnerable people. That was a much better one. And that kind of messaging, it doesn’t blame people, it doesn’t suggest they’re recklessly endangering people, it educates them about risks that they didn’t even understand that they needed to manage.

MS CECIL: Thank you, Professor Yardley.

My Lady, those are all the questions that I have.

Does your Ladyship have any questions?

LADY HALLETT: No, I have no more questions. Thank you very much indeed for your help, Professor Yardley, very

grateful.

THE WITNESS: Thank you very much.

(Last witness withdrew)

MR KEITH: As my Lady pleases.

LADY HALLETT: It’s not quite time. It’s up to you.

MR KEITH: Shall we crack on with the next witness?

LADY HALLETT: Okay.

MR KEITH: Professor Sir Peter Horby, please.

PROFESSOR SIR PETER HORBY (affirmed)

Questions from LEAD COUNSEL TO THE INQUIRY

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

A. Good afternoon. My full name is Peter William Horby.

Q. Professor, thank you for the provision of your witness statement, and for attending today to give evidence. I’m sorry you have been kept waiting a little.

You are a professor of emerging infectious diseases and global health at the Centre for Tropical Medicine and Global Health at the University of Oxford; is that correct?

A. It was correct. I’m now the director of the Pandemic Sciences Institute, which is a slightly different organisational structure within the university.

Q. You are still a professor of emerging infectious diseases and global health --

A. Correct, yes.

Q. -- and you specialise in emerging and epidemic infectious diseases?

A. I do.

Q. On account of one of the lessons and the pieces of learning that you include in your statement, I want to ask you about some of the other no less important roles that you have. Are you also the executive director of ISARIC, the International Severe Acute Respiratory and emerging Infection Consortium? Are you also or were you also the co-chief investigator of the RECOVERY Trial, which was -- is the randomised evaluation of Covid-19 therapy trial?

A. Yes, I am.

Q. You were also from 2018, significantly, chair of the NERVTAG committee, and I think that as chair of the NERVTAG committee you attended 75 meetings of NERVTAG, all the meetings between January 2020 and June 2021?

A. Well, NERVTAG nerve convened 75 meetings. I’m not sure I was in attendance at all of them, it would have been the vast majority.

Q. We’ll excuse you those last few that you may not have
attended, Professor.

As chair of NERVTAG, did you also attend SAGE and, in that role, your statement shows that you attended 89 of 105 SAGE Covid-19 meetings?

A. That's correct.

Q. I want to commence your examination, please, about asking you some questions about the Centre for Tropical Medicine and Global Health at Oxford. It's part of the Nuffield department of medicine, is it not?

A. That's correct.

Q. And because you are a specialist in emerging infectious diseases, that comprises research and work in relation, in particular, to the emergence of diseases abroad?

A. That's correct.

Q. The Centre for Tropical Medicine and Global Health has a very extensive research portfolio and it employs, does it not, a very significant number of principal investigators and staff both in the United Kingdom and abroad?

A. Yes.

Q. One of the points you make in your statement is that a major lesson that is required to be drawn from the pandemic is that there is an ongoing obligation to combine academic excellence, scientific and medical excellence, with public health and commercial capabilities, because that will deliver remarkable benefits at great speed?

A. Yes, that's correct.

Q. Was the centre, and the University of Oxford more widely, concerned, as a result of that partnership during the pandemic, with, of course, as is very well known, the development of the Oxford-AstraZeneca vaccine, the RECOVERY Trial, which you've mentioned and which I'll come back to in a moment, the ISARIC database, which is a worldwide clinical dataset -- how many patient records does it contain now, Professor?

A. It now contains around a million patient records, with about half of them from low, middle-income countries.

Q. Was Oxford also concerned with the development of the NHS contact tracing app?

A. Yes.

Q. Just for a moment focusing on each of those particular achievements, ISARIC, the International Severe Acute Respiratory and emerging Infection Consortium, is it in essence a global network of clinical research networks, so providing a massive amount of data and information to enable countries to respond to diseases? Is that what it is about?

A. Yes, it was set up after the 2009 influenza pandemic because of the failure to do good clinical research on an epidemic infection that we knew was coming.

Q. I'm going to ask you, Professor, just to go a little more slowly, please, for the benefit of our stenographer.

So it was set up after the 2009 influenza pandemic, and on the commencement of the Covid-19 pandemic, was it apparent to you that the protocols and the procedures which ISARIC had developed over time would be required to be activated to assist the United Kingdom Government to respond to this pandemic?

A. Yes. So we had, with the World Health Organisation, written a clinical characterisation protocol, one of which was for acute respiratory infections, which was designed for exactly this scenario, so --

Q. What is -- I'm sorry. What is a clinical characterisation protocol?

A. So it is a study that has ethical approval to get a good description from patients with a clinical syndrome, their demographics, their existing comorbidities, concurrent illnesses, their clinical presentation and the natural history of disease, because all of that information is critical both for clinical care but also for calibration of your public health response.

Q. So putting it in lay terms, and you'll forgive me, were you making the point, in fact, to the Chief Medical Officer, that the government should activate this system of acquiring data about clinical features of persons suffering from the disease in order to better respond to the crisis and to inform the government's response?

A. Yes, absolutely.

Q. All right.

Could we have INQ000221945, please.

You emailed the Chief Medical Officer on 17 January asking him, in essence, to activate this protocol so that information could start to be gathered on what it amounted to, what the pandemic amounted to, what the disease outbreak amounted to.

At the bottom of the page, in your email, in fact, to the then Chief Medical Officer, Professor Sir Chris Whitty, and also the Deputy Chief Medical Officer, Professor Sir Jonathan Van-Tam, you say: "... we need two things to happen:

1. 2019 [novel coronavirus] is designated as a priority pathogen of public health interest --

I believe this is a [Public Health England] designation."

What is a designation as a "priority pathogen of public health interest"?

A. Well, in this context, the National Institute for Health Research, which is a national NHS-affiliated research
network, has a portfolio of studies that can be activated in a public health emergency but only if the pathogen is designated as a pathogen of public health interest. So we needed that to allow us to activate the protocol.

