

Tuesday, 21 November 2023

1  
2 (10.00 am)  
3 **LADY HALLETT:** Mr Keith.  
4 **MR KEITH:** My Lady, today's witness is Professor Sir  
5 Chris Whitty. Could he be sworn, please.  
6 **PROFESSOR SIR CHRIS WHITTY (sworn)**  
7 **Questions from LEAD COUNSEL TO THE INQUIRY**  
8 **LADY HALLETT:** Sir Chris, may I give the same apology to you  
9 as I gave to Sir Patrick yesterday, I'm sorry that we  
10 have to keep imposing on your time. Thank you for all  
11 your help.  
12 **THE WITNESS:** Thank you.  
13 **MR KEITH:** You are of course Professor Sir Chris Whitty.  
14 **A.** I am.  
15 **Q.** Professor, thank you for, again, the assistance that you  
16 have already afforded the Inquiry by way, this time, of  
17 further witness statements. You've provided a corporate  
18 witness statement dated 15 August 2023, we needn't bring  
19 it up, a fourth witness statement dated 22 August 2023,  
20 together they run to hundreds, I think around about  
21 340 pages, and you've produced for us hundreds of  
22 primary documents as befits, of course, the magnitude of  
23 your role in the response to the pandemic.  
24 I'd like to start, please, with your qualifications  
25 and to detail some of your professional background.

1

1 Novichok poisonings; is that right?  
2 **A.** That's right.  
3 **Q.** Most importantly, you were appointed Chief Medical  
4 Officer for England on 1 October 2019, and you held that  
5 post of course throughout the period considered by this  
6 Inquiry.  
7 **A.** Yes.  
8 **Q.** Do you remain the Chief Medical Officer?  
9 **A.** I do.  
10 **Q.** We know from evidence that you co-chaired SAGE with  
11 Sir Patrick Vallance during the pandemic and you played  
12 a very significant and often public role in response to  
13 the Covid-19 pandemic.  
14 There is in your statement a reference to the fact  
15 that, in addition, you were head of the National  
16 Institute for Health Research, and I want to just depart  
17 for a moment from the chronology to look at what the  
18 nature of the NIHR is and what you did as its CEO.  
19 What is the NIHR?  
20 **A.** So the NIHR is the largest of the government funding  
21 bodies for medical research, and specifically it  
22 concentrates on practical medical and clinical research.  
23 The more basic science tends to be done by the Medical  
24 Research Council. Together they form the government's  
25 contribution to medical research in the UK in terms of

3

1 You are an epidemiologist and physician specialising  
2 in infectious diseases. You are or have been an NHS  
3 consultant physician in infectious diseases and tropical  
4 medicine at the UCL Hospitals NHS Trust and at the  
5 Hospital for Tropical Diseases. You hold a medical  
6 degree, a doctorate and a degree in physiological  
7 sciences all from the University of Oxford. You hold  
8 masters in epidemiology from the University of London,  
9 as well as an MBA and LLM in medical law and diplomas in  
10 economic and tropical medicine and hygiene.  
11 You were, I think, for a while, professor of public  
12 and international health at the London School of Hygiene  
13 and Tropical Medicine, and you are a fellow of the  
14 Royal College of Physicians, the Faculty of Public  
15 Health, the Academy of Medical Sciences and honorary  
16 fellow of a significant number of other learned bodies.  
17 Have I got it about right?  
18 **A.** Correct.  
19 **Q.** Most relevantly for our purposes, you were also the  
20 Chief Scientific Adviser to the Department for  
21 International Development between 2009 and 2015, and the  
22 interim Government Chief Scientific Adviser and head of  
23 the Government Office for Science between 2017 and 2018.  
24 You co-chaired SAGE during the Zika epidemic in  
25 2016, and you chaired SAGE in respect of the 2018

2

1 funding. And as you know, and I think most people know,  
2 the UK is very strong in this area, and I think this was  
3 important during Covid.  
4 **Q.** As you give evidence, Sir Chris, may I just ask you to  
5 slow down a little bit. Our stenographer, who is absent  
6 and is working remotely, will need to of course keep up  
7 with what you say.  
8 The relevancy of the NIHR and the discharge by you  
9 of your role as CEO is that in the early stage of the  
10 pandemic, in March 2020, did the NIHR -- was it able to  
11 achieve funding for certain important areas of research  
12 related to the possible response to the pandemic?  
13 **A.** Yes. So from quite early, from late January, we were  
14 planning to do this, we made the first calls with the UK  
15 research organisations, particularly MRC, in early  
16 February, and actually had studies up and running in  
17 March. So this was important in the way we were able to  
18 respond to the pandemic.  
19 **Q.** Was funding provided for a number of different areas,  
20 including clinical trials, phases of what then became  
21 the Oxford-AstraZeneca vaccine, funding for CO-CIN,  
22 which the Inquiry has heard is a system by which data  
23 was collected from hospitalised patients, and also for  
24 something called the Covid-19 Genomics UK Consortium,  
25 which provided vital research in relation to the

4

1 sequencing of Covid-19 variants?

2 **A.** Some of that was NIHR funding, some was from a combined

3 funding group that Sir Patrick Vallance and I together

4 controlled, but the same in practice applies. And

5 I think we should add one more: there are many other

6 studies that were covered but I think a very important

7 one was the RECOVERY Trial, which was the first to

8 demonstrate that dexamethasone significantly reduced

9 mortality in Covid.

10 **Q.** Is dexamethasone what is known as an antiviral or at

11 least a therapeutic which became extremely important in

12 being able to provide support to patients who were

13 ventilated or who were receiving oxygen?

14 **A.** It's a therapeutic, it was an anti-inflammatory steroid

15 but it led to a significant reduction in mortality for

16 those who were on oxygen.

17 **Q.** So drawing back from and looking at it overall, did your

18 ability to be CMO as well as CEO of NIHR, did it assist

19 you in being able to respond strategically to the

20 demands of the pandemic?

21 **A.** I think that it was slightly double-edged, Mr Keith.

22 I mean, I think that overall my view is that it was

23 beneficial because it allowed me to combine the strategy

24 for the research, which I directly controlled, with the

25 overall strategy for Covid. Of course, by having two

5

1 CMO England is also the UK Government medical adviser,

2 is there are a small number of areas, mainly of

3 international importance, where it is the UK Government

4 that leads rather than individual nations. But for

5 practical purposes it's England that was the majority of

6 my responsibilities.

7 **Q.** Is the CMO a professionally independent position?

8 **A.** Yes.

9 **Q.** Do you have a line manager? Do you report officially to

10 another individual or entity?

11 **A.** I report up to the permanent secretary, but I don't

12 think the permanent secretary or indeed anyone else

13 would wish to infringe the independence of the role of

14 the Chief Medical Officer, which is a long-established

15 one, going back to the 1860s.

16 **Q.** So the CMO's been giving advice to government on public

17 health and clinical matters since that time, 1855 in

18 fact?

19 **A.** Yes.

20 **Q.** All right.

21 Do you also sit on the executive committee and the

22 board of the Department of Health and Social Care?

23 **A.** I do.

24 **Q.** Are you also part of the collective leadership of the

25 medical profession which requires you, therefore, to

7

1 roles it did mean that I was quite stretched so there

2 were arguments either way, but I think it did actually

3 overall help me in helping to make the response

4 effective and quick.

5 **Q.** And then turning to some aspects of the role of the

6 Chief Medical Officer, does the Chief Medical Officer

7 act essentially as the United Kingdom Government's

8 principal medical adviser?

9 **A.** Yes.

10 **Q.** Are you the professional head also of the public health

11 profession in England?

12 **A.** Yes, not the managerial head, but I am the professional

13 head, yes.

14 **Q.** So you provide public health and clinical advice to the

15 Prime Minister, to ministers, directly to the DHSC, and

16 that includes of course its Secretary of State and

17 permanent secretary, and other senior officials across

18 government?

19 **A.** That's correct.

20 **Q.** It's important to emphasise, isn't it, that you are the

21 CMO for England? Is that because health is essentially

22 a devolved matter and therefore there are CMOs in the

23 other nations of the United Kingdom?

24 **A.** That is exactly correct. I think the one slight

25 difference in terms of the UK role, because the

6

1 meet with the presidents and the chairs of the medical

2 royal colleges, and also with the NHS?

3 **A.** One of the things I was very keen to do in Covid was to

4 ensure that it was seen there was a collective

5 leadership of the medical profession. It's not exactly

6 defined, but I think it is essentially the senior people

7 in the royal colleges, the General Medical Council and

8 the senior clinical people in government.

9 **Q.** The Inquiry is of course well aware that there are also

10 deputy chief medical officers. The DCMOs support you,

11 the Chief Medical Officer, but as senior medical

12 advisers are they also functionally independent?

13 **A.** Yes.

14 **Q.** And do they provide advice similarly on public health

15 and clinical matters?

16 **A.** They do.

17 **Q.** Are the roles of the DCMOs separated in any way?

18 **A.** Under ordinary circumstances, there is a principal DCMO

19 for health protection, so that would be major

20 infections, but also other emergencies, and one for

21 health improvement, which would be things like strokes,

22 heart attacks and so on. During the Covid pandemic this

23 distinction was almost entirely blurred, but under

24 ordinary circumstances that's the normal situation.

25 **Q.** Because all of them lent their collective and impressive

8

1 weight to the demands of the pandemic?  
 2 **A.** Yes.  
 3 **Q.** I think there were three full-time DCMOs in post during  
 4 the pandemic: Professor Sir Jonathan Van-Tam, from whom  
 5 we'll be hearing in due course, I think tomorrow; also  
 6 Professor Dame Jenny Harries, from whom we'll be  
 7 hearing; and Dr Thomas Waite and Dr Aidan Fowler, who  
 8 led on a variety of different aspects of the clinical  
 9 and medical advice that's given to government?  
 10 **A.** That's correct.  
 11 **Q.** All right.  
 12 Just before we turn to the mechanics of the first  
 13 two months of the pandemic, was there any significant  
 14 difference between you and the DCMOs in relation to who  
 15 initially responded to the emerging news of an epidemic  
 16 within China?  
 17 **A.** So the very first parts of the knowledge about Covid,  
 18 right at the beginning of January, the response was led  
 19 very clearly by Professor Van-Tam, as the health --  
 20 quite rightly, as the health protection DCMO, but in  
 21 co-ordination with me.  
 22 As the probability of this becoming a significant  
 23 threat to the UK rose, I took an increasingly prominent  
 24 role, and by the time I think we were clear that this  
 25 was the biggest threat we were potentially facing,

9

1 **A.** Yes.  
 2 **Q.** There really wasn't any area to do with the clinical and  
 3 public health response to the pandemic upon which you  
 4 did not advise?  
 5 **A.** I'd put it more -- a bit more constrained than that,  
 6 actually. Where I thought we added value was where  
 7 having a doctor or a scientist giving an opinion was  
 8 going to be useful.  
 9 We were flooded with requests, many of which in my  
 10 view were actually about policy, and we tried to avoid  
 11 those areas. So the question really should always be:  
 12 why does a doctor or a scientist need to answer this?  
 13 And if the answer was "it's not obvious it needs to go  
 14 to them", we tried to encourage other people to do it,  
 15 remembering that in total, at the absolute peak, the  
 16 office had less than 20 people in it, including myself  
 17 and the DCMOs. So we had to constrain what was done.  
 18 But we could range wherever we felt public health,  
 19 clinical advice or science was relevant.  
 20 **Q.** But by and large, requests from central government were  
 21 required to be responded to, there wasn't a question of  
 22 the CMO saying, "This is an area upon which I'm simply  
 23 not going to advise, albeit it's an area of public  
 24 health or clinical importance"?  
 25 **A.** Quite frequently we would say, "This is an area that

11

1 I took the leading role, but very much with  
 2 Professor Van-Tam and, in due course, Professor Harries.  
 3 **Q.** Did you start to take that lead role in late February,  
 4 early March, or at an earlier stage?  
 5 **A.** I would say I was probably taking the lead role in terms  
 6 of central government by the end of January.  
 7 **Q.** Looking at the nature of the advice that you gave to  
 8 central government and the means by which you gave it,  
 9 could we have, please, your statement, INQ000248853 on  
 10 the screen at pages 50 and 51.  
 11 We can see there, Professor, some examples of the  
 12 areas upon which you advised. You advised on the  
 13 accuracy of risk assessments, on the re-opening of  
 14 closed sectors, comments on Prime Ministerial speeches,  
 15 and then, over the page, on the roadmap, on  
 16 national/local messages, Tier 3 and the use of  
 17 a circuit breaker.  
 18 Then if we go over to 52, we can see "Specific areas  
 19 of advice", upon which the Office of the Chief Medical  
 20 Officer -- is that the office within which you and your  
 21 colleagues, the deputy chief medical officers, work?  
 22 You advised on indirect causes of mortality,  
 23 principles behind the 2-metre social distancing  
 24 provision, ethnicity, schools, holidays, variants, and  
 25 so on and so forth?

10

1 doesn't look appropriate for us". This wasn't because  
 2 we thought it was wrong, we just thought we were not the  
 3 right people to give the advice.  
 4 **Q.** You worked also very closely with expert advisory  
 5 groups, with scientific and medical colleagues in  
 6 government, with PHE, and so on and so forth. Did you  
 7 attend a vast number of central government meetings?  
 8 **A.** Yes.  
 9 **Q.** If we could have your fourth statement, INQ000251645, at  
 10 page 61, we can see there at paragraph 6.2 a description  
 11 of the sorts of meetings that you attended: COBR (M),  
 12 COBR (O), Cabinet as required, the MIGs and, over the  
 13 page, Covid-S, Covid-O, the "quad" meetings, meetings  
 14 of course with the Secretary of State for Health and  
 15 Social Care, and a multitude of other meetings with the  
 16 Prime Minister and his advisers and with UK CMOs.  
 17 Focusing just for a moment on the Department of  
 18 Health and Social Care, did you meet formally throughout  
 19 the period of the pandemic with the Secretary of State  
 20 for Health and the permanent secretary?  
 21 **A.** I did.  
 22 **Q.** I think you met around about 233 times according to your  
 23 statement. Did the CMO therefore, yourself, did you  
 24 formally feed, therefore, into the DHSC decision-making  
 25 process? So were you part of the functional structure

12

1 within the DHSC by which it responded to the pandemic?

2 **A.** Where a clinical, scientific or public health opinion  
3 was needed, yes.

4 **Q.** Were you therefore what was known as "silver" within the  
5 command structure within the DHSC?

6 **A.** I think that makes it sound slightly different to how I,  
7 at that time, perceived it, but I was the person who  
8 chaired the technical meetings, which collected and gave  
9 technical advice to the Secretary of State at various  
10 points along the path of the pandemic, particularly at  
11 the stage where there were regional approaches to the  
12 Covid pandemic.

13 **Q.** All right.

14 We will see in due course that you were also  
15 responsible for the clinical alert system or at least  
16 for promoting the use of that system and for the sending  
17 out of alerts throughout England in relation to the  
18 pandemic.

19 Did you also meet with a number of experts and  
20 scientific and medical peers internationally?

21 **A.** I did, I met with many.

22 **Q.** Did you meet repeatedly with officials from the World  
23 Health Organisation?

24 **A.** I did, including going to the World Health Organisation  
25 and meeting the Director-General.

13

1 given time there was usually several countries that were  
2 actually at the leading edge and where their experts  
3 were working flat out, I think it worked as well as  
4 reasonably could be expected.

5 **Q.** So will you give us, please, then, some indication of  
6 the areas in which you were particularly assisted, the  
7 emergence of the Delta wave in India, or the Omicron  
8 wave in South Africa?

9 **A.** At each one of the waves inevitably we got our first  
10 information from people in-country. Sometimes,  
11 for example with the Omicron wave, with the Delta wave,  
12 I and my colleagues had direct bilateral discussions,  
13 and they were extremely generous with senior scientists  
14 in those countries. And in the original Wuhan wave we  
15 had some direct interactions but a lot more indirect.  
16 And of course we relied for our early understanding of  
17 this on Chinese science and then subsequently science  
18 from other countries, for example Italy. In time we  
19 ended up having multiple routine groups of scientists  
20 across Europe, colleagues from the US, Australia,  
21 New Zealand, for example, there were many different  
22 groupings, but they were -- these were all ways of us  
23 sharing information bilaterally. And of course when we  
24 had the Alpha wave, which was first detected in the UK,  
25 most countries wanted to get information from the UK,

15

1 **Q.** Some have suggested that there was a general failure on  
2 the part of England and the United Kingdom to liaise  
3 sufficiently with overseas experts, with other  
4 countries, with other systems that were responding in  
5 their own ways to the pandemic. Did you in fact keep  
6 yourself extremely well informed throughout the pandemic  
7 as to how other countries were responding and also as to  
8 the technical and scientific medical information which  
9 they were accruing?

10 **A.** We did, and we were absolutely dependent on that. And  
11 I would say there were kind of three levels of  
12 interaction: there were bilateral meetings I had with  
13 particular experts at particular times; there were  
14 meetings of groups where -- for example, the World  
15 Health Organisation would organise a group of people to  
16 come together and give advice from all around the world,  
17 as an efficient way of passing on information; and then  
18 there were either publications or indirect links,  
19 because many people in the UK have very good  
20 international links, and then they would feed in to us.  
21 So we were getting information internationally from  
22 multiple routes and, as I say, were dependent on it.

23 **Q.** Do you consider that the system of international  
24 collaboration worked extremely well?