Q. The Inquiry is aware, as is the public, that there came a time in fact when the coronavirus was designated somewhat differently, with a different classification, known as a high-consequence infectious disease, it was so classified on 16 January. Can you assist the Inquiry as to whether that is the same designation of which you are speaking there or something different, and if it's something different why was Covid classified on 16 January as a high-consequence infectious disease?

A. So they're different classifications. This classification in this email is around activation of a clinical protocol. The other designation is around how the pathogen and patients who are infected with the pathogen are handled in terms of infection control and laboratory biosafety.

Q. So is that, in essence, a designation directed to the -- well, directed by the government at the government to take particular precautions when dealing with such a disease?

A. Yes, and it's the Advisory Committee on Dangerous Pathogens that advises the government on the designation of whether it should be a -- designated as a high-consequence infectious disease.

Q. Once the outbreak had crashed upon UK shores in mid-March, Covid was declassified was an HCID, in fact it was so declassified on 19 March. Why, very shortly, was it deemed appropriate to declassify the virus as an HCID at that stage?

A. So the purpose of the classification is to mitigate the risk of transmission, either from patients to other patients, healthcare workers or visitors to hospitals, and to mitigate the risk of infection in a laboratory, of laboratory workers or escape from the laboratory.

Now, that only makes sense as a measure if there's not already widespread transmission of the virus. Once you have the virus in the community, then those measures make a lot less sense. In fact, they're counterproductive, because they inhibit your ability to manage patients and to do laboratory diagnostics, for example.

Q. A considerable amount of public concern was expressed about the de-designation of Covid as an HCID. Are you saying that there were good clinical practical reasons why the designation served no purpose after the epidemic, the pandemic had erupted?

A. Yes, absolutely, it would have been counterproductive, I think, to have maintained that classification.

Q. In fact, does Covid have a mortality rate that is somewhat lower than the sorts of diseases which often are classified as HCID, such as Ebola, plague, SARS, MERS and so on?

A. Yes, it does.

Q. And by the middle of March, had a specific diagnostic test been developed to test for Covid?

A. I'm not exactly sure of the timelines of when the diagnostics -- I mean, the sort of advanced reference laboratory diagnostics were available, but the sort of point of care lateral flow devices that we're all used to using at home were not yet available.

Q. On the topic of the understanding of, in the early days, the nature of the virus, one of the core participants has asked, through Counsel to the Inquiry, to what extent was NERVTAG in January aware of the nosocomial risk, the risk that this virus would be readily transmitted in hospitals and other healthcare settings?

A. Was that a concern that presented itself towards the beginning of this chronology or was that something about which learning was developed later?

A. The concern was there right from the start, and I think, if my memory serves me right, there was an early email from the Deputy Chief Medical Officer, Jonathan Van-Tam, saying that hospital worker infection would be one of the red flags, that this was going to be a troublesome virus. So it's always -- and for me personally, I remember a conversation with somebody saying, "This is like flu", sort of, you know, later on in the pandemic, and saying, "It's not, we're seeing healthcare workers dying". That really is a red flag. So it was very much at the front of our minds that this is one of the flags that we should be looking for.

Q. Just two points on that. You were in a good position, on account of your many years of experience with emerging infectious diseases, particularly abroad, to understand that coronavirus was very much not an influenza?

A. It depends on the coronavirus. We have --

Q. Of course.

A. -- endemic coronaviruses that cause the common cold and then, at the other end of the spectrum, we had the SARS coronavirus with quite a high case fatality rate, so there is a huge spectrum, and we didn't yet know where on that spectrum we would land.

Q. I should have said this coronavirus. It became readily apparent to you that this coronavirus, SARS-CoV-2, had very distinct differences to the usual run of influenza?
A. Yes. I had personal professional contacts in China who were in Wuhan who we were in contact with, or I was in contact with, from 2 January, and it was clear fairly early that they were seeing severely ill cases, but one had to be cautious about assuming from that that it's very transmissible or that the very severe cases are common amongst those infected.

So we had a suspicion that this could be a serious outbreak but not yet confirmation of that.

Q. At NERVTAG's second meeting, which was in fact on 21 January, there was debate about the nature or rather the extent of the human-to-human transmission and a reference was made to the fact that the virus then in Wuhan or in China had been transmitted between a number of healthcare workers who had been in a neurological unit where they had, regrettably, not worn PPE.

What impact on the thinking of NERVTAG did that piece of information have, that the virus then emerging in China had been transmitted, human to human apparently, amongst healthcare workers?

A. So it started to narrow down where on that spectrum of risk, I guess, we were. It did not yet indicate this could be a pandemic, because, for example, another coronavirus, Middle East respiratory coronavirus, MERS coronavirus, that is transmitted primarily from camels estimates were that there was a case fatality rate of about 10%, up to 10%.

In the end that turned out to be wrong by 500 to 1000-fold, it was no more serious than a seasonal influenza. So you can get it catastrophically wrong unless you have really good comprehensive data, not just about the severe cases but about the whole extent of illness and infection in the community.

Q. You have referred to a particular piece of data, case fatality rate. Is it the position that, amongst the most important pieces of data are the infection fatality rate (what proportion of those persons who are infected will die), the case fatality rate (what proportion of confirmed cases will die) and also hospitalisation rate (what proportion of the infected population will require hospitalisation)?

A. Yes.

Q. Those are absolutely at the heart of a proper understanding of what the virus might do?

A. Yes, as well as the transmissibility, what we now know as the R number.

Q. They're all linked, though, of course?

A. Yes.

Q. You need to know the transmissibility, the reproduction number, you need to know how it's going to spread, to humans, does cause quite significant hospital outbreaks, with infection of other patients and of staff and deaths in the vulnerable, but that has not -- has not and had not at that time become a readily transmissible virus outside of that setting. So we could have remained either in that situation, where it was a MERS-like virus, or it could have been more like a SARS 2003 virus, which was transmitting a little bit outside of the hospital, or it could have been more like an influenza virus where it was readily transmissible in the community, and we didn't know -- so we'd narrowed it a bit but we didn't know where we were still.

Q. Does that highlight the vital importance of data? So for any government seeking to respond to the possibility of an epidemic, what is vital is to understand the nature of the virus, its transmissibility, its features, what it is capable of, in order to be able to sensibly start making decisions?

A. Yes, absolutely, everything is dependent on that. And if I may --

Q. Yes, please.

A. -- a good example is the H1N1 influenza pandemic which started in Brazil, and the very early data were that it was very severe because the initial cases had been detected in intensive care, and some of the initial...
clinical research response. And we provided support to him. So we provided him with the ISARIC tools, the case record forms, the sort of questionnaires that are filled in, and that format was used for the very first clinical description of what became known as Covid-19, which was, I think, published towards the end of January.

Q. It's obvious, isn't it, that, as professionals in this field, you were constantly looking abroad to see how this pandemic was developing, to try to see what information you could get, what data you could assemble?

A. So is there any basis for the suggestion in some quarters that the scientists and the professionals involved in the management of this pandemic in the United Kingdom were not completely aware of what was happening abroad and what information and what data could be gleaned from the emergence of the epidemic elsewhere?

A. We were certainly extremely active, so from 2 January I was on the phone almost every night to colleagues in China and Asia, I was also on the phone to colleagues in the World Health Organisation in Europe and elsewhere on an almost daily basis, to try and get as good information as we could get.

Now, often it's very partial, and we understood that, and I think it's important that we had that information from, in particular, China?

Q. You've mentioned the publication in The Lancet, could we have INQ000222003. Just pause there.

(Pause)

If we could have page 2 of 5, please. Is this the front page, the first page, in the bottom half, of an article published in The Lancet, I think on 24 January, talking about how Wuhan, Hubei Province, China, had become the centre of an outbreak of pneumonia of unknown cause?

A. Yes, that's correct. We found, I guess, the first case there. It demonstrates itself capable of saving the lives of hundreds of thousands of people?

Q. That's ISARIC.

You've referred to the RECOVERY Trial, I want to ask you some questions, please, about that. Was the RECOVERY Trial a sophisticated system or trial by which treatments for the potential benefit of persons suffering from coronavirus or Covid-19 could be evaluated?

A. It was. It is. It's still running now.

Q. It the RECOVERY Trial enrol its first patient on 19 March 2020, so relatively early on?

A. Yes.

Q. Is it led by a number of institutes or is it purely a Nuffield Department of Medicine --

A. It's an Oxford University study that's led by myself but also my co-investigator, Martin Landray, who is from the Department of Population Health.

Q. I want to ask you about the RECOVERY Trial because was it the RECOVERY Trial that led to the breakthrough finding that there was a drug called dexamethasone, which, in the passage of time, in the fullness of time, demonstrated itself capable of saving the lives of hundreds of thousands of people?

A. Yes, that's correct. We found, I guess, the first life-saving treatment that actually, luckily, was a drug that is available worldwide.
Q. It's a drug that is used, is it not, for patients who are seriously ill? It's not used on people who have mild symptoms, it's used on people who are on ventilators or who require oxygen, because it helps suppress the immune system and aids recovery?

A. Yes, that's right. And it has a very significant effect on reducing the risk of death.

Q. All right, and did the RECOVERY Trial also expose how some other very different drugs which were paraded in the press from time to time and by certain notable global figures had very little by way of beneficial impact or medicinal purpose whatsoever?

A. Yes, our first result was that hydroxychloroquine is not an effective treatment for hospitalised patients, and our second result was the benefits of dexamethasone.

Q. Hydroxychloroquine was notoriously promoted by the then President Trump?

A. It was.

Q. All right.

That's RECOVERY. Then can we come, please, to SAGE, of which you were a member by virtue of being chair of NERVTAG.

NERVTAG is a scientific advisory committee that reports, nominally, to the Department of Health and Social Care; is that right?

A. Yes.

Q. -- I think.

A. It is.

Q. By the time Covid had come to the United Kingdom, by definition it was perhaps no longer a new and emerging viral threat; it had arrived?

A. Yes.

Q. Why was it necessary to keep NERVTAG going and to keep NERVTAG running at such a hot rate throughout the currency of the entire pandemic?

A. Well, I think there were advantages to doing that, and I think it was the right decision.

One is it's a multidisciplinary committee, so it was set up and it has, you know, clinical, virological, sociobehavioural, modelling expertise, so it had, you know, quite a broad membership. Also it was a well established committee, so we were used to working with each other, and so it meant that we could operate effectively quickly, and much of the detailed technical work that SAGE would be looking for was within the scope of NERVTAG's remit.

So we had both the background and the expertise to answer those commissions.

Q. Were those commissions always clearly identified or were there difficulties occasionally which required NERVTAG to push back and say, bluntly, "This question is too broad or too specific or we don't understand what it means"?

A. Yes, definitely. And one can understand why that might happen in the heat of what was happening, but I think there were categories where it was too broad, you know -- we were asked about, you know, what's effective at preventing transmission, and that is a very, very broad question, it's almost a PhD thesis, or were not really scientific, technical questions, they were straying into what is sort of standard knowledge and standard operational knowledge. For example, some of the questions around protective equipment and disinfection is not really a sort of difficult scientific question.

Q. Did the governance structures around NERVTAG work well, so your chairing of the group, your relations with government, such as they were, and your relationship with SAGE?

A. Yes, I think they worked well. It was very hard work, and I think we would have benefited from a better resourced secretariat, and probably some additional scientific -- junior scientific support to help me prepare papers, et cetera. But the relationships worked well.
Q. By attending at SAGE yourself as the chair of NERVTAG, presumably you could see how the work and the learning that NERVTAG had provided was then discussed, debated and resolved in SAGE?

A. Yes.

Q. Where did the information or the conclusions go thereafter?

A. Thereafter, they went to government, and I don't know much more than that. You know, it was very clear that the Chief Scientific Adviser and the Chief Medical Officer were often walking straight out of SAGE meetings into meetings with ministers, the Prime Minister, Cabinet Office, et cetera, and relaying the SAGE position or the SAGE advice to them. But we didn't have -- I personally did not have much visibility of what happened outside of SAGE.

Q. And to be absolutely clear about this, you never had any concerns about the ability, the scientific and professional, intellectual capacity of the CMO and the GCSA to faithfully represent the views of SAGE to government?