25 **A.** I think against what was realistic, given that at any

14

1 and we tried again to provide that both bilaterally and  
2 in multilateral fora.

3 **Q.** So on that occasion the information flow was the other  
4 way?

5 **A.** Yes.

6 **Q.** You have in your statement provided some details of the  
7 number of meetings that you attended. I believe you had  
8 around 44 meetings between January 2020 and July 2020  
9 with the representatives of other countries, and between  
10 August 2020 and February 2022 you participated in  
11 a further 107 international meetings, we presume  
12 multilateral meetings?

13 **A.** That's correct. But it's also important to stress that  
14 a lot of information in medicine is passed on in written  
15 form, by papers, by emails, by alerts of different  
16 sorts. So this is only -- the direct meetings were only  
17 part of the way we were learning from the international  
18 experience.

19 **Q.** You have described how you were the chair of SAGE. You  
20 were of course the co-chair with Sir Patrick Vallance.  
21 Was he the principal chair of SAGE?

22 **A.** We agreed at the beginning that it would be much more  
23 efficient for one person to actually chair the meetings  
24 if they were present, and Sir Patrick was at virtually  
25 all of them. So he chaired them. Occasionally I would

16

1 chair them if he wasn't there. But we would agree  
 2 agendas, agree minutes, and, I think most importantly  
 3 actually, try accurately to reflect the output of SAGE  
 4 to policymakers together, as co-chairs, and to agree  
 5 what we -- where we felt the centre of opinion at that  
 6 point in time was.

7 **Q.** We're going to come and look at that process by which  
 8 advice and information from SAGE was funnelled through  
 9 yourself and Sir Patrick to central government in  
 10 a moment, but just focusing on your overarching approach  
 11 to SAGE and your working relationship with Sir Patrick,  
 12 did you try to formulate a common position in relation  
 13 not just to the funnelling of advice from SAGE but to  
 14 the technical advice that you both gave to government?

15 **A.** Yes. And I think it's important to, in a sense,  
 16 differentiate. I felt I had two roles with SAGE. In  
 17 one role I was actually a member of SAGE and had  
 18 expertise in areas that were complementary to other  
 19 people and gave an opinion as myself, if you wish, as  
 20 an expert in this field. But once the agreement had  
 21 been made and the minutes were agreed and we'd agreed  
 22 where the central position was, I would then try  
 23 accurately to reflect the views of SAGE as a body rather  
 24 than my own views, because I thought that was --  
 25 otherwise, in a sense, why have the extraordinarily

17

1 one between waiting and wading in, between yourself and  
 2 Sir Patrick in those early weeks of January and into  
 3 February of 2020.

4 Did he overstate the position? Was there a degree  
 5 of difference between you?

6 **A.** Well, Sir Jeremy, who is a good friend and colleague,  
 7 had a book to sell and that made it more exciting, I'm  
 8 told. My own view was that actually the differences  
 9 were extremely small, and the main one, and Sir Patrick  
 10 I thought put it very well, was that I saw as part of my  
 11 role within SAGE, as -- and this is my first role -- as  
 12 an individual, to reflect some of the very significant  
 13 problems, for particularly areas of deprivation, I saw  
 14 from many of the actions that we were taking in terms of  
 15 what was going to be advised to ministers to consider  
 16 for what they did next.

17 And I think that was an appropriate thing for me to  
 18 do, and Sir Patrick also thought it was appropriate.  
 19 Inevitably it meant that we appeared to have slightly  
 20 different starting points in SAGE, but the end product  
 21 was the SAGE view and we reflected the SAGE view when we  
 22 went to ministers. Which was, in my view, the correct  
 23 way to do it.

24 **Q.** You refer in your own statement to the fact that there  
 25 are risks associated with undercalling a crisis,

19

1 effective, in my view, model of SAGE sitting on top of  
 2 expert committees, sitting on top of a large scientific  
 3 effort, so funnelling up. So very much once we had  
 4 agreed a SAGE position, that was Sir Patrick's position  
 5 and that was my position.

6 **Q.** It's self-evident that the ramifications of this  
 7 epidemiological and public health crisis were enormous,  
 8 these were difficult and nuanced issues, there must have  
 9 been room for a wide spectrum of advice to be given; was  
 10 it not in practice quite difficult to ensure that  
 11 yourself and Sir Patrick were singing always from the  
 12 same hymn sheet?

13 **A.** Well, I mean, I think we spent -- firstly, the SAGE  
 14 process of course helped because a lot of discussions  
 15 were had in that group and different ideas could then be  
 16 tested more widely. Where we were unsure or where we  
 17 were having to give advice in advance of SAGE or in  
 18 an area where SAGE was unlikely to work, we did  
 19 everything we could to have our discussions before we  
 20 gave the advice to ensure that we'd thrashed it out and  
 21 had a common position to put to the Prime Minister or  
 22 other ministers as needed.

23 **Q.** You will be aware from the evidence given by  
 24 Sir Patrick Vallance that in his book Jeremy Farrar  
 25 observed that there was a friction, a tension perhaps,

18

1 for example missing the start of a major epidemic or  
 2 failing to get ahead of it, and overcalling, so leading,  
 3 I suppose, to multiple false alarms.

4 Sir Patrick, in his dairies, and again Jeremy Farrar  
 5 in his book, refer to a tendency on your part to be  
 6 perhaps more cautious than Sir Patrick, to a tendency to  
 7 wait, perhaps with the experience of your long and  
 8 highly distinguished career in this field, to wait to  
 9 see how things pan out, that -- to recognise that you've  
 10 seen it all before and we must be cautious and wait to  
 11 see what the data tells us. Would you agree that, by  
 12 contrast to Sir Patrick, that was more the stance that  
 13 you took?

14 **A.** I think we should be very careful of the narcissism of  
 15 small differences here. The differences were small, but  
 16 my -- I did have a stronger concern, I would say, than  
 17 some, that the biggest impacts of everything we did, and  
 18 I was confident we were going to have to do them to be  
 19 clear, but when we started the disadvantages of all the  
 20 actions, not just full lockdown but other actions before  
 21 that, for example what was initially called cocooning  
 22 and then shielding, as an example, stopping schooling is  
 23 another, the biggest impacts of those would be in areas  
 24 of deprivation and those in difficulties and those  
 25 living alone and so on. So I was very aware that we

20

1 essentially had two different things we were trying to  
2 balance, the risk of going too early, in which case you  
3 get all the damages from this with actually fairly  
4 minimal impact on the epidemic, and the risk of going  
5 too late, in which case you get all the problems of the  
6 pandemic running away.

7 Now, as we will I'm sure come on to, my view is,  
8 with the benefit of hindsight, we went a bit too late on  
9 the first wave, and I've been clear about that for some  
10 time. We can come on to the reasons for that. But the  
11 idea that there was not some tension between those two  
12 and that you could somehow go without cost earlier than  
13 was needed I think was incorrect.

14 And again, everyone around the SAGE table would have  
15 agreed with that position. The degree of weighting --  
16 I'm talking here in terms of putting weight, rather than  
17 wait as in time -- between those two inevitably varied  
18 a bit between people and I was probably further towards:  
19 let's think through the disadvantages here before we  
20 act, and also in making sure that in giving my advice  
21 that ministers were aware of both sides of the equation.

22 **Q.** You've referred there to the very well known harmful  
23 consequences of intervention, to the damage done  
24 economically, societally, by non-pharmaceutical  
25 interventions. Were those issues not, however,

21

1 public health, and I don't think any public health  
2 expert would disagree that they are, they might disagree  
3 on the exact approach I or others took but I think the  
4 principle that those are firmly within the scope of  
5 public health I think is widely accepted.

6 **Q.** Inherent in this system, in this process, and in the  
7 government's response, is this very difficult balance  
8 between the public health obligation to reduce  
9 mortality, directly and indirectly, to stop the number  
10 of deaths, stop the number of indirect deaths that might  
11 be brought about by, for example, a collapse in the NHS  
12 system, against the harmful indirect societal  
13 consequences of intervention.

14 In those early days, in January and February, was  
15 there not a greater need to get on top of the first side  
16 of the balance, to make sure that in public health and  
17 epidemiological terms everything had to be done to  
18 reduce direct and indirect mortality, as opposed to  
19 focusing on the indirect consequences of intervention?

20 **A.** Well, I think that one of the problems with that  
21 argument is if you get -- up to and including the  
22 beginning of certainly March, we didn't have any  
23 mortality in the UK, and we'd only just in fact heard  
24 evidence of internal transmission. There then is a very  
25 difficult period, really from the beginning of March

23

1 something better for government to resolve, these being  
2 intensely political decisions, as opposed to the CMO,  
3 who of course is primarily concerned with public health  
4 and clinical matters? Were you entitled to weigh up the  
5 adverse consequences of early intervention when advising  
6 on public health and clinical matters?

7 **A.** So the point you make is absolutely correct. I was not  
8 only entitled but should have and did weigh up the  
9 negative aspects from a public health point of view. It  
10 was no part of my job, nor did I ever do this, to say:  
11 what are the wider economic, what are the wider social,  
12 what are the wider geopolitical questions? That was not  
13 my job.

14 **Q.** Sorry, I'm going to interrupt, please try to go a little  
15 slower.

16 **A.** Apologies.

17 So let us take some practical examples. The  
18 question of someone who goes into shielding before need  
19 and then ends up with loneliness, depression and so on,  
20 that is a clinical and public health problem. The  
21 problem of someone living on the borderlines of  
22 deprivation pushed over the edge into deprivation is  
23 a public health problem. Questions of the wider economy  
24 are not a public health problem and were not for me, but  
25 the first two in my view firmly are within the realms of

22

1 till the 16th and then 23 March, where the exact point  
2 along that path where the intervention should happen was  
3 a matter for legitimate technical debate from a public  
4 health point of view. Then after that there is a wider  
5 set of discussions, exactly as you say, on the wider  
6 impacts on the economy and society. Which are not for  
7 me, SAGE or others, this was not our role.

8 But in those, you know, those technical questions,  
9 what we should actually give in terms of the public  
10 health advice, you had to actually give both sides of  
11 that advice.

12 Let me give an example in a slightly different way,  
13 if I can try and make this clearer. If as a doctor you  
14 only say to someone "You need an operation", and you  
15 don't lay out to them all the things that will  
16 potentially go wrong with this operation, even if you  
17 think personally it's the right thing to do, you are  
18 failing in your medical role. In fact, if it came to  
19 a court, there would be a direction on that from the  
20 legal profession. So it is important that when giving  
21 advice you give advice on both sides of the equation.  
22 That is central, in my view. Additionally, you have to  
23 actually think through the public health implications.

24 One of the problems I had in thinking this through  
25 was I think some people were thinking that this was just

24

1 a matter of getting through a few weeks and then we're  
2 out and then it's all fine. My view was you had to  
3 think about this over the course of the epidemic as  
4 a whole, and that was clearly going to go on for a lot  
5 longer, hence why we put so much emphasis, for example,  
6 on research. My view was always that you were only  
7 going to get to a situation you would not have to  
8 consider NPIs, for the sake of argument, once you'd got  
9 medical countermeasures, so vaccines, drugs and other  
10 areas, and that was going to take some time, so you had  
11 to be able to do whatever you were doing for the period  
12 of time until, essentially, the cavalry came over the  
13 hill in the form of medical science.

14 **Q.** In that period before it became apparent that there were  
15 cases and then, subsequently, deaths in the  
16 United Kingdom, there are references to you in the email  
17 correspondence with government and also in meetings  
18 referring to the risks of overreaction. On 23 March, as  
19 late as 23 March, in a meeting with the Prime Minister,  
20 you were reported by Imran Shafi in his notes of that  
21 meeting to have said "Overreacting will have impact".

22 So I want to ask you: to what extent did the need  
23 for the accumulation of data, to be sure about what the  
24 position was, knowing the lie of the land before  
25 systemically the country reacted, impacted your

25

1 there was a danger that if the country went too soon,  
2 too rapidly, there would be other -- perhaps indirect  
3 but other significant consequences?

4 **A.** Well, I can only in a sense repeat what I've previously  
5 said. I was certainly not in any way deviating from the  
6 position of SAGE. That was the position of SAGE, we'd  
7 agreed it, and that was clear that the view of SAGE was  
8 if you wish to avoid loss of life you were going to have  
9 to act. It is certainly the case that you need to be  
10 clear that there are going to be downsides to that  
11 action, and indeed if you didn't give that advice, when  
12 the downsides emerged, which they surely would, then the  
13 ministers involved would be much more likely, in my  
14 view, to reverse position. So they need to have a firm  
15 foundation when they take an advice that this is -- if  
16 you wish to reduce loss of life, this is a path down  
17 which you are going to have to choose a number of very,  
18 very unpalatable options, but be aware of the fact that  
19 there are downsides, we are telling you that now, don't  
20 say in two months "I didn't know that", this is what the  
21 situation is now.

22 That, in my view, is an appropriate way to give  
23 advice. And I don't -- again, I doubt any doctor  
24 listening to this or any civil servant listening to this  
25 would disagree that is the appropriate way in which you

27

1 decision-making or rather your advice?

2 **A.** My advice was -- by the time that SAGE had advice my  
3 advice was the advice of SAGE, and the advice of SAGE at  
4 this point was extremely clear: that without action we  
5 were going to be in very deep trouble. And they'd said  
6 that from the 16th onwards really, in my view, extremely  
7 clearly.

8 You know, it is important that if you're --  
9 you know, in giving advice, that the downsides of the  
10 advice are also laid out. That is good medical  
11 practice. It's also actually, as it happens, good civil  
12 service practice. That is what you should do. It  
13 doesn't mean you do not think that the action should  
14 occur. And in my view, by the time we got to the 23rd,  
15 the options available to ministers, unless they wished  
16 to see very heavy loss of life, were pretty narrow  
17 actually. But they needed to be aware of the downsides  
18 nevertheless.

19 **Q.** There is obviously a difference between advising on the  
20 downsides of a variety of options, different courses  
21 that could be taken, and a general appeal not to  
22 overreact, and it's that latter issue that I want you to  
23 address, please.

24 Did you, during that time, January, February, March,  
25 call the risks of overreacting? Did you call out that

26

1 give advice to a patient and it's the appropriate way to  
2 give advice to a minister. That's the correct thing to  
3 do.

4 **Q.** You've referred, Sir Chris, a couple of times now to the  
5 fact that you were merely relaying the position of SAGE.  
6 Did SAGE itself warn against the dangers of overreaction  
7 in those weeks from late January to early March?

8 **A.** I don't think that I would have used the phrase and  
9 certainly SAGE would have used the phrase  
10 "overreaction"; what we'd have said is "Here are some  
11 downsides, and these are things you need to be aware  
12 of". And, you know, again to go back to my earlier  
13 point, the differences between different people on SAGE  
14 on this were not of "Are these downsides there?",  
15 et cetera. All of these things were agreed. There was  
16 some difference as to the degree of weighting people  
17 would put on them, but I don't think that was  
18 inappropriate. You know, again, it's important there is  
19 a serious debate about these things before a central  
20 position is put forward.

21 **Q.** Of course there is a debate and of course individual  
22 epidemiologists and advisers would naturally differ as  
23 to the speed with which the system was required to  
24 react, whether or not steps should be taken, whether or  
25 not further data should be accumulated and a better

28

1 understanding accrued. But the material does appear to  
2 suggest that you were prominent in calling out the risk  
3 of overreaction, and that, as Sir Patrick Vallance has  
4 suggested, you were more cautious than others in wanting  
5 to wait to see how things would eventuate.

6 **A.** So I've --

7 **Q.** Is that fair?

8 **A.** No. I've rejected and I will continue to reject your  
9 characterisation of this as "overreaction", because that  
10 implies I thought in a sense the action should not  
11 happen. What I thought should happen is that people  
12 should be aware that without action that very serious  
13 things would occur, but the down sides of those actions  
14 should be made transparent. I don't consider that's  
15 incorrect, and I actually don't think that that was --  
16 and, you know, Sir Patrick was in a sense saying exactly  
17 that, that the advice we gave was identical but the  
18 debate we had about this was how do we actually get the  
19 balance of these clearly in front of people. And that's  
20 an appropriate thing to do.

21 **Q.** In principle, and obviously you've explained very  
22 clearly what your position was, but in principle, if  
23 generically the response of government was too cautious  
24 or the advice that was given was too cautious, can that  
25 in the field of pandemics, in the field of

29

1 **Q.** You gave a presentation at the Royal College of  
2 Physicians on 12 February, and if we could just have up  
3 a note of what you said, INQ000274050.

4 I'm bound to say, you expressed in beautiful  
5 language, Professor, the dichotomy that was faced both  
6 by you and of course by the system generally when  
7 dealing with this pandemic, by saying these words:

8 "And then we will come out the other side and at the  
9 other side one of two things will happen ... either  
10 I will be with [some colleagues] in front of the  
11 committee or inquiry explaining why it is that we failed  
12 to prepare adequately for this armageddon (which  
13 actually would not be an armageddon) [I think that was  
14 a technical explanation] or we will be sitting in front  
15 of the committee saying why did you spend all this money  
16 on an epidemic which never happened. Those are the two  
17 solutions and I am basically ready for either of them."

18 Is that -- obviously this is an excellent  
19 demonstration of gallows humour, Professor, but does  
20 that reflect, do you think, fairly the dichotomy which  
21 is faced, which was faced by you and your colleagues and  
22 by the government?