A. I think they both are incredibly talented, they're great communicators, and I had absolute confidence in them.

Q. On SAGE itself, do you express in your statement -- well, do you identify a number of areas in which you generally understood the advice that they were receiving, they may not have been provided with the answers that they were seeking, in part on account of this divide, this division of understanding as to what SAGE was there to do?

A. Yes. Perhaps sometimes they weren't even sure what answers they were after.

I think it would have been beneficial to have a much closer dialogue between the policymakers and the scientists, so we could understand the thinking of the policymakers and what their direction of travel and what their goals were, so that we could craft the most useful science advice.

Q. Do you think that the division between the provision of scientific advice and the making of policy was understood by the public?

A. Largely -- well, it's hard to say, but I think that certainly there was some misunderstandings about what the scientists were doing and what the policymakers were doing and where the division lay.

LADY HALLETT: Would you need the closer dialogue between policymakers and scientists if the CMO and the Chief Scientific Adviser were able to relay to you the government's objectives? Surely they would be the source, under the system you've described?

A. I'm not sure I quite understand your question, Mr Keith.

Q. Yes. Well, I'll put it another way. In your statement at paragraph 145, you identify that there may have been a problem with the ability of SAGE to provide advice because it didn't know what the nature of the government's objectives were, what its strategy was, and therefore it was unable to point its advice or to calibrate its advice to the best possible effect?

A. Yes, that's correct.

I think it's very difficult to provide science advice in a vacuum. It's a bit like being asked to, you know, provide a map but you've not been told the destination that you're heading to. So sometimes the scientific questions were obvious and the advice to give may be complex but it was straightforward. But other times, without understanding what it was that the objective, the policy objective, or the goal was, it became very difficult to give, I think, the most helpful advice.

Q. Did you get the impression that, whilst policymakers began to have concerns about the way in which SAGE was operating, in particular in relation to its role as a provider of advice to government, and this interface between the provision of advice and operational or proactive measures that were required to be identified?

A. I think it would have -- it would have helped if perhaps the CSA and the CMO had a clearer steer from government as to what the policy objectives were in the short, medium and long term. But also, on occasions, I think it would have also helped to have had a roundtable dialogue --

LADY HALLETT: Have everybody round the table?

A. Yeah -- around specific really important questions so that we could get a really -- a much clearer idea of the policy objectives, and maybe for the scientists to challenge the policymakers to think more clearly about what their policy objectives are, so that we could do the science advice as best we could.

MR KEITH: "Following the science" was that well known mantra; may we presume that you weren't a devotee to that phrase?

A. It certainly was something that was unpopular amongst all of the scientists I spoke to, for two main reasons. One, science is rarely black and white, there are different interpretations of science and there are different degrees of interpretation, and you will see that throughout the Inquiry, no doubt. Secondly, it assumes that there is a direct relationship between a piece of science advice and a policy decision, where that's not the case. There are many other factors.
influencing the policy decisions, around ethics, economics, politics, which are outside of the science advice.

Q. Did you ever feel that the scientific advice provided by NERVTAG and SAGE was cherry-picked or, to use a more pejorative expression, manipulated by policymakers, that they took from you what they wished and then claimed that they were following you?

A. I never had -- I didn’t personally have a very strong feeling around that. I did feel that there were decisions made that did not necessarily fully align with the science advice, and for me one of the issues was there was not a feedback cycle, so where the policy decisions did not match the science position we didn’t really get feedback as to why that policy decision was made, which I think would have helped us feel more comfortable about what was happening.

Q. In your statement, you say that it would have been helpful to SAGE to have a greater expertise on it from frontline public health practitioners. Why do you say that?

A. Whilst there were people in the room with public health expertise -- I mean, I myself, my medical speciality is public health, but I’m not a practising frontline public health worker, and also the deputy chief medical officer, you know, have public health training as well. But that’s different from being at the frontline running a public health department in a local council or on the ground. And I think one of the messages, I think from my evidence, is that, you know, science needs to be in context, it needs to be in the policy context but it also needs to be in the operational context, and so I think having those kind of people giving an input would have helped us to refine the advice we were giving.

Q. Was SAGE and NERVTAG, were they both too scientific, if you like, or too dominated by biomedics as opposed to pandemic management experts?

A. That is one of the dilemmas. As a science advisory committee, you want a table full of eminent scientists who people will recognise as leading experts in that area of science, but if that is not contextualised then you can get science that’s not meaningful or helpful or practical. So at some point there has to be that sort of ground truthing of it, and perhaps that’s at the committee level, NERVTAG or SAGE level, but perhaps it’s in a different forum, but it does have to happen somewhere.

Q. Another point you make in your statement is that SAGE spent considerable time reviewing international data.

A. Yes. And you can see there that the request was to be issued to UK heads of mission, so really using the Foreign Office network as a way to gather intelligence to help the UK response.

Q. In broad terms, did SAGE and NERVTAG have difficulties in or encounter difficulties in being asked repeatedly to give advice in broadly the same areas? Were you forced to return to issues which you believed that you had already resolved, or asked questions or asked to address issues which were outside the strict remit of either committee?

A. On the second issue, yes. I think particularly, you know, my experience with NERVTAG, we were asked sort of technical operational questions that weren’t really requiring, you know, heavy scientific inputs. On the first question, we were asked to revisit items, but I think often quite sensibly. And we come to this later, but the use of face coverings is one where it came back to NERVTAG, I think for good reasons.

Q. Do you believe that your learning, your meetings, your consultation was sufficiently transparent and known to the public?

A. Further down the page, at point 7, my Lady will recall this from another witness: “It is not possible for the UK to accelerate worst-case scenario approach should be, and how in general terms the government should continue to plan, and you’ll recall, Professor, the reference to using influenza pandemic assumptions.

Further down the page, at point 7, my Lady will recall this from another witness:

"It is not possible for the UK to accelerate diagnostic capability to include Covid-19 alongside regular flu testing ..."

Then on page 3, please, you can see two-thirds of the way down the page:

"Action: FCO and DfID to work with SPI-M secretariat to finalise the detailed breakdown of data required from Chinese and other national authorities, and the routes through which this data should be shared."