23 **A.** Well, I think it's important to put some context on  
24 this. I actually stand by what I said but I'm going to  
25 explain it. And, I should say, here we are, so this was

31

1 epidemiological study, lead to government responses  
2 being behind the curve? So, putting it another way,  
3 antithetic to the notion of which the Inquiry has heard  
4 quite a bit, that when dealing with pandemics, the  
5 precautionary principle demands that you go early and  
6 you go hard?

7 **A.** So I think that some of the evidence to the Inquiry on  
8 the precautionary principle misunderstands it quite  
9 profoundly actually.

10 So the precautionary principle is useful if you're  
11 dealing with something where there are, for practical  
12 purposes, no downsides, or very minimal downsides  
13 relevant to the advantages, in which case the argument  
14 has got to be: well, just go ahead and do it.

15 So an obvious example was advice to people to wash  
16 their hands. There is no downside to do that, it's  
17 a good thing to do. The more you get into things where  
18 there is significant cost -- I do not mean that in  
19 an economic sense, I mean cost to individuals, cost to  
20 families, in terms of their health, mental health and so  
21 on -- the less you can say, "Well, it's just  
22 a precautionary principle, I'm going to impose this on  
23 you just in case"; that's not an appropriate  
24 understanding of what precautionary principle is or  
25 should be.

30

1 not an entirely unfair thing to say.

2 The -- I was giving a talk to the medical profession  
3 at a point where we were over two weeks, I think from  
4 memory, before the first internally transmitted case in  
5 the UK, more than three weeks before the first death in  
6 the UK, and in fact before the first death in Europe  
7 from Covid. So my point at this stage to them was --  
8 this in a sense was part of a two-hour briefing in which  
9 I and colleagues were laying out the science and saying  
10 "We're going to have to do a lot of things here, many of  
11 which are going to be difficult", and if you actually  
12 watch my whole talk I think it's pretty clearly a kind  
13 of eve of battle talk to people, a "Brace yourself, and  
14 this is already difficult, it's going to get harder, and  
15 it may be that at the other end we'll decide that we  
16 shouldn't have done all those things and this was an  
17 overreaction, but the fact is we've got to do them".

18 By this stage, for example, I'd already committed  
19 public money to doing research on Covid, that decision  
20 was already taken, and a variety of other things were  
21 already in train that were causing significant  
22 difficulties to colleagues in other bits of the health  
23 service.

24 So in my view this was in a sense saying yes, we've  
25 got to act, but be aware of the fact that that this

32



1 could go -- even at that point I think I was  
 2 increasingly doubtful about that, but this could go  
 3 either way.

4 **Q.** The reference to spending all the money on an epidemic  
 5 which never happens is, of course, another way of  
 6 describing overreaction?

7 **A.** That I would go -- you know, you're trying to ascribe  
 8 discussions in mid-March to a point where I was trying  
 9 to explain a rather different set of things to the  
 10 medical profession in early to mid-February --

11 **Q.** Indeed.

12 **A.** -- which was a very different set of circumstances.

13 **Q.** By that date, 12 February, you were of course aware of  
 14 what is known as the Report 4 from Imperial College  
 15 London of 10 February which described the overall case  
 16 fatality rate in all infections, both symptomatic and  
 17 asymptomatic, for this emerging coronavirus as  
 18 approximately 1%, so the death rate overall was 1%.

19 And SPI-M-O, the Inquiry has heard evidence about  
 20 this, had reported on 10 February, again two days  
 21 before, that:

22 "It is a realistic probability that there is already  
 23 sustained transmission in the [United Kingdom], or that  
 24 it will become established in the coming weeks."

25 In light of the information made available to you,

33

1 both of those sides.

2 **Q.** Of course.

3 Can we now look, please, Professor, at an entirely  
 4 separate subject, by way of trying again to put into  
 5 place some of the important building blocks.

6 You met regularly, did you not, with the CMOs of the  
 7 other United Kingdom nations? That was obviously  
 8 envisaged by the system, the system requires that there  
 9 be regular and significant collaboration with the CMOs  
 10 from the other nations.

11 Did you start to work with them significantly from  
 12 a very early point in the chronology?

13 **A.** Yes, and, I mean, I -- obviously the four UK CMOs, or  
 14 maybe not obviously, work closely together in any case  
 15 but we all saw this as a shared threat to the  
 16 four nations of the United Kingdom.

17 We came from slightly different disciplinary  
 18 backgrounds. That was an advantage. So, you know, to  
 19 re-stress, having different opinions and different  
 20 backgrounds and different approaches is a strength, not  
 21 a weakness. And it allowed us to make sure that the  
 22 advice we were giving ministers, from a technical point  
 23 of view, remained as aligned as possible. Ministers  
 24 then obviously could take different political decisions.  
 25 And that remained the case all the way through.

35

1 my question therefore is: in the application of that  
 2 balance to which you refer, was it not already clear by  
 3 10 February which way that balance surely had to be  
 4 operated?

5 **A.** Well, by this stage I was doing the great majority of my  
 6 work and my team's work around this. We were putting  
 7 a large amount of time into communicating it, putting  
 8 resources into it, trying to get the medical profession  
 9 ready for it, at a point where, in my view, we were  
 10 moving increasingly far away from a probability this  
 11 could go back to nothing, but we weren't yet at a point  
 12 where we could say that definitively. We were still  
 13 a long way away from, for example, the WHO declaring  
 14 a pandemic. And as I say, we did not at this stage and  
 15 did not for some time in fact have internal  
 16 transmission.

17 So the statement by SPI-M-O that we would probably  
 18 at some point have it, I'm paraphrasing, I thought was  
 19 a reasonable one. That didn't mean that we had it at  
 20 that point in time.

21 And I think it is also important to recognise that  
 22 it would have been wrong to swing the whole of the  
 23 medical profession over to this. Even at the height of  
 24 the pandemic more people died of causes not Covid than  
 25 died of Covid. Every one of those deaths is tragic on

34

1 I would like to pay great tribute to the other CMOs  
 2 and DCMOs in the four nations. I think we worked  
 3 together collectively as a team quite effectively  
 4 throughout. Very effectively actually.

5 **Q.** I think you met around about -- well, according to your  
 6 statement, 274 times?

7 **A.** That's true, and we were messaging each other in between  
 8 those and so on, so it was a very close interaction.

9 **Q.** No doubt you gave advice collectively?

10 **A.** We gave advice collectively where there were important  
 11 issues that -- so we gave advice collectively under  
 12 a number of circumstances. The most important one was  
 13 where we thought there was an issue of great public  
 14 importance where we wanted to signal to the public that  
 15 this was a collective view. Shall I give an example of  
 16 that?

17 **Q.** Please.

18 **A.** So, for example, when schools were going back, we wanted  
 19 to give a collective view about the risk/benefit in  
 20 a very clear way to the general public and to teachers  
 21 and staff members, we wanted to give a clear view about  
 22 vaccination of children, and we gave those views as  
 23 a collective because our view was, as a collective, in  
 24 a sense we were demonstrating this was not just one  
 25 person's opinion, this was a general opinion of the

36

1 profession, as represented by the chief medical  
 2 officers. And in some cases we did it collectively also  
 3 with the deputy chief medical officers.

4 **Q.** So you were doing it not just to aid collective  
 5 decision-making for trans UK matters, but to make  
 6 a strong collective public statement?

7 **A.** Correct. And then sometimes we would get other senior  
 8 clinicians from other areas to do this as well. And  
 9 I think one bit of that, which I think -- I hope  
 10 the Inquiry will find useful, we collectively wrote  
 11 a report to our successors, along with  
 12 Dame Jenny Harries in her new role and also Steve Powis  
 13 from the NHS, to say: this is our professional opinion  
 14 on the technical matters. Fully saying, to be clear,  
 15 that the narrative of the Inquiry -- the narrative of  
 16 the pandemic will come from this Inquiry, but we wanted  
 17 to have a collective view to whoever was next having to  
 18 face a pandemic in the UK, here's what we learned from  
 19 this.

20 **Q.** Can you recall any significant scientific disagreements  
 21 between you, albeit I'm sure there were times that you  
 22 were testing each other's thinking and testing the  
 23 conclusions that the others might have reached but any  
 24 significant disagreements?

25 **A.** Not that I can recall. I think there were several

37

1 demonstrably did a lot together. The different public  
 2 agencies did a lot together and, for example, the issues  
 3 around PPE were agreed on a four nations basis, usually  
 4 at a technical level. The presidents of the royal  
 5 colleges, with whom I met regularly, are on a UK-wide  
 6 basis principally, some of them are more Scottish-based  
 7 or English-based, for example, but they are  
 8 UK-resourced, so -- and the General Medical Council  
 9 which is involved in some of these is a UK body, so we  
 10 were working as -- from a purely professional, technical  
 11 point of view, clinical and public health, in my view  
 12 very closely all the way through and at multiple levels,  
 13 and this carried on all the way through the system.

14 That doesn't mean that there weren't different and  
 15 perfectly legitimately different responses to the  
 16 pandemic at an operational or political and other areas,  
 17 so I'm not claiming this was identical across the UK, it  
 18 clearly wasn't, but I think at a technical level we did  
 19 whatever we could to ensure that the advice was shared  
 20 and also tested across the UK, and I think that was  
 21 actually a real strength.

22 **Q.** As a matter of interest, it's obvious that there were,  
 23 well, a very large number of meetings from  
 24 24 January 2020 onwards. In terms of the formality of  
 25 that process, do you recall whether or not your various

39

1 points where we had to chew something over quite hard to  
 2 reach a collective view, but these were usually things  
 3 which were in practice 49%/51% calls, where it's not  
 4 really clear what to do and there is a legitimate spread  
 5 of opinion and we wanted to, when we gave our collective  
 6 view, be pretty confident that we were giving one that  
 7 we could all sign up to and felt comfortable with and  
 8 we'd thought through the pros and cons of that. But  
 9 I don't think there were any on a -- from a technical  
 10 point of view. The most difficult one tended to be on  
 11 borders.

12 **Q.** And you gave advice on borders, balancing risks and  
 13 benefits in education, of course vaccination, dosing  
 14 schedules --

15 **A.** All of these.

16 **Q.** -- clinical trials and also winter challenges --

17 **A.** Exactly.

18 **Q.** -- challenges faced by all the nations.

19 There has been some suggestion from some quarters  
 20 that there was an absence of proper collaboration on the  
 21 clinical medical front with the devolved  
 22 administrations. Do you consider that there was in fact  
 23 the closest of collaboration with all four nations?

24 **A.** Well, I mean, just commenting on the areas where I was  
 25 involved, there are many others, I think the CMOs

38

1 meetings with the other UK CMOs were minuted?

2 **A.** We had -- essentially we met in kind of three different  
 3 ways. There were some -- there was just informal  
 4 discussions, there were formal things where we were  
 5 trying to come to a decision, and essentially that  
 6 either ended up with a minute or it might end up with  
 7 a joint letter, but that essentially is the minute of  
 8 "these are the positions we've taken". And then there  
 9 were discussion groups, of which the most -- probably  
 10 the most prominent was something called the senior  
 11 clinicians group, which I chaired, and that didn't just  
 12 have CMOs, it also had people from the NHS at some  
 13 points, it had chief nurses and others, so this was very  
 14 much not a decision-making -- it was for just people to  
 15 share information principally. But these were --  
 16 you know, where a decision was taken then there would be  
 17 a formal record of it, and that I think was the key  
 18 point about this.

19 **Q.** Moving on to another part of the system, Public Health  
 20 England. You say in your statement that, because you  
 21 were asked to comment on the effectiveness of Public  
 22 Health England, that it did play to its considerable  
 23 scientific strengths in January and February, and  
 24 of course we remind ourselves that it was in January  
 25 that it created, at great pace, a PCR diagnostic test

40

1 for SARS-CoV-2, but that operationally it struggled  
2 thereafter to scale up the system of testing based upon  
3 the diagnostic test that it had invented; is that a fair  
4 summary?

5 **A.** That is a fair summary.

6 **Q.** There has in fact been a great deal of evidence before  
7 this Inquiry that there was a wholesale absence of  
8 a sophisticated scaled-up test, trace and isolate system  
9 in the United Kingdom at the beginning of 2020. You  
10 must have reflected long and hard on this issue. To  
11 what do you ascribe that absence?

12 **A.** I think that in a sense there's two levels of it. The  
13 countries which were best able to scale up, particularly  
14 using their public system, and I'm going to use  
15 South Korea as a proxy for that but there were others,  
16 had had very significant investment in public health  
17 infrastructure. In the case of South Korea, and  
18 I discussed this with colleagues from South Korea, it  
19 was after they had a bad -- a bad experience with MERS,  
20 and they thought they wanted to beef things up, and they  
21 did. And in the case of Germany, which took a slightly  
22 different approach, they used their very strong  
23 industrial base to be able to do that.

24 Absent either public investment over some period of  
25 time, you can't just switch this on at short notice, or

41

1 splitting off the public -- the health protection system  
2 from the rest of it, and, you know, I actually think the  
3 UKHSA system that's been created is a very good one, but  
4 this wasn't a situation where I was sort of sitting down  
5 in meetings and saying "Shall we lead to this change?"  
6 That was not part of what I was doing. And to be fair,  
7 I don't think it was necessarily a good reason why  
8 I would have been, because that was a structural  
9 question not really a clinical or a public health one in  
10 the ordinary sense.

11 **Q.** All right.

12 Can we now look, please, at SAGE, of course the  
13 Scientific Advisory Group for Emergencies, which you  
14 co-chaired.

15 You say, again rather pithily, in your statement  
16 that as co-chair of SAGE you're likely to be biased in  
17 its favour and that it's not obvious to you what  
18 an alternative better mechanism for the provision of  
19 scientific advice would be.

20 Were you aware of how other countries had set up  
21 their scientific advisory systems?

22 **A.** Yes, so because I'd been a Chief Scientific Adviser in  
23 government during several emergencies of different  
24 types, including being Government Chief Scientific  
25 Adviser for a short while on an interim basis, I'm --

43

1 an industrial base well designed for it. It was much  
2 more difficult.

3 There were a number of other reasons, and in  
4 a sense, I think, this is probably not the moment to go  
5 into them in great depth, but those were major barriers  
6 to it. I think there were also some issues about how --  
7 the interrelationship with the NHS laboratory system but  
8 I'm not really the person to answer questions on that.

9 **Q.** We've heard some evidence about the multitude of small  
10 laboratories which were perhaps institutionally  
11 incapable of being scaled up. You must have -- well, of  
12 course you were absolutely well aware of the absence of  
13 such a system in January 2020. Your understanding shows  
14 of course also, doesn't it, that you were well aware of  
15 how other countries were responding, of course you were  
16 on top of the detail of what other governments and  
17 countries were doing to respond to the pandemic?

18 **A.** Yes.

19 **Q.** Was the CMO consulted during the course of the pandemic  
20 on the decision to disband Public Health England?

21 **A.** I don't recall being consulted either formally or  
22 informally, I think it was sort of told that this was  
23 going to happen. My view was my colleagues from Public  
24 Health England did this extraordinarily professionally.  
25 I think there were arguments either way in terms of

42

1 was well aware of systems around the world going into  
2 the pandemic. And we've also -- Sir Patrick and I have  
3 had the privilege of talking to a lot of our colleagues  
4 from other nations about their systems from around the  
5 world. And there are many good systems. So the fact  
6 that we have the SAGE system was not something where we  
7 were doing it in ignorance of all alternatives. In  
8 general, and I think most people certainly in Europe  
9 would agree with this, the UK system of integration of  
10 science into government, in my view, still is short of  
11 where it should be, arguably by some distance, but in  
12 fact it is better than a large number of our neighbours.  
13 We do at least have a network of Chief Scientific  
14 Advisers, we do have the SAGE mechanism, we do have  
15 a very empowered and rightly empowered Government Chief  
16 Scientific Adviser.

17 So I think the SAGE system had some pluses and  
18 minuses but, as I say, I couldn't see another system  
19 internationally where you looked at that and said "If  
20 only we'd had that, we'd have been in much better  
21 shape".

22 **Q.** Just looking in a more narrow way at some of the  
23 particular aspects surrounding how SAGE worked, a number  
24 of witnesses have noted the tension that you identify in  
25 your statement between having a group that's small

44

1 enough to allow significant, proper expert debate and  
2 having a body that's large enough to be more  
3 representative but so large that it acts contrary to the  
4 ability to have a proper focused debate.

5 Do you assess that that balance was correctly drawn  
6 in the case of SAGE? Was its membership sufficiently  
7 diverse in terms of comprising not just epidemiologists  
8 and modellers and behavioural scientists, but members of  
9 other disciplines?

10 **A.** I think in the very first meetings of SAGE, I think it  
11 was too small, and I think it was recognised as that,  
12 and Sir Patrick and GO-Science did a lot of work to deal  
13 with that. Arguably -- at other bits of the pandemic it  
14 actually arguably got too large. There was a very wide  
15 spread of outstanding scientists, but it was less easy  
16 for people to challenge one another. So there is  
17 undoubtedly a sort of point between those which is the  
18 most effective one.

19 It's important also to recognise that SAGE is not  
20 a fixed body, even in a single emergency. So people  
21 come on to it and go off it depending on what the set of  
22 problems are that are being considered. So the only  
23 person who's actually fixed on SAGE is the Government  
24 Chief Scientific Adviser, Sir Patrick. All others --  
25 and obviously now Dame Angela, again who you will be

45

1 biomedical specialists dealing with issues such as  
2 modelling and epidemiology and so on?

3 **A.** Well, I think -- I think probably there are -- I mean,  
4 in a sense, you can make a case for almost infinite  
5 numbers of scientists -- sciences perfectly reasonably.  
6 I think that in the case of, for example, PPE, all the  
7 various kind of things that are needed to do in terms of  
8 infection control, that wasn't actually dealt with by  
9 SAGE, that was dealt with completely separately on a  
10 four nations basis, so the sciences that were dealing  
11 with that were a different -- it was done by a different  
12 strand, just as, for example, the deployment of vaccines  
13 was done via the JCVI mechanism not through SAGE.

14 So it's important to understand that even for  
15 science advice the only bits of science advice that  
16 really SAGE was supposed to and did have as its central  
17 actions were things that were advice to ministers on the  
18 more general areas, and there were large numbers of  
19 other scientific bodies, formal and informal, feeding  
20 into other bits of advice, including into government,  
21 but also to the medical profession and indeed to the  
22 general public. So I don't think SAGE should be seen as  
23 the only vehicle, it was the vehicle for -- formally  
24 it's the vehicle for getting science into COBR; in  
25 reality it had a wider remit than that, but it was

47

1 speaking to I think later during the week -- all others  
2 come or go as needed for the particular needs at that  
3 point in time.

4 **Q.** Can you recall whether or not those additional members  
5 of whom you have spoken came from other particular  
6 disciplines beyond epidemiology or behavioural science  
7 or modelling?

8 **A.** There was a -- quite a wide range of people came and  
9 went at different points, some of very -- all of them of  
10 very considerable eminence. I think it depends how far  
11 you're talking about going. So I don't think that we  
12 went into -- we certainly didn't go into, for example,  
13 economics at all --

14 **Q.** We'll come to that issue.

15 **A.** Yeah. So there were sort of boundaries for SAGE. Quite  
16 a lot of the hard work scientifically was in fact done  
17 in subcommittees, and by the middle of 2020 there were  
18 a -- quite a number of subcommittees that brought in  
19 experts in areas that were relevant to, for example,  
20 social care, to childcare and so on.

21 **Q.** May I then ask you directly, Professor: a number of  
22 witnesses have spoken of how there was a deficiency of  
23 experts dealing specifically with matters such as  
24 infection control or community mobilisation, the  
25 public-facing side of public health, as opposed to the

46

1 definitely bounded.

2 **Q.** But the reality, Professor, was that SAGE, which was  
3 of course the only -- was the sole or primary perhaps  
4 scientific advisory body for the government in the face  
5 of this pandemic, did include in its membership  
6 a significant number of modellers, biomedics,  
7 behavioural scientists. There wasn't, in fact,  
8 a significant number of experts who were dealing with  
9 the coalface of how the pandemic might impact upon the  
10 country and therefore aware of what measures might have  
11 to be taken and recommended in terms of infection  
12 control, community mobilisation, intensive care, beyond  
13 the attendance of Public Health England and the NHS, who  
14 were obviously attending the committee. Would you  
15 agree?

16 **A.** I mean, as I said previously, you could have enormous  
17 infinite membership, but SAGE's job was not to either  
18 promulgate policy -- promulgate practice, although I was  
19 very keen and Sir Patrick was very keen that it only  
20 considered things that were practical, so discussing  
21 theoretical things that were not practical is not a good  
22 use of time, but very many of the scientific inputs to  
23 government were not via SAGE. And I can't repeat that  
24 strongly enough. SAGE was only a route for certain  
25 sorts of questions to a particular bit of government, it

48

1 was not the only mechanism by which government was in  
 2 receipt of scientific advice, there were many other  
 3 mechanisms formal and informal.

4 **Q.** Would you accept that the government came to see SAGE as  
 5 the primary route of advice dealing with all scientific  
 6 aspects of the pandemic, and therefore would have been  
 7 looking naturally to SAGE to have reflected in its  
 8 advice appropriate elements of infection control and  
 9 community mobilisation, and so on and so forth, because  
 10 SAGE was advising on non-pharmaceutical interventions  
 11 and on social interventions --

12 **A.** Yes, I'm not actually disputing the basis on which the  
 13 question's being asked, but I think you also have to  
 14 accept that if you want challenge and if you want  
 15 timeliness -- and remembering particularly at the  
 16 beginning of SAGE we usually had a maximum of two or  
 17 three hours between SAGE beginning and COBRs actually  
 18 meeting -- you do have to have a limit to the number of  
 19 people who are around the table and you do have to make  
 20 judgements, many of which will not be ideal judgements.  
 21 And it's not that they're not the best -- they're not in  
 22 our view the best available, but other people could have  
 23 come to a different set of conclusions about who should  
 24 be round the table. What I think other people wouldn't  
 25 do is come to a different conclusion that this should be

49

1 maybe this is where some of the confusion comes from.  
 2 SAGE only really advised ministers, and only ministers  
 3 for particular sets of questions. Government is a much  
 4 larger body and was advised via multiple different  
 5 routes.

6 I think it's also -- we need to be a little bit  
 7 careful that a few of the people, when they say SAGE  
 8 didn't have all the expertise, what they actually mean  
 9 is SAGE didn't have their particular expertise, and  
 10 preferably them. That is a different thing again. But  
 11 I think many of the challenges were quite legitimate.  
 12 I got written to by specialist groups, as did  
 13 Sir Patrick, distinguished groups of distinguished  
 14 scientists, quite regularly saying "Why are we not  
 15 represented better on SAGE?" And they were all  
 16 legitimate questions. So I'm not disputing this, I'm  
 17 simply saying you have to make a judgement at some point  
 18 but you do have to have a group which is not unwieldy.

19 **Q.** I don't wish to spend too much longer on this point,  
 20 Professor. I think some of those witnesses may balk at  
 21 the proposition that they were only advocating a wider  
 22 membership in order to reflect their own sectarian  
 23 position. But --

24 **A.** No, that's not what I was trying -- saying. I think  
 25 they genuinely would feel that their expertise was one

51

1 infinitely larger. I think that would -- I think  
 2 whoever was chairing SAGE would say there has to be  
 3 a manageable limit where people can actually challenge  
 4 one another rather than simply everyone goes round and  
 5 says their piece. Because if that's the case you might  
 6 as well not have SAGE at all. It's got to be seen as,  
 7 you know, a discussive and challenging environment not  
 8 simply a representative body of people reading out "This  
 9 is my script for today".

10 **Q.** Professor, the question wasn't inviting a view as to  
 11 whether there should be infinite membership or a hugely  
 12 expanded membership. It addressed the balance between  
 13 members of the research and teaching institutes, the  
 14 biomedics, the modellers, and public health  
 15 practitioners. Given that, as is obvious, SAGE was  
 16 formed and constituted itself, certainly in the eyes of  
 17 the government, as the primary form of scientific advice  
 18 to help it through the pandemic, would you agree that  
 19 that balance wasn't correctly struck?

20 **A.** I agree that other people might have struck the balance  
 21 differently, which is a different point completely, and  
 22 were they the Chief Medical Officer they could have come  
 23 to a different conclusion, but Sir Patrick and I took  
 24 the view that given the questions ministers were  
 25 asking -- I think I'd like to differentiate here, and

50

1 the country would have benefitted from. I'm not in any  
 2 sense disputing that. But I'm just saying that it  
 3 wasn't often virology wrote to say "Can't we have more  
 4 anthropology?" Or anthropology wrote to say "Can't we  
 5 have more public health?" It tended to be groups  
 6 saying, "Our group is not sufficiently represented".  
 7 Perfectly legitimately.

8 **Q.** And equally legitimate the argument that there should  
 9 have been more public health practitioners, more experts  
 10 with infection control, and so on and so forth?

11 **A.** And legitimate --

12 **Q.** As you say, a judgement call.

13 **A.** Yes.

14 **Q.** In hindsight, it's no doubt a proposition with which you  
 15 would agree?

16 **A.** That the --

17 **Q.** There should have been a greater --

18 **A.** So I --

19 **Q.** -- focus on that sort of discipline?

20 **A.** Well, in terms of the advice that I -- you have to  
 21 remember that I also had the benefit of huge numbers of  
 22 people giving me advice, and not through SAGE. So for  
 23 example I met regularly, very regularly, with the  
 24 directors of public health across the entire country,  
 25 an extraordinarily able and dedicated and very

52

1 experienced group. They gave me public health advice  
2 from all parts of the country, not through the SAGE  
3 mechanism. And these kind of mechanisms were replicated  
4 for Sir Patrick in other areas and so on.

5 So I think it is in -- you know, I just think we  
6 should be a bit cautious of implying that SAGE was the  
7 sole mechanism by which science entered government; it  
8 was one route for one set of issues. And I think that  
9 is where some of the misunderstandings sometimes arise  
10 from.

11 **Q.** In your statement you make the point that legitimate  
12 outlier opinions often tended to dominate media  
13 discussions but the job of SAGE was to provide a central  
14 view of current science. Central in whose view?

15 **A.** Well, that is part of the judgement of these. So what  
16 we wanted to do with SAGE, and this is true for all  
17 SAGEs, not just true for this, is, as best we could,  
18 say: at this point in time, at this level of knowledge  
19 of this pandemic, as it happened -- in this particular  
20 case -- which of course developed very substantially  
21 over the first 18 months of the pandemic -- this is  
22 where we think the mid-point of national and indeed  
23 international science is.

24 So it wasn't the job of SAGE to advocate for one  
25 position or another, it was the job of SAGE to sense the

53

1 a failure of imagination?

2 **A.** Well, I think that ... so within SAGE, certainly I was  
3 one of the people who was most concern -- most concerned  
4 that we captured the reality of previous pandemics. So  
5 let's start off with that. And, for example, I was  
6 throughout, and I think this has been pointed out by  
7 some of the other witnesses, concerned about the fact  
8 that there would be a surge in winter, irrespective of  
9 where the first wave occurred, and that was partly for  
10 logical reasons but partly because if you look back over  
11 the last -- certainly over the three significant flu  
12 pandemics, for example, in the 20th century, starting  
13 with the 1918/19 one, the first wave was actually fairly  
14 moderate and the winter surge that followed it was -- in  
15 fact killed a lot more people than the first wave. That  
16 was a really critical, in my view, fact. That wasn't  
17 picked up in the modelling as that wasn't the reason --  
18 you know, it wasn't that the modelling couldn't pick  
19 that up, but that wasn't -- didn't -- wasn't derived  
20 from modelling, that was derived from, in a sense,  
21 historical experience. So there's a lot of things that  
22 we could usefully pick up from previous pandemics.

23 Secondly, within previous pandemics, a large number  
24 of NPIs had been used, and we were aware of them and  
25 modelled them, including for example --

55

1 mid-point and say to ministers: at this point in time  
2 here's the mid-point, and also at this point in time  
3 here's the spread. Which of course was, in some areas,  
4 quite narrow, there was some areas where there was  
5 basically pretty universal agreement, and then there  
6 were quite a lot of areas where there was quite a wide  
7 spread, and it was appropriate and necessary that that  
8 was to the best of our ability reflected in the way we  
9 described it to ministers.

10 **Q.** One last question on this topic, if I may. Elsewhere in  
11 your statement, in the context of describing how  
12 difficult it was to contemplate in January and February  
13 the notion that there might in due course have to be  
14 a full lockdown, a mandatory stay-at-home order,  
15 effectively suppressing day-to-day life and closing all  
16 high-risk -- well, indeed, every major economic and  
17 social activity -- and you say this, that the absence of  
18 contemplation of that notion, of that possibility, might  
19 be "considered a failure of imagination by a group of  
20 scientists who understood the nature of epidemics and  
21 their history".

22 If anybody was going to understand the lessons to be  
23 learnt from past pandemics, and the necessary  
24 epidemiological lessons, it was, of course, surely the  
25 members of SAGE. What did you mean by that reference to

54

1 **Q.** Just pause there. Do you mean -- is that a reference to  
2 quarantines and --

3 **A.** Yeah, so it would include --

4 **Q.** -- isolation -- self-isolation and the like?

5 **A.** Exactly, quarantines, self-isolation, school closures,  
6 stopping high-contact professions. These are things  
7 which have been done over decades or centuries, so these  
8 were mechanisms that were well known.

9 The idea of essentially, by law, locking down all of  
10 society is not something which had previously been used,  
11 and you could argue -- and I think it is reasonable to  
12 argue -- that that's something we should have cottoned  
13 on to at an earlier stage.

14 In reality, my view is that the band of situations  
15 where that would be relevant is in fact relatively  
16 narrow. So if a pandemic was much milder, like the  
17 swine flu pandemic, then it would be seen quite  
18 reasonably as disproportionate. And if the R was, let  
19 us say, 12, rather than 3, then it would probably not be  
20 effective because there wouldn't be -- the force of  
21 transmission would be too great. So --

22 **Q.** I'll pause you there, please, Professor. We will be  
23 coming back, of course, to the epidemiological  
24 justification for lockdowns in a later part of your  
25 evidence. But just on this point of principle, if there

56

1 was a failure to cotton on to the notion or the  
 2 possibility of a mandatory stay-at-home order, does it  
 3 not necessarily follow that the government wasn't made  
 4 aware in good time of that possibility, that the  
 5 government wasn't advised in good enough time that this  
 6 was an option, and had SAGE been alert, perhaps  
 7 imaginatively, to this being a possible intervention,  
 8 consideration would have been given to that possibility  
 9 at an earlier and more appropriate stage?  
 10 **A.** I think what you see with SAGE, and maybe we'll come on  
 11 to it later, because there's quite a lot of layers of  
 12 technical points behind it, is that what SAGE was  
 13 clearly advising by the time we get to the middle of  
 14 March was that if ministers intended to prevent the NHS  
 15 from being overwhelmed, which was their -- one of their  
 16 principal drivers, they have many others, and reduce the  
 17 loss of life, they were going to have to significantly  
 18 reduce interactions between households and individuals.  
 19 And there are a variety of ways by which this could be  
 20 done. The question about whether it was done by law  
 21 actually is not a scientific question, it is a political  
 22 and, to some extent, legal question, not a scientific  
 23 one.

24 Now, when you say: were they aware of this  
 25 possibility? Well, it clearly had been used by China,

57

1 really what we were talking about, and I think the  
 2 phrase I used was that China had thrown the kitchen sink  
 3 at this and we needed to work out what was the way we  
 4 could achieve it with the least damage. I'm  
 5 paraphrasing, but you'll find the email there. Which  
 6 really, essentially -- it's not just my view, I think  
 7 that would have been a shared view around -- around SAGE  
 8 members.

9 You know, you can argue that we should have gone for  
 10 a maximalist model, if -- I think -- I don't think --  
 11 I don't want to sort of put anyone into a difficult  
 12 position, but were we to have been instructed by  
 13 ministers, "Can we do -- you know, what would happen if  
 14 we did a Chinese approach", that would be something  
 15 which SAGE undoubtedly would have looked at.

16 The question actually I think is: was it -- would it  
 17 have been appropriate for a group of scientists to come  
 18 up with what I consider is quite a radical proposition  
 19 to put to government. And I think that's a debatable  
 20 question actually. But, you know, we were already very  
 21 clearly making the case that we would need to  
 22 significantly reduce interaction between households and  
 23 a lockdown is one of the ways in which you can do that.

24 **LADY HALLETT:** We're going to leave it there, I think --

25 **MR KEITH:** We are.

59

1 so there was very recent -- it was all over the  
 2 newspapers, politicians were aware that that possibility  
 3 existed, and indeed it started to be used across Europe,  
 4 although not that far in advance, actually, of where we  
 5 did in the UK by a matter of really days in general.

6 So the principle that this was actually available as  
 7 a policy response didn't require SAGE to make that  
 8 point. That was just simply a minor kind of, in  
 9 a sense, commentary on what you've just said. But did  
 10 SAGE look in detail at a mandatory lockdown as part of  
 11 what they were thinking about in early and mid-February?  
 12 I think the short answer is no, and that's pretty clear  
 13 from the minutes. We did, on the other hand, look at  
 14 ways of keeping households separated, including advice  
 15 to stay at home and so on.

16 **Q.** As the primary provider of scientific advice on these  
 17 issues to government, surely it was incumbent on SAGE to  
 18 put forward -- not the Chinese, but SAGE -- as  
 19 a possible policy response the notion of a lockdown and  
 20 to do so in good time; would you agree with that general  
 21 proposition?

22 **A.** I think you have in your, as you said, many documents  
 23 from me, one where I make the point that we need to find  
 24 a way of getting R below 1, which in principle is the  
 25 key thing for getting a wave to turn over, which is

58

1 **LADY HALLETT:** -- otherwise I'll get protests.  
 2 I shall return at 11.40.

3 **(11.23 am)**

4 **(A short break)**

5 **(11.40 am)**

6 **LADY HALLETT:** Mr Keith.

7 **MR KEITH:** Professor, still on the subject of SAGE, it's  
 8 very apparent from the evidence that the SAGE committee  
 9 produced minutes, which you of course approved, in a way  
 10 that tried to reflect a consensus position, and whilst  
 11 some of the minutes do provide levels of certainty  
 12 rating, for example in relation to subject X there's  
 13 a high confidence or subject Y there's a low confidence,  
 14 would you agree that in general terms dissenting  
 15 opinions, changes of opinion or differences of opinion,  
 16 were not, as a general rule, reflected in the minutes?