So is this a good example of the constant steps that
A. For NERVTAG, I hope so. We had -- the membership was publicly available, because it was a standing committee, the terms of reference of the committee was publicly available, and we endeavoured to write as detailed as minutes as we could and to publish those as quickly as we could. There was a bit of delay initially just because of workload and for no other reason, but we got those out as quickly as we could. And I think, you know, that was very helpful. But as you know, the SAGE membership and the SAGE minutes took a bit longer to be made publicly available.

Q. The Inquiry has heard a considerable amount of evidence about the way in which the documents, the minutes so-called of SAGE, in particular, reflected a consensus position.

A. You give an example in your statement at paragraph 101 in fact that at one particular meeting, I think it was 24 January, the debate had to a significant extent revolved around one of The Lancet papers to which you’ve taken us, one of the documents of which you were a co-author, but that the minutes of that particular SAGE on 24 January simply do not reflect that debate, indeed they make no mention of that Lancet article, either the scientific paper or your commentary at all?

Q. Did NERVTAG produce a report -- perhaps not an annual report, but a report -- subsequently detailing the majority of the work that it had done between January 2020 and June 2021?

A. Yes, NERVTAG traditionally has written an annual report, so although this covered a longer period, it was our attempt to do the annual report that covered the sort of first 18 months of the pandemic.

Q. Could we have INQ000221969, please, and page 3 of that document. It’s the fifth annual report. On the contents page, Professor, can we see or can we gain an understanding of the relatively large number of areas on which NERVTAG provided advice and which it reviewed, you had received from other bodies, for example Public Health England or ONS, be made public so that the public could understand the nature of your debate and why you’d reached the conclusions that you had?

A. Yes, on a number of occasions there were pieces of information that we saw as papers submitted to NERVTAG that we thought were of national interest and therefore we minuted that these should be made publicly available. We had no power to make that happen, but we could minute it and recommend it to DHSC and to government.

Q. Now, I want to ask you some questions about the chronology and bring you back to the beginning of January.

You say in your statement how planning for an extraordinary NERVTAG meeting began on 9 January, when the World Health Organisation announced that the cause of the outbreak was probably a novel coronavirus.

A. Correct.

Q. Was one of the first issues that NERVTAG therefore had to consider port screening?

A. That was one of the first issues we were asked to consider.

Q. It may seem self-evident, but the DHSC or SAGE wanted NERVTAG to consider this issue because one of the first steps the government might consider taking was imposing steps the government might consider taking was imposing
 restrictions on the border?

A. Yes.

Q. In general terms, and mindful that at that stage, Professor, there was no sophisticated testing system in place at all, were there distinct restrictions or limits on what could be done by way of screening arrivals at the border?

A. So the only options in the absence of a test were symptom screening, really, so fever screening, which you can do through temperature monitors, or asking people to fill in a questionnaire about whether they've had a certain suite of symptoms or not.

Q. Are people generally prone to want to declare that they've got symptoms of a new and emerging infectious disease?

A. I would imagine many are not.

Q. In relation to temperature screening or symptom screening, is that a particularly effective way of ascertaining whether or not people are infected?

A. It's not, it's very insensitive, particularly when you've got an emerging infection which is quite rare.

The vast majority of people with a fever you'll pick up will not have the infection, and so you will be quarantining and evaluating a very, very large number of people when there's very few real cases, but you will also miss a large number of the real cases because they are incubating disease, so they're infected but they're not yet showing symptoms.

So, you know, the data is -- you know, it varies, but, you know, for every case you'd detect you'd miss 15 to 20 of what you're looking for, as well as having to evaluate many hundreds or potentially thousands of non-cases.

So it's very widely regarded as a very poor measure, a very ineffective measure.

Q. So it's ineffective, and presumably any kind of border restriction comes at considerable cost, and not just irritation and inconvenience to travellers but is a very difficult system to put into place operationally?

A. Yes, and costly, and also may divert resources from better activities like screening people who present to healthcare centres, asking them about their travel history and then focusing on those patients rather than screening a large, very large number of travellers. Could we have INQ000023107, please, on the screen.

These are the minutes from that particular NERVTAG meeting on 13 January. If we look at the first page, we can see who was in attendance, the contents at the bottom, and then on page 3, please, paragraph 3.2:

"Members note that it has been stated that there has been no 'significant' human to human transmission, which implies there may be some evidence of limited human to human transmission ..." So by this time, the end of January, it was becoming apparent from data from China that there probably was human-to-human transmission?

A. I think the data, but also the careful use of "no 'significant' human to human transmission" which implies that it's not none.

Q. Page 6, please, 3.9:

"The current PHE risk assessment for this virus was presented ..."

Professor, what does the PHE risk assessment assess?

A. It's a good question. We actually had debated this considerably in NERVTAG before the pandemic, and it's very difficult to do a meaningful and informative and intuitive risk assessment, and actually in retrospect this risk assessment was, if anything, unhelpful. It's a risk assessment based on the current risk today to, you know, the UK population, what's the risk to someone on, you know, the Clapham omnibus or whatever, which at that time was very low, because there were no cases outside China, and the risk to a UK traveller is low because, you know, it wasn't an extensive outbreak outside of the UK. But it can and was interpreted as us saying that the future risk was very low, which is a quite different proposition. But it became a distraction, unfortunately.

LADY HALLETT: Isn't the right thing to do to say "We cannot carry out a risk assessment until we know more"?

A. Well, I think we could make a comment about the risk to, you know, someone walking down Euston Road at that time, which was very low. We couldn't make an assessment of the risk in the next six months, one year. I think we could have been -- that should have been communicated better.

MR KEITH: The purpose of the PHE risk assessment process is to inform the public as to what the Public Health England, the government, believes is the then current risk.