17 **A.** Yes. I think I'll make one very minor gloss on what  
 18 you've said, I basically agree with the position, which  
 19 is that in my view this was a central view not  
 20 a consensus view. So -- and that difference I think is  
 21 important, and it comes to your second bit, which is,  
 22 there were, in some discussions -- in many discussions  
 23 everyone agreed at the end, and on a few occasions we  
 24 even said that, but in many discussions there would  
 25 still be people at the end of the discussion who would

60

1 say, "Look, I'm not sure I completely agree", but would  
2 agree that the central view of the meeting was X. So  
3 that is an important point.

4 I think we were much -- we got better but we should  
5 have from the beginning had the discipline more  
6 thoroughly of saying high confidence and low confidence.

7 I think that was a sensible way to do it. In part  
8 because of lack of time and in part -- to actually do  
9 this properly, and in part actually because of people  
10 actually reading it, recording all the opinions, which  
11 you could do under certain other circumstances, didn't  
12 really -- wasn't really a realistic or probably, in my  
13 view, sensible proposition. But we did try -- and this  
14 I think is really critical -- Sir Patrick and I tried to  
15 reflect the range of views when we were briefing  
16 ministers to the best of our ability. So we tried to  
17 capture the fact that there were outlier opinions --  
18 I don't mean that in a negative sense, I mean that in  
19 a positive sense -- around the central view.

20 **Q.** But that process was, of course, often not recorded,  
21 because you were communicating your views in verbal  
22 briefings, and the government, as a general rule, didn't  
23 therefore fully understand or appreciate the full range  
24 of dissenting opinion.

25 Obviously one understands the point you make that if  
61

1 dominates.

2 But there was a different mechanism, and I think  
3 people have underestimated this in some of their  
4 commentary on this, which is it was available to and  
5 used by very large numbers of government departments to  
6 have observers at this who listened to the debate  
7 directly. For example there was almost invariably  
8 someone from Number 10, there was certainly almost  
9 invariably someone from Cabinet Office, there was almost  
10 invariably someone from the Department of Health. So  
11 they were able -- and indeed the Treasury for large  
12 parts of it -- they were able to reflect, as they saw  
13 fit, and certainly if they had felt that the minutes  
14 were actually not what they had heard, it was entirely  
15 open to them to say, "I know this is what the minutes  
16 say but I was at the meeting and that isn't what  
17 I heard". And then what I would expect to happen were  
18 that to occur was that the relevant minister, if they  
19 thought this was important, would summon Sir Patrick or  
20 me and say, "I've got two versions of this, the minutes  
21 and what my own woman/man has said, what do you say?"  
22 That never happened but that -- certainly that mechanism  
23 could have occurred if people had wished to. Because  
24 they all -- the many, many departments and the devolved  
25 nations had observers.  
63

1 there had been long detailed minutes, perhaps government  
2 ministers and officials wouldn't have read them with the  
3 same degree of detail that they would have read  
4 a shorter document, and it's important to get the key  
5 points out. But in the sphere of these extremely  
6 difficult issues and the very difficult judgement calls  
7 that were having to be made, might it not have been  
8 better for government to have a better understanding of  
9 the range of scientific opinion, of the dissenting  
10 opinions, of the lone voices calling for a particular  
11 option but which were not reflected in the consensus  
12 opinion?

13 **A.** Leaving aside the occasions when lone voices chose to  
14 share them with the general public via the media, but  
15 that's a -- there were two mechanisms by which people  
16 could get the spread of opinion. One was Sir Patrick or  
17 me briefing ministers. And that -- you know, many of  
18 the things in SAGE were for specific ministerial  
19 meetings, and one or both of us would give a briefing on  
20 the spread of opinion, and if either of us or the other  
21 had not fairly reflected it, we would then chip in. So  
22 there was -- in a sense, the fact we were both there was  
23 helpful, just as, for example, the fact that co-chairs  
24 of some of the key committees were on SAGE was helpful,  
25 so you avoid a situation where one person's view  
62

1 **LADY HALLETT:** Sir Chris, Mr Keith's question was premised  
2 on the basis that ministers would read the minutes. Was  
3 it your impression that they read the minutes or  
4 somebody read the minutes and told them what they were,  
5 or was it your impression that ministers relied on your  
6 verbal advice?

7 **A.** I think that in most cases the ministers were more  
8 reliant on the verbal, but that depended on the  
9 minister. Some ministers are more, in a sense,  
10 paper-based in the way that they absorb information,  
11 others are more verbally-based, and, as always, our job  
12 was to fit our communication style around that.

13 But the minute was there also for -- you know, we  
14 weren't in every meeting with the ministers, so the  
15 minute was also there for other officials to have as  
16 an anchor point as to what had SAGE actually said as  
17 their central view. So, you know, that was part of what  
18 they're there for, and of course they are also a record,  
19 and in due course, and I was very pleased by this,  
20 a public record so that others could comment if they  
21 wish.

22 **LADY HALLETT:** Thank you.

23 **MR KEITH:** But the dissenting views, such as they were, were  
24 not recorded, generally speaking, in the SAGE minutes,  
25 and of course only those persons who were in the room  
64



1 with you and Sir Patrick would have been privy to the  
2 verbal briefing, which you've described was a useful  
3 conduit for perhaps giving a wider range of the  
4 reflection of SAGE views.

5 **A.** No, that is correct.

6 **Q.** All right.

7 **A.** And I fully accept that this is a potential weakness.

8 All I'm saying is that there were -- there's more than  
9 one mitigation: there was the verbal, with two different  
10 people in the room to check the other wasn't  
11 misunderstanding, and there were observers.

12 So I think -- you know, you can come up with better  
13 solutions to this, but something where the minutes run  
14 to 20, 30 pages would move from a situation where a few  
15 people read the minutes to nobody read the minutes, in  
16 reality in these kind of situations.

17 **Q.** These things are always a judgement call, are they not,  
18 Professor?

19 **A.** Yep. They are.

20 **Q.** There are plainly degrees by which they can be altered  
21 without throwing the baby out with the bathwater?

22 **A.** It would have been possible, in my view, in retrospect,  
23 and there is an argument for this, to have had two sets  
24 of minutes, an immediate set that accurately reflected  
25 the central view and a longer set that people

65

1 needed", so that was why members of the Cabinet Office  
2 and Number 10 began attending SAGE, because the minutes  
3 didn't adequately reflect the full range of dissenting  
4 opinion?

5 **A.** And there was a mechanism for them to pick that up.

6 I think my reading of Mr Cummings' evidence on this,  
7 which I found very interesting, was he actually felt it  
8 might have been helpful for some ministers themselves to  
9 have come and listened to the debate in SAGE. I think  
10 that of course would have been open to them. When  
11 Mr Cummings himself -- when it was known that  
12 Mr Cummings himself sometimes came to SAGE, this caused  
13 quite a row, actually. I wasn't the person who made the  
14 decision to make that possible, but I thought it was  
15 perfectly sensible that a -- one of the -- you know, one  
16 of the most senior advisers to the Prime Minister, if he  
17 or she wished to, could listen in on SAGE, struck me as  
18 a sensible thing to do. What wouldn't be sensible is if  
19 they then tried to --

20 **Q.** Contribute?

21 **A.** Well, they could ask questions, potentially, but tried  
22 to bias the answer that was given, that would be  
23 extremely unacceptable. But that wasn't the situation,  
24 in my view, that happened.

25 **Q.** Another aspect of the SAGE process that's been reflected

67

1 subsequently did.

2 But the one slight caution I would have on that is  
3 my experience of minutes in difficult areas is that  
4 everybody feels their own view has been misrepresented  
5 almost whatever you do, and clearing minutes is a slow  
6 and quite laborious process because you have to be  
7 accurate, and if you make them longer it therefore  
8 becomes a longer process. So I think there are  
9 arguments either way, but I think that would be the only  
10 thing I can see would be easy to do that would meet that  
11 need.

12 **Q.** You've mentioned by way of mitigation, Professor, that  
13 there were other attendees at SAGE, but of course those  
14 PHE and NHS and other government officials who were  
15 attending SAGE were not necessarily present in your  
16 verbal briefings to the Prime Minister?

17 **A.** Some were, some weren't, so --

18 **Q.** But not always?

19 **A.** Of course. To have had that would have meant a very  
20 large room.

21 **Q.** Indeed. And Mr Cummings has given evidence that one of  
22 the reasons why he asked that there be attendees from  
23 Number 10 and Cabinet Office at SAGE was because the  
24 SAGE minutes did not, in his opinion at any rate,  
25 capture anything like, to use his words "what we

66

1 in the evidence before the Inquiry is that because of  
2 the commission basis upon which requests to SAGE were  
3 made for particular advice, because of the way in which  
4 that system operated, there was an inadequate  
5 opportunity for SAGE to understand what decision-makers  
6 and ministers were driving at, on the basis that if they  
7 had been able to speak to them directly, if they'd  
8 engaged with them, they would understand better what the  
9 ministers' needs were and what it was that they wanted  
10 from SAGE. Can you think of any way in which the system  
11 might have been recalibrated to allow that, that one way  
12 street to be opened up or reversed?

13 **A.** Well, I'll give you a narrow answer but you may want me  
14 to go wider. The narrow answer was when we were certain  
15 what ministers wanted we did our best to reflect that to  
16 SAGE participants so that they could reflect that in  
17 their pre-work and in the meetings. Sometimes, and this  
18 is not a criticism, it's simply a statement of fact --

19 **Q.** Can I pause you there. Do you mean you would speak to  
20 members of SAGE individually outwith the formal meetings  
21 and outwith the minute process --

22 **A.** Yes.

23 **Q.** -- and say "This is what government has in mind"?

24 **A.** What we would do was, where we were clear that we knew  
25 what government wanted, we or others would reflect that.

68

1 The problem here is iterative, and this is where  
 2 I think many of the problems potentially can come from,  
 3 is SAGE -- you know, it wasn't helpful to say to SAGE,  
 4 "There is a considerable debate going on in Government  
 5 and lots of people have got different opinions". That  
 6 wasn't actually a terribly useful thing to say. It was  
 7 helpful if we could say, "Well, government's strategic  
 8 aim is X". But the danger was SAGE was not in  
 9 a position to say what government's strategic position  
 10 was until the government itself had a strategic  
 11 position, and sometimes the government was waiting for  
 12 SAGE to make a strategic position. And that potential  
 13 circularity I think is something which I think bears  
 14 some thought.

15 **Q.** Those communications where you relayed government  
 16 thinking back to individual members of SAGE were not  
 17 necessarily recorded because they were perhaps given in  
 18 verbal conversation, and secondly it's apparent that --  
 19 from the minutes, because there are no references to  
 20 SAGE's understanding of what the government is looking  
 21 for or what it wants, to what those needs are. So it  
 22 does rather appear as if the formal process for  
 23 recording the range of debate didn't adequately reflect  
 24 what it was the government needed, and in its hour of  
 25 crisis it needed the assistance of SAGE.

69

1 place upon you and Sir Patrick too great a burden? How  
 2 could you possibly be expected, after this multitude of  
 3 meetings, to relay the ebb and flow of debate on these  
 4 extraordinarily difficult issues in, bluntly, side  
 5 meetings with the government?

6 **A.** Well, firstly, I mean, we weren't trying to relay the  
 7 whole ebb and flow but we were trying to relay the range  
 8 of opinion, slightly different.

9 I -- the alternatives would actually have been even  
 10 more burdensome, which would have been to have to write  
 11 up the whole thing, get it agreed by everybody and then  
 12 send it in. In a fast-moving pandemic, the principal  
 13 aim is to be accurate and to be fast. I think that the  
 14 big advantage we had -- and, you know, I would really  
 15 like to pay tribute to Sir Patrick because I thought he  
 16 was absolutely extraordinary on this -- was having both  
 17 of us meant that if one of us had inadvertently relayed  
 18 information in a way that was misunderstood, and you  
 19 could sometimes see this happening in both directions,  
 20 there was another person to say, "You know, I agree with  
 21 Sir Patrick", in my case, or he with me, "however,  
 22 I would just like to clarify the following points". So  
 23 I think that mechanism of having two people who are  
 24 relatively wide-ranging scientists able to check one  
 25 another's recollection and onward relay, I think did

71

1 **A.** I think that -- I mean, I think there are probably two  
 2 answers to that. I mean, I think, again, it's a fair  
 3 point.

4 The first is that SAGE was often commissioned  
 5 directly from Cabinet Office, so what you have is  
 6 essentially you have what Cabinet Office wanted of SAGE,  
 7 and Cabinet Office is the clearing house for all of  
 8 government, including, importantly, Number 10. So that  
 9 was one vehicle. But it would have been, I think,  
 10 incorrect, at several levels actually, for the SAGE  
 11 minutes, which were a scientific record, also to have  
 12 been a record of my or Sir Patrick's view about what  
 13 government's current policy positions were. That's  
 14 a completely different thing, and I don't think that  
 15 would have been an appropriate thing actually for us to  
 16 have recorded in the SAGE minutes.

17 **Q.** I've not suggested that.

18 **A.** No, no, I know, I'm just sort of explaining where  
 19 I think the balance potentially lies.

20 **Q.** Ultimately, you and Sir Patrick were required to relay  
 21 verbally, in an undocumented -- largely undocumented,  
 22 process, your own recollections of the ebb and flow of  
 23 the debate within SAGE. You were required verbally to  
 24 reflect back to SAGE, unrecorded, the response of  
 25 government and what its thinking was. Did that not

70

1 provide some degree of, in a sense, error prevention in  
 2 the transmission of the information.

3 I fully accept that in a less frantically paced  
 4 system, it would be -- there are better ways you could  
 5 do it, and of course they would be much more convenient  
 6 to a subsequent Inquiry, because then it's all written  
 7 down, but that of course wasn't the principal aim at  
 8 that time.

9 **Q.** One final aspect of SAGE. You've repeatedly referred to  
 10 the fact that of course SAGE was a scientific advisory  
 11 body, it produced the scientific advice.

12 **A.** Yes.

13 **Q.** There was no analogue and there could not properly have  
 14 been within SAGE an analogue for economic and societal  
 15 considerations. That was a matter, and it's a political  
 16 decision, for the government. You must have oft  
 17 reflected upon the fact that SAGE would be giving advice  
 18 on the scientific issues, the advice would be relayed  
 19 through you and Sir Patrick to government, and then on  
 20 occasion that advice would be trumped -- I don't mean  
 21 that in a pejorative sense, but the advice would be made  
 22 subject to intervening advice, if you like, on the  
 23 economic and societal issues in your absence and in the  
 24 absence of SAGE. Did you come to believe that there  
 25 ought to have been an analogous recorded transparent

72

1 body that could do the same for economic and societal  
2 issues as SAGE was doing for the scientific issues?  
3 **A.** I certainly think that there is a strong case for having  
4 the technical economic advice -- remembering of course  
5 the economic advice is itself quite often quite  
6 market-sensitive, so that's a slight caveat -- made  
7 transparently available to people and, where it's  
8 possible, for external experts to challenge it. There  
9 is a case to be made.

10 My suspicion is that this is one that the Treasury  
11 would -- have not yet warmed to and are fairly unlikely  
12 to warm to, but that's a -- that's for a large number of  
13 legitimate reasons. But, you know, what you say is  
14 correct. It would however -- you know, the one bit of  
15 what you said I would just be a little bit more cautious  
16 of is the idea that I'd be worried that the science  
17 advice would be "trumped" by the economic advice. My  
18 view is political leaders should take both bits of  
19 advice and then they should balance them. That's  
20 not a -- in a sense that is their job, and in a sense  
21 not mine.

22 **Q.** I've referred to that expressly by virtue of my  
23 reference to the fact that that was a political decision  
24 for ministers.

25 **A.** Yes.

73

1 actual data was relatively easy to interpret. It was  
2 much harder earlier on. So that was the first thing.

3 Models also have a separate use, which is in testing  
4 out various scenarios and saying: if you do this, what's  
5 the likely effect? I think it's always important, and  
6 again modellers will also agree with this, this is  
7 a cliché of modelling, that all models are wrong but  
8 some models are useful. And the point about these  
9 models was they helped to explore and test some policy  
10 options. They were not predictions of the future. And  
11 I think this is where some of the problems arose: these  
12 were not meant to be predictions, they were not  
13 presented as predictions, but they were often  
14 interpreted as predictions.

15 **Q.** I'm going to come back to the public perception of  
16 models in a moment, but remaining focused, please,  
17 Professor, on this issue of the extent to which  
18 modelling was required to understand the basic data  
19 which would inform your advice to government as to what  
20 the state of the emergency was, how quickly the virus  
21 was emerging, and in relation to the spread of the  
22 virus, its transmission.

23 Modelling wasn't required, was it, to inform you of  
24 the infection hospitalisation rates, how many people who  
25 were infected would be hospitalised, how many people

75

1 **Q.** Modelling. Some witnesses have suggested that there was  
2 an over-reliance on epidemiological modelling within  
3 SAGE, particularly between January and March. It's  
4 notable, Professor, that when you gave advice yourself  
5 to the Prime Minister and ministers in early and  
6 mid-March about the likely numbers of deaths, on the  
7 impact on the NHS, and possible infection peaks, you  
8 used actual data and short-term forecasts, actual  
9 scenarios, as opposed to models.

10 Ultimately, and I appreciate this is a very wide  
11 question, was too much reliance or at least too much  
12 time spent on modelling in February of 2020 in -- and  
13 thereby damaging focus upon the actual data of infection  
14 hospitalisation rates, infection fatality rates, and the  
15 obvious emergence of the virus?

16 **A.** Well, I have and actually Sir Patrick has, and if I'm  
17 honest most sensible modellers have, a strong preference  
18 for actual data over model data where that is available.  
19 The problem we had -- and models have many uses. The  
20 problem we had early in the pandemic, in the first  
21 three months, was we were dealing with very sparse data  
22 and data that had to be integrated from lots of  
23 different areas, where the actual data didn't tell you  
24 a terribly clear story. As the numbers sadly ticked up,  
25 and there were many more cases in the UK, then the

74

1 would die of those who were infected, the infection  
2 fatality rate, or what the impact on the NHS was likely  
3 to be? Those judgements rested upon actual data or  
4 short-term scenario planning, just basic standard  
5 assessments of what was likely to happen.

6 **A.** When we had, from late March onwards, unfortunately  
7 a lot of people with Covid in the UK, a lot of people  
8 going to hospital, a lot of people dying, a bit later  
9 than that we had very good data flows that meant we  
10 could see where things were going. I completely agree  
11 with you that that was far preferable to rest on those  
12 as the principal reasons for making decisions,  
13 presenting data to ministers, presenting data to the  
14 general public. That wasn't the situation though we had  
15 in January, February and early March, remembering the  
16 numbers at that point were extremely small and in fact  
17 we were not picking up very large numbers of them. If  
18 you look at the decision-making, it had to be based on  
19 extrapolations of the true numbers, so, for example,  
20 early on, there was a very useful analysis done by  
21 Professor Ferguson saying that the numbers in China must  
22 be substantially greater than the numbers being reported  
23 based on his modelling about what must have happened if  
24 it had left China, if it had --

25 **Q.** I'm just going to pause you there, I'm so sorry.

76

1 That was not, however, a modelling exercise. He  
2 looked at the number of flights that were coming out of  
3 Wuhan, worked out for the number of people in hospital  
4 how many people therefore were likely to have been  
5 infected, and worked out the infection hospitalisation  
6 rate from that, it wasn't a modelling exercise --

7 **A.** That sounds like a model to me.

8 **Q.** All right. Well, then let me ask you this: it's obvious  
9 from the 28 January SAGE meeting, for example, that  
10 SPI-M were asked to advise and the modellers in SPI-M  
11 were asked to advise on the actions the United Kingdom  
12 could take to slow down the spread of the outbreak. Why  
13 was it thought necessary to ask modellers to be in the  
14 vanguard of that response, to give advice to SAGE about  
15 how in practice the government should respond?  
16 Modelling could never be a substitute for basic  
17 epidemiological analysis of death rates, hospitalisation  
18 rates and impact on health services.

19 **A.** I think you're probably using modelling in a much  
20 narrower sense than I would, so a lot of the things  
21 you've just talked about in my view do depend on models,  
22 so for example how you calculate a clinical fatality  
23 rate or a population levelled fatality rate is  
24 a modelled number, particularly early on when numbers  
25 are changing very rapidly. So I think modelling has

77

1 London School of Hygiene and Tropical Medicine reports  
2 telling you what the death rates and the hospitalisation  
3 rates were likely to be?

4 **A.** Well, I mean, firstly a lot of those data were coming  
5 from modelling groups, just to clarify on that point.  
6 It's also important to realise that there were huge  
7 strands of scientific work that were happening in  
8 parallel with the modelling work.

9 Now, the modelling work tends to get a lot of  
10 prominence, and one of the reasons it's lodged itself in  
11 the public mind is some of the prominent modelling  
12 groups were led by people who were very good at  
13 explaining it in the media and they tended to hear a lot  
14 more of that than they did from virologists or others,  
15 but actually alongside this was very large research and  
16 analytical effort across multiple domains and modelling  
17 was only one of those. It was an important one but it  
18 was not the only one.

19 **Q.** All right.

20 Two final points on modelling. Firstly, can you  
21 return, please, to the point you made earlier about the  
22 public appreciation of modelling. There is very plain  
23 evidence before the Inquiry that a quite inappropriate  
24 degree of alarmism was apportioned to some of the  
25 scenario forecasting modelling done by ICL and

79

1 some quite small and discrete uses, and these are laid  
2 out quite nicely in several of the witness statements  
3 you've already received so I'm not going to go into them  
4 in detail, so I think quite a lot of the relatively  
5 simple data are still model-derived. I think what  
6 you're talking about are scenario models, which actually  
7 test out -- but the point about this is they don't  
8 propose, they test various approaches and say: how will  
9 these -- if you did this or if you did that, what, in  
10 the view of the model -- with the big caveat I made that  
11 models are not predictions -- which are the ones that  
12 would have big impacts and which ones would not?

13 Now, you can try to do that without a model, but  
14 a model will give you a lot of information you otherwise  
15 would not have.

16 **Q.** So was this the position: that a great deal of time and  
17 energy and resource was spent in February on that  
18 sort of future modelling, that is to say trying to model  
19 what the various contingent outcomes would be of steps  
20 that might be taken by the government, what measures,  
21 what impact measures would have, but that of necessity  
22 relatively less time was spent focused on the actuality  
23 of the scenario faced by SAGE and the government, which  
24 was that there was emerging data from China and from the  
25 Diamond Princess episode and from the basic ICL and

78

1 Professor Ferguson, and also by the London School of  
2 Hygiene and Tropical Medicine. In general terms, was  
3 that alarmism and criticism justified in any way at all?

4 **A.** I think that -- I thought Sir Patrick did an excellent  
5 job of laying out his discomfort and my discomfort at  
6 trying to explain models in very short-form press  
7 briefings because they have to come, rightly, with large  
8 numbers of caveats, which the modellers themselves would  
9 agree, and what inevitably happened with models,  
10 unfortunately, was you can't actually argue with the  
11 number of people going into hospital and the number of  
12 people sadly dying, you can argue with the model. So  
13 they tended to become a way in which both sides of  
14 a polarised debate tended to have their debate, with  
15 some people saying "This is all made up, it's all  
16 exaggerated. Look, this is all modelling and the  
17 modelling is exaggerating", and other groups saying "The  
18 models show this is going to be absolutely terrible, why  
19 aren't we doing more?" And so on.

20 So the models tended to become the focus for the  
21 debates between people who had strong opposing views  
22 because they were more debatable, actually. Also  
23 because they weren't fully understood. And a large  
24 number of the people who were debating them in public  
25 were doing so -- essentially they had a position they

80

1 wanted to advance and they were going to use the model  
2 to advance that position almost whatever the model  
3 showed.

4 You know, and I think this demonstrates that trying  
5 to use modelling outputs in public discourse has to be  
6 done with care. It doesn't mean it shouldn't be done,  
7 but it has to be done with great care, whereas using  
8 actual data is much easier. Everyone can understand it,  
9 you can test whether it's true or not, but if it's true  
10 at least you can then interpret it. And that's why  
11 personally I far preferred and, if you see my  
12 presentations of data, I tried wherever possible only to  
13 use either existing data or data with very short-term  
14 forward projections because I think that's much more  
15 straightforward to explain.

16 **Q.** And in truth is that why when the change of strategy, as  
17 we've heard, and will debate in due course whether it  
18 was indeed a change in strategy, but what has been  
19 called the change in strategy occurred around about  
20 the 13th or 15 March, what drove that change of strategy  
21 was actual data about where we were on the  
22 epidemiological trajectory, actual data in relation to  
23 the number of cases and likely deaths, and actual data  
24 in relation to the impact on the NHS?

25 **A.** That is exactly right. So the problem we had was both  
81

1 a government-ordained legally-backed change in  
2 behaviour. What do you say to that? Did you think that  
3 the issue of voluntary or spontaneous changes in  
4 behaviour was correctly understood and put in its  
5 place -- in the correct place?

6 **A.** Well, in a sense, in the model, you can -- and I'm going  
7 to cause deep pain to my modelling colleagues in the way  
8 I'm going to describe this, but I'm going to do it in  
9 a sense for a general audience. The model can say, for  
10 example, what would happen if you reduced interactions  
11 between households by 75% or more. That's  
12 a straightforward -- in fact some of the models asked  
13 exactly that question. You can then make an assumption,  
14 which you can vary, as to how far you would get by  
15 simply saying, "Please everybody, stay at home", and how  
16 far you can get by adding on to that "And the government  
17 will insist". Those are perfectly possible to model.  
18 That's not actually particularly difficult to do. All  
19 you're doing is you're just saying, "What proportions do  
20 I assign to these?" And it could be that you get 100%  
21 adherence without any government action or it could be  
22 there's quite a big difference between the government  
23 insisting and people doing it voluntarily.

24 I think one of the problems that of course we had in  
25 March in particular, but also at other points in the  
83

1 where we thought we were in time and where we thought we  
2 were in terms of the force of transmission, and  
3 therefore the number of measures you would need to  
4 actually get on top of things changed quite  
5 significantly once actual data started to flow that was  
6 more reliable. And that is a -- that's kind of  
7 inevitable. Data trumps models every time. Everybody  
8 agrees with that. And any model is only as strong as  
9 the data on which it is based.

10 **Q.** Coming back to the criticisms that were made in the  
11 public sphere in relation to models, is the nub of it  
12 that models model numbers of deaths, in essence, that  
13 may occur in the event of, for example, a step is not  
14 taken or they may model a variety of mitigations that  
15 may or may not be put into place, but of course if those  
16 mitigations are put into place and the government does  
17 take steps, then the number of deaths estimated will not  
18 come to pass?

19 **A.** Correct.

20 **Q.** All right.

21 Finally on models, some evidence has been given to  
22 the Inquiry that the modelling that was relied upon by  
23 SAGE failed to give sufficient weight to spontaneous  
24 changes in behaviour on the part of the population as  
25 opposed to weighing up the likely consequences of  
82

1 pandemic, is there was no way of being confident really  
2 about what the relative contributions of those would be,  
3 and by the time you would be confident you would be  
4 several doubling times further along the path. So there  
5 wouldn't be time in a sense to look back and say, "Well,  
6 that's fine then, we probably don't need to take more  
7 radical steps".

8 Would it be helpful for me just to put a bit of  
9 background to this or shall we --

10 **Q.** I don't think so, but thank you, Professor. It would  
11 appear, and I hope I summarise your position fairly,  
12 that the question of the weight to be given to voluntary  
13 as opposed to compulsory changes in behaviour is  
14 extremely hard to estimate?

15 **A.** Correct.

16 **Q.** And an attempt was made repeatedly to try to estimate  
17 what weight should be given to that particular issue,  
18 but we'll never know?

19 **A.** I think in practice we won't, and we'd probably get  
20 different answers between different waves as well.

21 **Q.** And that rather reinforces the point you made earlier,  
22 doesn't it, about the care that needs to be applied in  
23 placing weight upon modelling outcomes, particularly of  
24 that more sophisticated type?

25 **A.** Yes.

1 Q. All right.

2 You refer in your statement to the fact that,  
3 disgracefully, abuse was directed from the public and  
4 some sections of the press and social media against  
5 yourself and the Government's Chief Scientific Adviser  
6 and members of SAGE, and I'm not going to ask you for  
7 your reaction to that, it's absolutely self-evident that  
8 that was a disgraceful thing to occur.

9 You must have thought, you must have wondered,  
10 though, during the course of this pandemic, to what  
11 extent yourself and your fellow scientists on SAGE  
12 would -- may, by virtue of your Herculean contribution,  
13 be laying yourself open to future legal liability?

14 A. Yes, I mean, I think I was not -- in my own position of  
15 being in a government employee I was much less  
16 concerned, but I've always been worried and I have been  
17 for some time that it is ambiguous, at best, where  
18 scientists who are either seconded in to something or  
19 not employed by government at all but are giving their  
20 time in various forms, formal or informal, to what  
21 extent are they automatically covered by some form of  
22 indemnity against frivolous or indeed actual civil  
23 claims. And I think that is a worry and I think it's  
24 one that should be solvable in my view.

25 Q. I now want to turn to look, please, at the

85

1 therefore it is legitimate, they are open to political  
2 debate. I think within that I had -- there's a bit  
3 where I completely thought that the debate was not  
4 illegitimate but healthy and there was a bit which  
5 I thought was less healthy.

6 Q. Yes.

7 A. The health -- would it be helpful --

8 Q. Yes, no, please.

9 A. The healthy bit of the debate was, I think it was quite  
10 right that -- in, for example, the balance between  
11 a public health intervention and essentially, for the  
12 sake of argument, freedom to do what people want -- is  
13 had openly, and within a democracy I think that's quite  
14 right. Where I thought it was not legitimate was for  
15 people essentially to change the facts to fit the  
16 political agenda that they came with. And there is no  
17 doubt that there are examples of that, where people  
18 essentially ignored facts, twisted facts, in my opinion,  
19 that were facts, they weren't model outputs or anything,  
20 they were facts of life, because they were inconvenient  
21 to the political position they took. That doesn't  
22 strike me as healthy in the environment of a very major  
23 national crisis. But the debate seems to me something  
24 quite rightly that should happen and ideally happen in  
25 the public domain and in Parliament.

87

1 decision-making structures, into which of course you  
2 contributed your advice and the advice of SAGE.

3 It is obvious that those momentous decisions to  
4 impose lockdowns, so stay-at-home orders backed by the  
5 force of law, and decisions in relation to  
6 circuit breakers and tiers and rules of six, whatever  
7 they may have amounted to, were decisions for  
8 government, they were not decisions for SAGE or for the  
9 CMO or the GCSA.

10 A. Yes.

11 Q. Does it follow that they are all, ultimately, political  
12 decisions?

13 A. I think they are all very clearly political decisions  
14 because they had very profound implications for society  
15 and I think they are clearly ones that only an elected  
16 politician, within a democratic system at least, can  
17 reasonably finally make. We can give advice of  
18 a technical nature as to what would happen in this  
19 situation or that one, but ultimately these are  
20 political decisions.

21 Q. Is that why, do you think, that these matters have  
22 become of course so divisive, why this whole debate has  
23 become so politicised and why so many commentators have  
24 taken such entrenched positions?

25 A. Well, I think, yeah, in a sense they are political and

86

1 Q. And therefore there is a fundamental point to be made,  
2 isn't there, about the role of SAGE and of the CMO and  
3 the GCSA: firstly, you could only advise in the public  
4 health sphere?

5 A. Correct.

6 Q. Secondly, whilst you could advise of course on the  
7 indirect and direct consequences of whatever decision  
8 the government might make in terms of the effect on  
9 mortality, bluntly on how many people would die, it was  
10 exclusively a matter for government to weigh up the  
11 mortality issue, the number of deaths, to weigh up the  
12 economic and societal harmfulness resulting from,  
13 for example, a lockdown. That was never anything that  
14 SAGE or you or Sir Patrick could advise on directly?

15 A. Correct. Can I add just a slight addition to that?

16 Completely agree with the point. So let us take  
17 an example, if people are moved into a greater degree of  
18 poverty, that has a public health implication.

19 Q. You referred to this earlier --

20 A. Yes, so I think that is a legitimate thing for us to put  
21 before government, but the decisions absolutely have to  
22 be for government via elected ministers.

23 Q. Because there is a very clear and recognised link  
24 between poverty and deprivation and public health?

25 A. Correct, and also education, the same is true.

88

- 1 Q. All right.
- 2 You've described in some detail how you relayed the
- 3 advice from SAGE, and you've now described the limit on
- 4 the role of SAGE and on the CMO and the CSA. Does it
- 5 follow that you never said ever to government, "My
- 6 personal opinion is that you must follow a particular
- 7 route or outcome, you must, for example, impose
- 8 a mandatory lockdown, you must impose a circuit breaker,
- 9 you must do this"? Did you hold yourself back from
- 10 opining on the ultimate issue, if you like, and restrict
- 11 yourself always to giving advice on the outcomes, the
- 12 risks of whatever decision the government might make?
- 13 A. I think -- I hope, and I think the evidence from the
- 14 ministers has said this, that I was -- I was and
- 15 Sir Patrick was -- very careful to be clear and blunt
- 16 about the public health implications of decisions taken
- 17 or not taken, but not to say "Therefore you must" or
- 18 "I think you must", because that is absolutely
- 19 a political decision at the end of the day.
- 20 Q. Having asked you to address that point, in fact when we
- 21 come to lockdown 3 in January 2021, was there,
- 22 curiously, a process by which all the UK CMOs did advise
- 23 on the public health position and on the state of play
- 24 across the United Kingdom in terms of the transmission
- 25 of the virus at that stage, which did lead directly

89

- 1 that is a legitimate thing for a public health person to
- 2 do. My director of public health colleagues around the
- 3 country would give similar kinds of advice in their
- 4 regional areas, the CMOs in the other four nations. So
- 5 that is intrinsic to the job of a CMO or a public health
- 6 adviser, but that is very different from things that
- 7 involve government or the force of law or the use of
- 8 taxes.
- 9 Q. In order to shoot as many hares as possible, does it
- 10 also follow that ministers were absolutely clear that,
- 11 as the democratically elected representatives, it was
- 12 exclusively for them to make the decisions and not for
- 13 you or SAGE or any other part of the government machine
- 14 that wasn't an elected representative?
- 15 A. I think that a few of them in the early stages needed
- 16 some help to see that that was -- there was no option
- 17 but for them to make the decision. But that wasn't
- 18 because they were trying to shirk their
- 19 responsibilities, I think they saw it as a technocratic
- 20 exercise and I saw it as a political exercise, at the
- 21 end of the day, that the technocratic bit was giving the
- 22 technical advice, the political situation follows on
- 23 from that. But I think once people had internalised
- 24 that and there was no push-back on it, then I think
- 25 ministers were clear that they ultimately held the

91

- 1 of course to the government imposing the third lockdown?
- 2 A. Yes. And, I mean, I think there are two situations on
- 3 this. The first one is the UK CMOs advised a move up to
- 4 alert level 5, as this was then termed, I won't go into
- 5 the details, knowing that that was something which would
- 6 be politically important, but this wasn't us telling
- 7 ministers in any of the four nations what to do, it was
- 8 making clear our view that if they did nothing the
- 9 outcome would be very bad, from a public health point of
- 10 view. Ultimately the decision is still that for
- 11 ministers. And in fact the decision as to whether to
- 12 accept our advice on the alert level was in fact for
- 13 ministers, but my view was they were pretty unlikely to
- 14 refuse our request to move.