A. Yes.

Q. Having a risk assessment process which focuses only on the risk at that particular day, on that occasion --

A. Yeah.

Q. -- fundamentally invalidates the validity of such a public assessment, does it not?

A. Well, extremely limits it and, as I said, in the past at NERVTAG we have gone round and round with PHE trying to develop a more meaningful risk assessment, and this process was completely unhelpful actually, it was
distracting, it gave the wrong message and in fact, you
know, it might imply we weren't doing much but we were
doing an awful lot. So it didn't actually even reflect
into what actions were taken.
So one of my recommendations is that there needs to
be a much more refined approach to risk assessments and
communication of risk.
Q. Do you think that if at the end of January Public Health
England had declared openly and publicly: there is
currently no viral activity in the United Kingdom but
that, given the impossibility of effective containment,
given what we know about human-to-human transmission,
given that we know that the travelling around China and
the Far East of millions of people, including hundreds
of thousands of infected people, there's a very high
risk that that virus will come here?
A. Yes, and I can't be sure that wasn't said, because
I wasn't following all, you know, the public
communications from PHE or government.
Q. But there was no formal risk announcement that went to
anything like that degree of alerting both the
government and the population --
A. No.
Q. -- that this highly dangerous, fatal viral outbreak was
surely coming?

Then over the page on page 9, we can see action 2,
DHSC to endeavour to establish if exit screening is
taking place in Wuhan. DHSC, action 3, to raise the
issue of advice posters at port of entry.
So the actions appeared to be designed to see
whether there were any sorts of controls on travellers
coming out of China, out of Wuhan, to see whether
infected persons were being stopped?
A. Yes.
Q. And on the UK end, the DHSC wasn't going to publish
posters but it was going to raise the issue of whether
or not advice posters should be posted at ports of
entry?
A. Yes. I can't remember the actual wording of the -- in
the more detailed minutes of action 3, but it -- there
were a number of measures recommended around
highlighting to travellers the potential they may be
infected and what they should do if they develop
symptoms.
Q. Given what was beginning to be understood about the
spread of the virus in South East Asia, human-to-human
transmission, the beginnings of an understanding of the
possible infection and fatality rates, do you believe
that these actions were sufficient?
A. In terms of border measures, yes, because it was our
Q. It's well known that New Zealand was a country which did
apply very stringent travel restrictions; it effectively
closed its border by imposing mandatory quarantining
firstly on all travellers and then only allowing
residents in with quarantine.

By the time that New Zealand had done that,
Professor, can you recall at what stage the
United Kingdom was at in terms of the spread of the
virus?
A. Yes, so most of the countries that introduced complete
tavel bans like New Zealand did so, you know, around,
starting around sort of mid-March. So I think 18 March
was when New Zealand introduced their complete travel
ban. By that time, in the UK we already had extensive
infection within the country, and it was now a domestic
problem, it wasn't an imported problem.

So stringent restrictions on people coming into the
UK, they would have had to have had very high level,
you know, 70% plus of all travel stopped, not just from
China because the disease was seeded around the world --
in the event we were seeded from Europe, not from
South East Asia -- and would have had to have been done
very early.

It's hard to see that that would have happened early enough because, you know, we didn't have our first
domestic cases until, you know, I think it was late
February, by which time it was too late, and for the UK
to have led the world and closed all the borders in --
would have had to have been early February, I think it's
very difficult to imagine that that would have been
done.

Q. So just to pick up on a couple of points there, did
subsequent genomic sequencing analysis show that there
had been hundreds, if not thousands of individual
seedings, that is infection points, within the
United Kingdom in particularly the later part of
February and the beginning of March?
A. Yes, from Italy, France --
Q. From Western Europe?
A. -- yeah, Spain.

Q. And that the majority, as it transpired, of those
infections had gone unknown --
A. Yes.
Q. -- because they were asymptomatic?

A. Yes.
Q. So the position at the end of February was the infection
had already taken hold, there was sustained community
transmission, but that our ability to be aware of that
was significantly hindered?
Was it going to happen next week, one month, two months, 
four months? And you can see from some of the earlier 
papers there was uncertainty. I think one of the pieces 
of evidence you showed me earlier said that it would be 
two to four months from domestic transmission in the UK 
to the peak, which turned out to be wrong; it turned out 
to be one month.

So I think we were becoming aware of what to expect, 
and that was becoming very well known, and that was 
discussed at SAGE and was known to NERVTAG and was in 
the SPI-M modelling. But we didn’t know when it was 
going to happen, and also we didn’t know what we should 
do about it, because the more nuanced data you were 
talking about is important if we’re deciding how long 
you quarantine people for, how long you need to get your 
results from test and trace back to reduce transmission. 

So, yes, we knew what was coming, but there were 
other things that we didn’t know, and they were the 
things that became apparent in March.

Q. A considerable amount of time was spent debating the 
nature of what possible interventions could be applied, 
in modelling terms what might be the impact of whatever 
measures the government sought --

A. Yeah.

Q. -- saw fit to impose. But to what extent, if any -- and

thought based on our earlier data? And that was 
probably, you know, a week or ten days earlier than the 
lockdown that we thought we knew enough scientifically.

Then there's the question about -- which is not my 
area -- when politically would it have been acceptable? 
And I think it is important to think about the number of 
cases we were having in the UK at that time, which, 
you know, was quite low. We only had the first UK 
domestic case identified -- because there were actually 
a lot -- in late February, and so the numbers were 
creeping up. So at which point it would have been seen 
as a measure that could be taken at a political level is 
a different question.

Q. I now want to look at some of the important areas, other 
important areas that NERVTAG provided advice upon, not 
directly related to the lockdown decision or NPIs.

NERVTAG played a very considerable role, as you’ve 
described, in advising on the efficacy of face masks, on 
the protection of the vulnerable and in particular those 
in care homes, and also on the issue of contact tracing.

So just dealing with those three in order: in 
relation to face masks, from late January, as you’ve 
already described, NERVTAG was tasked to provide advice 
and specifically on the efficacy, the utility of face 
masks. Is this the position: that by mid-February

I genuinely put it neutrally -- did the focus for those 
early weeks in March on the modelling, the working out 
of what possible interventions might have the best 
effect, the consequences of NPIs, concealed the reality, a 
much more brutal and less scientific reality, which

was just the numbers of the virus and the epidemic would 
be bound to lead to the NHS being overwhelmed?

Q. To what extent, if any, Professor, do you believe that

the decision-making process that led to the first 
lockdown may have been too slow?