15 The other situation, and I just want to be really

16 clear on this one, is it is also legitimate, in my view,

17 and I did this from time to time, for me to give advice

18 direct to the public, which they can choose to take or

19 not. And in, for example, the winter of 2021 I did,

20 for example, advise -- which was not government

21 policy -- that people were extremely careful in that

22 period around Christmas. That wasn't, in my view,

23 political advice, that was public health advice. They

24 could take it or not, it wasn't the government speaking.

25 A very large number of people did take that advice. But

90

- 1 responsibility to balance the various issues.
- 2 Q. In truth, were there ever any good or easy outcomes?
- 3 A. So there were two things I said right from the beginning
- 4 and I, you know, still don't think there's any reason to
- 5 doubt them, the first of which is there were no good
- 6 options, all the options were very bad, some were a bit
- 7 worse, and some were very, very bad. And the second is
- 8 this was going to go on for a long time. So if you took
- 9 an option, you had to be prepared to see it through for
- 10 many months to years rather than just seeing this as
- 11 a temporary situation. And I think, again, this took
- 12 a while for some people to internalise, that this was
- 13 not going to be in any way easy and it also was going to
- 14 be long and it was also going to involve significant
- 15 loss of life almost irrespective, unfortunately, of
- 16 whatever decision was taken, but where some decisions
- 17 would lead to substantially worse outcomes from a public
- 18 health point of view.
- 19 Q. And is it because ultimately these momentous decisions
- 20 could only be for ministers that a mantra that they were
- 21 "following science" was, in your opinion, inaccurate?
- 22 A. Yeah, I mean, both Sir Patrick and I when it initially
- 23 happened, remembering that our job was to get science
- 24 into government, thought, well, this is a good thing,
- 25 the government is recognising that science is important.

92

1 Very soon we realised it was a millstone round our  
2 necks, and didn't help government either because it  
3 blurred the distinction between the very firm clear  
4 demarcation that must and did occur -- did exist between  
5 technical advice and political decision, for which  
6 people are then answerable in the ballot box and in  
7 Parliament.

8 **Q.** Did you ever judge that scientific advice, either from  
9 yourself or Sir Patrick or SAGE, was being ignored,  
10 for example you were excluded from meetings where you  
11 would have expected to be present or that inappropriate  
12 degrees of weight were being given to countervailing  
13 considerations?

14 **A.** So on the second I think that's entirely a political  
15 judgement and different politicians faced by the same  
16 set of circumstances might have come to a different  
17 balance.

18 Were there meetings where I thought that it was  
19 convenient to one or two people that I or Patrick wasn't  
20 there? Yes, but that's a -- in a sense, that's the  
21 political process. Ultimately the ministers were in  
22 a position they could have insisted we were there and  
23 they didn't always. But that is -- you know, neither  
24 would I have felt it was appropriate for me to insist  
25 there was an economic adviser there or someone who had

93

1 that were taken during Covid in the UK, my view is  
2 I don't think they -- they were not intending to  
3 cherry-pick, they may have done so by accident but it  
4 wasn't by design.

5 **Q.** You obviously spent a great deal of time in Number 10,  
6 you worked very closely with government ministers and  
7 government advisers for an inordinate amount of time.  
8 A certain degree of administrative confusion can be  
9 expected in any government dealing with a crisis of this  
10 magnitude, but how efficiently did you assess the  
11 administrative system around the Prime Minister to be  
12 operated?

13 **A.** I thought that the -- the civil servants, including  
14 the -- particularly the health and economics private  
15 secretaries, did a very, very good job in difficult  
16 circumstances. If I'm honest, I think that the  
17 political system around the Prime Minister was more  
18 mixed, but I don't think that was really as much to the  
19 fore in this set of decisions as it was in some other  
20 areas. It was quite often chaotic, but actually I'd be  
21 very doubtful if it wasn't chaotic in multiple other  
22 governments, and in fact that was what our fellow  
23 advisers from other countries said, in many other  
24 environments, that this was, you know, difficult for  
25 every country, it was being faced by extraordinary

95

1 understood diplomacy when we were discussing ports.  
2 I think this has to be a decision fundamentally for  
3 ministers. Who do they want to take their advice from  
4 has to be for them at the end of the day.

5 **Q.** Were there ever times when you assessed that there was  
6 a degree of cherry-picking of the science that was being  
7 proffered by SAGE and yourself?

8 **A.** What, that we were cherry-picking or that other people  
9 were cherry-picking --

10 **Q.** No, no, obviously other people are cherry-picking the  
11 advice you're giving?

12 **A.** Could have been the other way, but yes, no doubt about  
13 it at all. But that was inevitable and, in my view,  
14 wasn't -- didn't apply, and I really want to clear about  
15 this, to, in my view, the principal decision-makers in  
16 government, so the Prime Minister, the then Secretary of  
17 State for Health, the then Chancellor, the then  
18 Chancellor of the Duchy of Lancaster, for example, nor  
19 did, in my view, it apply to the great majority of  
20 political leaders. But they were definitely some that  
21 chose the science they wanted to hear, let's put it that  
22 way, and undoubtedly there were political commentators  
23 whose view of science started with "What is my political  
24 position?" and then derived from there.

25 But in terms of the decision-makers in the decisions

94

1 circumstances.

2 And I think, if I can -- if I can take a step back,  
3 I think it's very dangerous for people in my kind of job  
4 to say who is -- who would I have as my fantasy  
5 Prime Minister at this point in time. The choice is put  
6 before the electorate. If the opposition had won the  
7 election, it would have been Mr Corbyn, if Mr Johnson  
8 hadn't been able to continue, it would have been  
9 Ms Liz Truss, they would have had different sets of  
10 challenges and advantages as leaders. It's the job of  
11 the technical people to work with whoever is there, that  
12 is their job, and I think it is important not to  
13 personalise, in a sense, the situation between technical  
14 advisers and ministers, I think it's important to work  
15 with whoever is there.

16 **Q.** Professor, so that there can be no doubt, the Inquiry  
17 has not asked you and we're not seeking to ask you to  
18 express your views on the political attributes or  
19 ability of any individual.

20 My question was directed solely at the issue of  
21 decision-making and the processes by which these  
22 momentous decisions were taken.

23 There is clear evidence, although ultimately  
24 of course it is absolutely a matter for my Lady to  
25 determine, that there was a difficulty in -- the

96



1 Prime Minister had a difficulty in reaching clear,  
 2 consistent positions, ample evidence relating to  
 3 oscillation or backing and veering, whatever have you.  
 4 Did you observe that? Because of course you were  
 5 there.  
 6 **A.** I think that the way that Mr Johnson took decisions was  
 7 unique to him --  
 8 **Q.** Now, if I may interrupt, that's a euphemism if ever I've  
 9 heard it. What do you mean by that?  
 10 **A.** Well, I mean, he has a quite distinct style, but I think  
 11 lots of people have got quite distinct styles, and I do  
 12 want to, in a sense, take your invitation not to make  
 13 commentaries on individual politicians, I don't actually  
 14 think that's my role particularly.  
 15 **Q.** No, but you gave advice within the confines of SAGE and  
 16 your role, of course, on the public health issues, and  
 17 you expected the government to be able to respond  
 18 efficiently, speedily. You've referred to the need for  
 19 speed earlier. It must have been apparent to you that  
 20 the government encountered significant difficulties in  
 21 being able to reach collectively, through the  
 22 Prime Minister or otherwise, decisions that it was  
 23 then -- that they then stuck to and they consistently  
 24 abided by? This degree of oscillation and chaos is  
 25 apparent?

97

1 done in good faith, I'm just making that as a comment --  
 2 inevitably.  
 3 A lot of the way by which senior ministers,  
 4 including the Prime Minister, came to their position was  
 5 done informally in conversation and, for example, one of  
 6 the times where we had the most conversation with the  
 7 Prime Minister in a small group, where he tended to be  
 8 at his most focused, was in the briefing just before we  
 9 did press conferences. That was not a formal meeting,  
 10 that was really just working things out, but actually it  
 11 allowed him to test out ideas not in public, which  
 12 I think he valued and I think helped the decision-making  
 13 process. But that wasn't a formal meeting and it wasn't  
 14 minuted.  
 15 But I think that the decision-making minutes in  
 16 meetings were -- from fairly on -- early on my sense was  
 17 the record-keeping in the very first bit of the pandemic  
 18 was less strong. But I wasn't the person who the  
 19 minutes were aimed at and I didn't see a lot of them,  
 20 but that was my sense at the time -- for -- for  
 21 legitimate reasons of people being stretched all over  
 22 the place, but that fact -- the fact of it is, I think,  
 23 relatively clear.  
 24 **Q.** All right.  
 25 Can we now turn, please, to some of the early steps,

99

1 **A.** That's correct, but I don't -- I think it's a matter of  
 2 record that many other nations had similar problems,  
 3 expressed in different ways, in this major, major  
 4 international crisis.  
 5 **Q.** Finally on the subject of decision-making, you've  
 6 already confirmed that obviously there were verbal  
 7 briefings in Number 10 that were unrecorded, but in the  
 8 nature of these things principal private secretaries,  
 9 private secretaries and advisers would keep notes, there  
 10 would be read-outs of all the meetings.  
 11 Do you assess that all the meetings that you had,  
 12 all the engagements, the verbal briefings, were  
 13 adequately recorded? There were thousands of hours of  
 14 meetings between yourself, Sir Patrick and government,  
 15 and they're not all recorded. Do you think in hindsight  
 16 that the lack of formality, the lack of transparency may  
 17 have contributed to that degree of chaos or perhaps to  
 18 the oscillation which witnesses have described the  
 19 Prime Minister suffered from?  
 20 **A.** I think that -- well, firstly, I didn't get to see --  
 21 rightly, didn't get to see ministerial minutes for many  
 22 of the meetings I went to. And in fact one of the  
 23 interesting things in this process has been reading  
 24 minutes where my memory of the events is not exactly in  
 25 accordance with the minutes -- I'm quite sure they were

98

1 the early information that you received in January  
 2 of 2020.  
 3 It forms no part of the Inquiry's function with you,  
 4 Professor, to go through every single one of the  
 5 thousands of meetings and documents, and so I'm going to  
 6 ask you to try to keep your answers at an appropriately  
 7 high a level as possible.  
 8 On 5 January, in an email to Professor Sir  
 9 Jonathan Van-Tam and to Yvonne Doyle and others, you  
 10 referred to triggers.  
 11 **A.** Yep.  
 12 **Q.** "... three triggers [which] would mean we should start  
 13 taking a close interest in considering the risk to the  
 14 UK."  
 15 Could we have, please, INQ000047484. If we go down  
 16 to page 3, we can see that the genesis of the email  
 17 string was a report from the press, I think, but of  
 18 a report from ProMED, the organisation about which  
 19 the Inquiry has heard which provided information about  
 20 the undiagnosed pneumonia in China.  
 21 If we go back to 1, we can see that yourself and  
 22 your colleagues were talking about this report, and then  
 23 you say this:  
 24 "My view is that any of three triggers would mean we  
 25 should start taking a close interest in considering the

100

1 risk to the UK.  
 2 "1) Healthcare workers dying ...  
 3 "2) Evidence of person-to-person spread eg in  
 4 families.  
 5 "3) Geographical spread implying a zoonosis is  
 6 spreading ..."  
 7 Just a couple of questions about those triggers. In  
 8 subsequent email correspondence Sir Jonathan Van-Tam  
 9 referred to that first trigger as meaning not that  
 10 healthcare workers would die but that there was  
 11 transmission of the virus between healthcare workers.  
 12 Which is the correct trigger, is it death or  
 13 transmission?  
 14 **A.** Well, I meant mortality, and I'll explain why, but  
 15 actually I thought the way that he moved it on to  
 16 healthcare workers having transmission was probably  
 17 sensible for the later stage, because it was clear the  
 18 first one was less relevant.  
 19 So if I can explain -- if you want me to, I can  
 20 explain why I chose those three triggers.  
 21 **Q.** Well, just briefly, if you --  
 22 **A.** Yes. The first one, which I think is important, is what  
 23 I wanted to capture was a disease which had a high  
 24 mortality if you had very close contact, even if it  
 25 didn't spread very widely in the population, and

101

1 **A.** Yeah.  
 2 **Q.** On 13 January, there was a NERVTAG meeting in which  
 3 NERVTAG noted that it had:  
 4 "... been stated that there had been no  
 5 'significant' human to human transmission, which implies  
 6 there may be some evidence of limited human to human  
 7 transmission which has not yet been made available ...  
 8 we should be cautious about making conclusions about the  
 9 absence of human to human transmission."  
 10 My question to you, therefore, is this: in relation  
 11 to the continuing assessment of whether or not there was  
 12 sustained human-to-human transmission, did SAGE and  
 13 indeed you apply an appropriate precautionary approach,  
 14 that is to say, to recognise that, unless and until it  
 15 has actually been positively excluded, it's better to  
 16 assume and to work on the basis that that human-to-human  
 17 transmission will be or is sustainable?  
 18 **A.** Are you talking about human-to-human transmission in  
 19 general or specifically asymptomatic, just to --  
 20 **Q.** No, I'm talking about in general, because this is  
 21 a 13 January meeting before the issue of asymptomatic  
 22 transmission becomes truly apparent.  
 23 **A.** Yes, I mean, in general, my view is we were, by that  
 24 stage, putting a really quite considerable degree of  
 25 interest and emphasis on this particular outbreak, even

103

1 examples might be MERS, SARS or Ebola. And those  
 2 wouldn't be captured by something that had very  
 3 widespread community transmission, at least until quite  
 4 late on in the situation. So that was the reason I put  
 5 that one in, in a sense, separately from  
 6 person-to-person spread.

7 Sir Jonathan, I think very reasonably, said, well,  
 8 healthcare workers are people who come particularly  
 9 closely to people who have got significant symptoms, and  
 10 they're an important subset in the sense of two, so  
 11 I think he moved my triggers on. I didn't think that  
 12 was unreasonable when I subsequently saw that.

13 **Q.** All right.

14 It's obvious that from this point on a number of  
 15 you, but particularly you and Sir Patrick and SAGE, were  
 16 focusing on the issue of person-to-person transmission,  
 17 how transmissible was the virus, also on the issue of  
 18 asymptomatic transmission, because, as we've heard from  
 19 other evidence, you need to know the degree of  
 20 asymptomatic transmission to work out the body of the  
 21 iceberg of which death and hospitalisation are only the  
 22 tip. You need to know what the body of the virus is  
 23 doing.

24 And also, of course, the degree to which cases were  
 25 in reality spreading beyond China.

102

1 though we didn't at this point have clear evidence of  
 2 human-to-human transmission that we can, in a sense, put  
 3 our foot on, it's also the WHO position, but I think  
 4 there was a general view that it was looking worse  
 5 rather than better as time went by.

6 So when this first -- you know, just thinking it  
 7 through from the beginning of January to the end of  
 8 February, you start off with a situation where you have  
 9 an outbreak. The probability this will turn into  
 10 a major epidemic, relatively small. And probability of  
 11 a pandemic, very small. The further on you go in time,  
 12 the less the probability this is just going to be  
 13 an outbreak or indeed disappear at all goes -- that  
 14 probability goes down, when the probability of a major  
 15 epidemic and then, subsequently, a pandemic goes up. So  
 16 it's a continual process that happens over that  
 17 two-month period.

18 **Q.** On 14 January, Sir Jonathan Van-Tam alerted you to  
 19 a Reuters report which had been issued on 14 January in  
 20 which there is a reference to limited human-to-human  
 21 transmission of a new coronavirus, and it's obvious to  
 22 Sir Jonathan and it's obvious from that report that  
 23 there is human-to-human transmission among families but  
 24 that it's not become sustainable in a wider setting.