A. I think it could have been done earlier. There’s 
a scientific question about how much earlier. When did 
we know that we could identify when the peak was going 
to happen, that it was going to be in a month, not in,
you know, two to four months, which we’d previously

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NERVTAG recommended that wearing a face mask by 
symptomatic people is recommended, if tolerated, but 
that the wearing of face masks by well people living 
with symptomatic people is not recommended, and also not 
recommended is the wearing of face masks in public?

Were there a number of meetings of SAGE and NERVTAG 
through February, April -- 7 and 19 and 13 April and 
then 14 April -- at which NERVTAG and SAGE returned 
repeatedly to the issue of face masks?

A. Yes, that's right, and this is one of the issues I said 
I think rightly came back round again.

Q. On 7 April, the SAGE minutes show that NERVTAG had 
concluded that the increased use of masks would have 
minimal effect.

On 9 April, the NERVTAG minutes from that day, 
NERVTAG 13, showed that Sir Jonathan Van-Tam had asked 
you to return to the issue of face masks because other 
countries had introduced what's known as soft advisory 
positions in relation to the use of face masks, and he 
was concerned that NERVTAG and SAGE should re-examine 
the issue; is that correct?

A. That's correct.

Q. Was there then a very considerable consideration 
provided by a paper dated 13 April called "Face mask use 
in the Community"? Did that paper summarise all the
MR KEITH: That's correct. It summarised the evidence as we saw it, which is something we might want to discuss.

Q. How did you see it, as NERVTAG, by 16 April?
A. So NERVTAG had looked at the issues of face masks in the past, pre-pandemic, and had taken quite a stringent scientific view that the highest quality evidence is randomised controlled trials, where people are randomised to have a face mask or not -- not other sorts of studies, not just observational studies, which have many biases, or physical studies, how much virus is filtered -- and that data was fairly clear that there may be some small benefits, but it wasn't clear and the evidence was weak. And we maintained that position on how we saw the evidence, focusing on the data from randomised controlled trials. Others placed more weight on the physical evidence of filtration and the observational data.

Q. To what extent was the argument for the wearing of face masks strengthened by the application of a precautionary approach: well, it may not have much practical benefit, and there's only some weak evidence to support the scientifically clean.

A. There are two considerations there. One is there was an issue early on about the availability of face masks and using them for a setting where they're less effective and less useful. The second was around communicating doing something when the evidence wasn't strong. But the reason it came back to us -- and I think it was right -- was the context had changed. The threat was much greater and more present than when we made the first recommendation. There was emerging data, observational data, which is sort of non-trial data, from places like Hong Kong, and there was more data about asymptomatic transmission.

So the context, the evidence hadn't really changed. It had a bit, that we now had some Covid data rather than flu data, but the context had changed dramatically. The downside is you might divert face masks from healthcare workers and those who need them most, and those in who they're most effective, so sick people or the clinically very vulnerable.

The second downside is that you are making a population-wide recommendation based on weak evidence, practicalities?

Q. In the event, Professor, following the advice given by NERVTAG and adopted by SAGE, the government advised on 11 May the public to consider wearing face coverings, and then in June they became mandatory in public transport, and then in July in shops?
A. Well, I would say it wasn't just on the basis of NERVTAG, and I think this was -- you know, this is an example of effective challenge where DH or SAGE commissioned other expert groups to look at the data. The Royal Society and the DELVE group produced a paper, and also there were some other groups that looked at the data. So there was an attempt to get differing scientific views of the value of it, and it was those, all of those inputs I think that changed the position, not just NERVTAG.

Q. But NERVTAG was not an outlier, was it? The general evidence which had gone before, set out a number of policy options, and basically conclude that there was weak evidence that the use of face masks by symptomatic people may reduce transmission?
A. At that time, so in April, it was very apparent to NERVTAG, wasn't it, that the government had real concerns about -- this is your second point -- about the availability of masks? If NERVTAG or SAGE were to recommend the wearing of face masks or not -- not other sorts of studies, not just observational studies, which have many biases, or physical studies, how much virus is filtered -- and that data was fairly clear that there may be some small benefits, but it wasn't clear and the evidence was weak. And we maintained that position on how we saw the evidence, focusing on the data from randomised controlled trials. Others placed more weight on the physical evidence of filtration and the observational data.

Q. To what extent was the argument for the wearing of face masks strengthened by the application of a precautionary approach: well, it may not have much practical benefit, and there's only some weak evidence to support the scientifically clean.

A. Yes, I mean, it's the first time I've seen that, and it -- we were not -- in no way were we pressured by anyone from government to make any advice based on the availability of masks but, as we had healthcare workers on the committee, it was a clear issue about the availability of PPE for healthcare workers, and raised by committee members that it could divert stocks away from places where they're more effective.

Q. In the event, Professor, following the advice given by NERVTAG and adopted by SAGE, the government advised on 11 May the public to consider wearing face coverings, and then in June they became mandatory in public transport, and then in July in shops?
A. Well, I would say it wasn't just on the basis of NERVTAG, and I think this was -- you know, this is an example of effective challenge where DH or SAGE commissioned other expert groups to look at the data. The Royal Society and the DELVE group produced a paper, and also there were some other groups that looked at the data. So there was an attempt to get differing scientific views of the value of it, and it was those, all of those inputs I think that changed the position, not just NERVTAG.

Q. But NERVTAG was not an outlier, was it? The general
(53) Pages 209 - 212
plan. He summarised what the approach had been in that
action plan. He said:
"We have been working on the next steps of
interventions."
Then he referred again with these words to that
plan:
"This care home support package sets out steps that
must now be taken to keep people in care homes safe."
There's a reference to funding on 13 May.
Then over the page, what is been done in terms of
tests being made generally available, clinical support,
local authority care home support plans, building the
workforce.
Did that letter, Professor, address the concerns
that you had raised repeatedly in your communications
within NERVTAG and to the government?
A. Yes, it was. It is.
Q. So at that stage, so March into April 2020, what was
your understanding about how Covid mortality was being
defined and measured, please?
A. I would have to go back and look at that, but it was --
you know, I believe it was around, you know, deaths
within 28 days of a Covid diagnosis.
Q. So was there also an element about Covid-19 appearing on
a death certificate?
A. I don't recall us ever discussing that.
Q. Thank you.
To move on, please, to May 2020, because at this
stage one of NERVTAG's subgroups appears to have
grappled with this question of definition, and that's
the clinical risk stratification group --
A. Yes.
Q. -- which is one of the ones that you refer to in your
statement.
So this was a group which was established in
response to a commission from DHSC and the CMO's office,
the objective being to produce a risk prediction
algorithm to estimate hospital outcomes and mortality
outcomes in the adult population, and that was to be
rolled out in healthcare settings.
That's the summary, I think, from the annual report
that you referred to earlier.
A. Yes.
Q. Is it right that that ultimately, the product of that
group, became QCovid?
A. That's correct.
Q. So that was the risk prediction tool that was in
operation.
A. Yes.
Q. So you told us in your statement, Professor, that you
attended meetings of this subgroup, at least initially,
until it was set up --
MR METZER: I have permission to ask. I shouldn't be too long.

LADY HALLETT: Thank you, my Lady.

MR METZER: Unfortunately I can't, because I wasn't chairing the meeting, and the development of the tool and the models was under Professor Hippisley-Cox's management, and I hadn't been involved in developing these kind of tools before.

Q. I see. Can I ask you then, please, if you can help us with the significance of the final words there in that action, which are "ideally to match the figures which the government has been publishing"?

A. That's a very good question. I don't recall that statement or remember why that was put in there.

MS STONE: Yes, thank you, Professor.

LADY HALLETT: Thank you, Ms Stone.

MR METZER: Yes, of course, my Lady. There are a small number of questions which I understood were going to be put, which I think -- subject, of course, to my Lady -- were going to be put by Mr Keith.

I will be very short, but I do need to ask permission to go a little wider than the questions I have permission to ask. I shouldn't be too long.

LADY HALLETT: Well, we have to finish by 5 at the very latest, Mr Metzer, so I'm sorry, you've got your five minutes.

Questions from MR METZER KC

MR METZER: Professor Horby, first can you confirm that NERVTAG confirmed that identifying the end of symptoms may be very prolonged or very difficult to define on 6 March 2020, and specifically discussed ongoing clinical issues post-Covid and the potential need for a clinical forum on 15 May?

A. Yes, correct, we did.

Q. Thank you.

Can you outline NERVTAG's discussions on Long Covid and the outcome of the discussions? We note -- and I'm not going to take you to them -- the minutes of NERVTAG show that Long Covid was only first mentioned on 4 September 2020, and that during the course of that meeting the issue of Long Covid was raised, and the minutes note: "Should NERVTAG look at this and have a view?"

The question is: the action was for you, Professor Horby, to discuss with Jonathan Van-Tam whether advice was needed for NERVTAG on Long Covid; is that right?

A. I believe so, yes.

Q. Thank you. And why, when discussions on clinical issues post-Covid were identified by NERVTAG back in May 2020, was Long Covid only discussed in September of that year?

A. So the quotes that you gave from May were really about when we should define a point for quarantining or isolation of patients, the start of illness or the end of illness? Should somebody stay in quarantine for seven or 14 days after start of illness or, you know, four to seven days after end of illness? And the clinicians amongst us on the committee noted that there can be long-term symptoms like chronic cough, et cetera, fatigue, which make it quite difficult to define an end point.
So that was the context for that discussion. It wasn’t a context about: what are the longer term complications of Covid? And, you’re right, that wasn’t really raised until quite a lot later.

Q. Thank you.

Are you able to comment on the ISARIC Long Covid study, when it was established, whether it was launched in response to SAGE 29’s discussions, and why you didn’t mention ISARIC’s work on Long Covid in your witness statement?

A. Yes. Thank you for that, it’s a good point. We did start to engage on Long Covid through ISARIC towards sort of late summer, we engaged with the Long Covid survivors group, and they were co-developers of the Long Covid protocol, which we have established and is -- data is being collected on that. But you’re right, it’s an omission from the evidence statement.

Q. Thank you.

Lastly, areas that were given permission for previously.

Professor Brightling and Dr Evans in their expert report on Long Covid commend ISARIC’s study as a hibernating observational study of people hospitalised for an acute infection that was trial-ready at the onset of the pandemic.

Do you agree that the focus of ISARIC, WHO(?), the CCP, and on ISARIC 3C, were on patients suffering from acute Covid-19?

A. Yes, that’s correct.

Q. And could surveillance of long-term sequelae have been built into the sleeping observational study that was trial-ready at the start of the pandemic?

A. Yes, it could have done and we intend to do that in the future. It was an omission.

Lastly, Professor Brightling and Dr Evans also gave evidence to the Inquiry that the risk of long-term sequelae was foreseeable before the Covid-19 pandemic based on evidence of post-viral sequelae from both MERS and SARS.

If ISARIC was developed in 2012 and activated for MERS, do you accept that the absence of monitoring long-term sequelae initially was a blind spot of ISARIC’s?

A. Having personally seen SARS cases and avian flu cases and worked closely with people who’ve seen MERS cases, long-term sequelae were not highlighted as a common or major problem, they were recognised but weren’t seen to be a major common problem. So I think at that time we may have underappreciated it, but I don’t see that we were missing sort of historic data that made us think that this would be a major issue.

MR METZER: Okay. Thank you very much, Professor Horby.

Thank you, my Lady.

LADY HALLETT: Thank you, Mr Metzer.

MR KEITH: My Lady, we’re back on track in terms of timetable. That concludes today’s evidence.

LADY HALLETT: I’m sure we all send our apologies to our stenographer.

10 o’clock tomorrow, please.

I’m sorry, thank you so much, Professor Sir Peter, I’m really grateful for all your help.

THE WITNESS: Thank you.

LADY HALLETT: And for all that, obviously, you’ve done to try and assist in this kind of pandemic and indeed others. Thank you.

THE WITNESS: Thank you.

(The witness withdrew)

(5.00 pm)

(The hearing adjourned until 10 am on Thursday, 19 October 2023)
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91/11
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