25 The trigger, going back to the triggers, or one of

104

1 the triggers, was, in addition to healthcare workers  
 2 dying and geographical spread, evidence of  
 3 person-to-person spread eg in families.  
 4 So my question to you is this: the very trigger that  
 5 you had identified or one of the triggers that you had  
 6 identified as being of importance didn't require  
 7 sustained wider community transmission, it only required  
 8 transmission in a more limited setting, for example in  
 9 families. Was that not already occurring and was not  
 10 the evidence that that was already occurring already  
 11 apparent by that date, 14 January?  
 12 **A.** I think by that stage we were pretty clear that there  
 13 was at least some person-to-person transmission in close  
 14 settings, so that's to say healthcare and family  
 15 settings. That's a long way from saying this will  
 16 become a community outbreak, let alone a pandemic.  
 17 And I think one of the things that bedevils some of  
 18 the discussion of this is people think of this in  
 19 a binary sense, of its either likely to be or it is not  
 20 likely to be a pandemic. It was a gradually shifting  
 21 probability curve. At this stage it's still on the less  
 22 rather than more likely on the basis of just this  
 23 evidence. But what this does demonstrate is that you're  
 24 heading the wrong way rather than the right way compared  
 25 to where you would have been five days previously,

105

1 trigger was met?  
 2 **A.** So in any given week I will get dozens of reports of  
 3 outbreaks around the world, my colleagues will as well.  
 4 What you're trying to do is to essentially pick up the  
 5 needle in the haystack of that information at the  
 6 earliest possible stage. That was the reason for having  
 7 the triggers.  
 8 Now, I had not done prior to this and I have not  
 9 done since something where I said we need to do triggers  
 10 at all. So even on 5 January we were behaving in a way  
 11 different to what we do with any of the other ones we  
 12 had previously talked about, and the fact we were having  
 13 a lot of conversations around this, at this point what  
 14 looked a very small outbreak in a country the other side  
 15 of the world, demonstrates the level of concern that we  
 16 had relative to the multiple other outbreaks we get  
 17 every month.  
 18 So this was -- you know, in a sense, I think the  
 19 system -- I don't think this is a sign of the system not  
 20 working, this is exactly what we should be doing, which  
 21 is funnelling down, winnowing out the ones where it's  
 22 improbable and left with the ones where you've got to  
 23 take it seriously. So the degree of concern was ramping  
 24 up by this stage.

25 A trigger -- I think possibly the word "trigger" was

107

1 because you now have evidence that is not overwhelming  
 2 but pretty confident there is now person-to-person  
 3 spread, at least in this narrow sense.  
 4 **Q.** The question was not designed to elicit when you might  
 5 properly understand there to be a pandemic.  
 6 **A.** No, I'm saying --  
 7 **Q.** It was addressing the fact that, by your own trigger, by  
 8 your own self-identified trigger, it does appear that,  
 9 at that relatively early date, 14 January, there was  
 10 family human-to-human transmission --  
 11 **A.** Absolutely.  
 12 **Q.** -- and therefore the trigger which you had identified  
 13 for government action, because that's what the triggers  
 14 were designed to meet, had been met?  
 15 **A.** The trigger was designed for government to take it  
 16 seriously, which is not the same point as -- it takes  
 17 another, I think, from memory, seven days before we get  
 18 to the point of saying, "We've got to call SAGE, this is  
 19 going to -- this is going get into very" --  
 20 **Q.** But what is meant -- I'm sorry. What is meant by  
 21 wanting government to take it seriously?  
 22 **A.** So --  
 23 **Q.** You're dealing, with respect, with the emergence of  
 24 a virus which kills. What did you have in mind by way  
 25 of wanting the government to take it seriously when this

106

1 an unhelpful way to frame it for the benefit of people  
 2 who are not in this area, because it implies a binary  
 3 state, but it really -- basically it should have  
 4 probably said these are things which should mean that we  
 5 take it more seriously.  
 6 **Q.** By 16 January it was obvious, and Jonathan Van-Tam  
 7 emailed you, that Japan had declared a confirmed case?  
 8 **A.** Yes.  
 9 **Q.** On 16 January Professor Ferguson had made available  
 10 Imperial College's Report number 1, in which he said  
 11 past experience suggests self-sustaining, ie sustained,  
 12 human-to-human transmission should not be ruled out.  
 13 Therefore, by 16 January you were aware that there was  
 14 a novel coronavirus with a 12% case hospitalisation  
 15 rate, that was on the limited data coming out of Wuhan,  
 16 there had been geographical spread, only a small number  
 17 of infections had been identified, it was obvious that  
 18 the outbreak was much greater than the cases would  
 19 indicate, there was human-to-human transmission, albeit  
 20 not sustained, and Professor Ferguson was saying in  
 21 principle, in a precautionary way, you can't rule out  
 22 the fact it is sustainable.  
 23 **A.** Yep.  
 24 **Q.** Did not that, all together, indicate that a higher  
 25 degree of alarm should have been sent round government

108

1 than was in fact sent round government?  
 2 **A.** I think on the 16th and with that information,  
 3 remembering that the cases that were found outside China  
 4 were not ones that were transmitted outside China, these  
 5 were people who had been in China and had travelled out,  
 6 so these were Chinese cases just detected in another  
 7 environment, so that's quite an important non-trivial  
 8 distinction, but what you're now getting is a rippling  
 9 out of people getting more and more concerned,  
 10 remembering that this is only just over two weeks since  
 11 this thing that is been declared at all, and the amount  
 12 of information is still quite minimalist. So I think --  
 13 personally I don't look back on this and think, well, it  
 14 was obvious that we should be calling SAGE and getting  
 15 COBR involved on the 16th, I think that would have been  
 16 difficult to sustain, nor is it obvious what they would  
 17 have discussed other than the facts that are there,  
 18 which are relatively clear, don't need further  
 19 interpretation.

20 **Q.** I ask, Professor, because in his statement  
 21 Sir Jonathan Van-Tam says this:  
 22 "The date on which I recall first being seriously  
 23 concerned about the threat that this virus potentially  
 24 posed to the [United Kingdom] was 16 January ... By that  
 25 date, it was clear this was a novel coronavirus, it was

109

1 his view that this was a serious issue, I don't recall  
 2 him actually saying this would become a pandemic but  
 3 I certainly recall him being very concerned about it,  
 4 and rightly concerned about it. But that -- you know,  
 5 I don't see evidence that is this is not the system  
 6 working as it should at this point, because it is not  
 7 clear to me what an alternative path would have led to  
 8 a better outcome on 16 January.

9 **Q.** The Inquiry's been treated to a debate in a completely  
 10 different context about the difference between process  
 11 and substantive outcome. You have already referred to  
 12 the precautionary principle, and Professor Costello in  
 13 his evidence said in an emergency there is a need for  
 14 fast decision-making, emergencies require rapid action  
 15 based on precedent and best practice. We would suggest  
 16 to you instinct plays a very important role in this.

17 Were, was Sir Jonathan Van-Tam's instinct not  
 18 correct and was your response, which was to wait and see  
 19 whether more data should be accumulated, with hindsight,  
 20 the wrong approach?

21 **A.** I don't think I can see anything obvious that should  
 22 have been done on 16 January that would have changed,  
 23 even marginally actually, the outcome subsequently.

24 So I think -- you know, in a sense, it is all very  
 25 well saying theoretically you should start panicking;

111

1 fairly clear that human to human transmission was  
 2 occurring ..."

3 And then he uses these words, and obviously we'll  
 4 hear from the professor himself:

5 "... my view was that this would be [so not may, but  
 6 would be] a significant [so not trivial] pandemic [not  
 7 epidemic]."

8 And he says he raised this with you and, to the best  
 9 of his recollection, your response was "to agree that  
 10 the situation may well escalate but for now we needed  
 11 instead to wait and monitor developments".

12 In hindsight, and of course this is a hindsight  
 13 debate, should you have raised a greater alarm at that  
 14 stage than that piece of evidence from his witness  
 15 statement would indicate?

16 **A.** I don't see what I would have done differently at this  
 17 particular point. Sir Jonathan, and I think he would  
 18 agree with this, is quite instinctive in some of his  
 19 decisions, very often rightly. He's a very able  
 20 epidemiologist and thinker in this area. But if I'd  
 21 said to him, "Okay, what's the evidence on which this is  
 22 going to be a pandemic and lots of other things  
 23 aren't?", he would have said "This just feels like that  
 24 to me", that's quite a narrow basis on which to make  
 25 quite big decisions. But I think -- you know, I took

110

1 actually the question is what should you do. And at  
 2 this point we had a large number of people who were now  
 3 engaged in this, we were taking it very seriously, it  
 4 was being discussed quite widely. This was a short  
 5 period before we ask for SAGE, which I've almost never  
 6 called for a SAGE before. So, you know, we were taking  
 7 this very seriously indeed. But at this point, unless  
 8 you can point to something where it is obvious we would  
 9 have done something different, I'm not sure --

10 **Q.** You're the CMO, with respect.

11 **A.** Yes, I know, that's why -- that's the point I am making,  
 12 is that was my judgement and that is still my judgement.

13 **Q.** The triggers were designed to identify an appropriate  
 14 response on the part of government, they weren't just  
 15 there for your scientific amusement.

16 **LADY HALLETT:** I think to be fair, Mr Keith, Sir Chris said  
 17 that they were to make sure the issue was taken  
 18 seriously, and he has just said we were taking it  
 19 seriously. I think we need to be --

20 **MR KEITH:** And my question to you is this: you did plainly  
 21 move on to call a SAGE, and the chronology shows that  
 22 SAGE was called at a relatively early stage in the  
 23 process, but with your experience as the Chief Medical  
 24 Officer, what do you mean by wanting the government to  
 25 take it seriously? You call for SAGE, a SAGE is

112

1 a platform at which there may be a debate, but what in  
2 practice, epidemiologically, did you have in mind when  
3 these triggers were met?

4 **A.** So I think there's a large bit of the apparatus of  
5 government which is, in a sense, being ignored in that  
6 question, potentially, and I'd just like to highlight  
7 it.

8 **Q.** Please.

9 **A.** Public Health England, which is a large body, as opposed  
10 to my own office, of several thousand people whose job  
11 it is to deal with this, and the Department of Health  
12 and Social Care, both of which were by now taking this  
13 very seriously, and this was part of the discussion that  
14 was being had in the appropriate bits of government,  
15 which is not at this point, in my view, Number 10 or the  
16 central system. We'll come on to where I thought that  
17 changed, but at this point I think the right bits of  
18 government were taking this very seriously. So I don't  
19 think -- and that's the basis on which I'm saying  
20 I think this was a reasonable level of response for, as  
21 you -- leaving aside Sir Jonathan's gut feeling -- as  
22 you show, is still quite limited data. And if you look  
23 at Professor Ferguson's analysis, it shows pretty wide  
24 confidence intervals, quite rightly, he's basing it on  
25 incredibly sparse data. So I think we just need to be

113

1 what the geographical spread is likely to be. But also  
2 what can be done by way of preliminary steps to prevent  
3 a virus coming to this country or what steps can be put  
4 into place preliminarily by way of controlling the virus  
5 if it comes to this country, and I want to know to what  
6 extent you had in mind steps being taken by the  
7 government beyond the accumulation of data, what  
8 practical measures, if any, were already within, under  
9 the horizon of these, well, the bodies that sat,  
10 of course, from 21 January onwards and yourself?

11 **A.** So all I can point to is that government has extremely  
12 able specialist groups, of which Public Health is the  
13 principal one but also emergency bits in the Department  
14 of Health and Social Care, which were by now, at this  
15 point, taking this as a major part of their work, that  
16 was correct. "Wait and see" did not just mean  
17 Sir Jonathan and I had a chat and that was the end of  
18 it, government took no further action, it simply means  
19 in this situation that more data will allow us to  
20 actually decide whether we need to activate at a central  
21 government, cross-government basis, or whether this  
22 stays within the specialist agencies within which it  
23 was, at that point in time, still being assessed.

24 Now, and this is quite an important differentiation,  
25 there is rightly a stage along the process which is done

115

1 careful.

2 And this is -- the reason I'm saying this and the  
3 reason I'm going to defend this position, where I know  
4 it would be easier for me just to concede, is if as  
5 a result of this Inquiry we start having a hair trigger  
6 for large numbers of things where the professional  
7 judgement is "let us wait and see", and that is the  
8 correct professional judgment, that would not be an  
9 advance. It's -- the judgement as to when you're moving  
10 too slowly and when you're moving too -- too  
11 precipitately is a judgement call ultimately, and you  
12 have to be able to make it at particular points. There  
13 are various points along the path which we'll come on to  
14 where I would, in retrospect, have made different  
15 decisions. This is -- and all I'm saying is this is not  
16 one of them.

17 **Q.** You've used the phrase just then "let's wait and see".  
18 Did you say that, Professor? Because at this stage,  
19 around about 16 January, your primary consideration was  
20 "let's wait and see what the data shows". The reason  
21 I ask you is obviously there are any number of things  
22 that might or need to be done, finding information about  
23 the transmission of the virus, getting data about its  
24 impact, hospitalisation and death rates, whether or not  
25 it's likely to spread from China or surrounding regions,

114

1 within the technical sphere, is done by Public Health  
2 England, done by the Department of Health, and there is  
3 a certain point where you cross some threshold and there  
4 is a judgement call where this becomes  
5 a cross-government problem where wider bits of  
6 government, wider bits of the system need to be brought  
7 into play.

8 Your implication, I would take it, since I'm saying  
9 that the health bits were activated at this stage, is  
10 that on the basis of this data alone, central government  
11 outwith the health system should be being activated in  
12 some way, and I'm saying my judgment at the time and my  
13 judgment still now is I don't agree.

14 I hope I'm plain.

15 **Q.** No, that's very plain, Professor.

16 You've referred to whether or not the government  
17 took no further action, obviously there is an issue  
18 there for government, but I want to press you: was this  
19 the position, then, that it was important, as you saw  
20 it, to wait to see, to use your words, what data there  
21 was out there, how things would develop, and also -- and  
22 this is your reference to PHE and other government  
23 bodies -- bringing government into play, bringing those  
24 important and necessary parts of government to life to  
25 be able to respond to whatever might eventuate? Is that

116

1 a fair summary? You wanted to see what the position  
2 was, what data could be accumulated, and generally bring  
3 the government to life to be able to deal with whatever  
4 your enquiries discovered?

5 **A.** If -- yes, but if you -- if consistently you go to all  
6 of government and say "I have no data on this, I'm a bit  
7 worried, got to bit of a gut feeling this is going bad",  
8 you don't get very much traction, and the time you need  
9 to you also get not very much traction. Waiting and  
10 seeing, as the record clearly demonstrates, was a matter  
11 of a few days, and in that time we got enough  
12 information to be able to start making some really quite  
13 serious judgements as to what the level of risk  
14 potentially could be.

15 I think that the argument for always acting early  
16 can be made in the absence of looking at all the  
17 occasions when you decided not to act early and that was  
18 the correct thing to do. In medicine you have the idea  
19 of sensitivity and specificity, where sensitivity is  
20 you're good at picking up the thing that matters and  
21 specificity is you're good at not picking up the thing  
22 that does not matter. Sometimes in medicine the other  
23 aphorism is time in small doses is what gives you the  
24 diagnosis. In my view this was one of those occasions.

25 **Q.** The question was not in fact asking you, Professor,  
117

1 In a few sentences, could you just outline for us,  
2 please, where the deficiencies in capability were to  
3 which you were referring?

4 **A.** So I think that there were problems with planning, but  
5 the much more important ones are problems of  
6 establishment. So if you compare -- let's start off  
7 with the establishment and I'll go back to the planning  
8 point.

9 The model for healthcare at the foundation of the  
10 NHS was a very heavily -- a very heavy bedded one, large  
11 numbers of beds, many more beds in the NHS at that point  
12 for a much smaller population, a medical system that was  
13 largely designed around infectious diseases or  
14 infectious diseases as a major part of -- as a major --  
15 sorry, as a major part of its work, for example a lot of  
16 TB in the early parts of the NHS, and so many -- and  
17 then the erosion of public health facilities, which  
18 wasn't a dramatic one, but it was a continuous one, over  
19 really quite a long period of time, and I think  
20 the Inquiry has had, from expert witnesses, a laying out  
21 of how essentially that was whittled away over a whole  
22 series of administrations over a long period of time.

23 **Q.** So that's the system in terms of public health.

24 **A.** That's the system, exactly.

25 **Q.** What about plans?  
119

1 whether it's important always to act early. Was it  
2 necessary, in fact, to have acted earlier?

3 **A.** Than the 16th?

4 **Q.** Than the 16th.

5 **A.** Not in my judgement. That was my judgement at the time,  
6 and I'm going to repeat it, that is still my judgement.

7 **LADY HALLETT:** And I think you have answered the question  
8 very carefully, Sir Chris.

9 Right, we shall pause there, and I shall return at  
10 2 o'clock, please.

11 (1.01 pm)

(The short adjournment)

13 (2.00 pm)

14 **LADY HALLETT:** Yes, Mr Keith.

15 **MR KEITH:** Professor, in your statement, in fact at  
16 paragraph 7.39, you say this:

17 "As of January 2020, I had a good awareness of the  
18 UK's capability to respond to a pandemic."

19 You thought that it was -- or you considered it was  
20 capable of responding effectively to small outbreaks,  
21 and then this:

22 "I had no illusions that the [United Kingdom], or  
23 for that matter any other Western nation, was well set  
24 up to meet the challenges of a major pandemic with  
25 significant mortality."  
118

1 **A.** So I looked at the pandemic flu plan at the point when  
2 we were beginning to worry about this, about the time  
3 we're talking about now, and it was pretty clear that it  
4 wasn't going to give us any particular help, frankly.  
5 So my view was we didn't have a plan that was going to  
6 be useful from a prevention or management point of view.  
7 It had a large number of useful components within it,  
8 there wasn't nothing helpful there, but the idea there  
9 was a respiratory pandemic plan for the kind of pandemic  
10 this was going to be, if it was going to be a problem,  
11 that we could just take off the shelf and follow the  
12 playbook, was optimistic at best.

13 So --

14 **Q.** Can I pause you there --

15 **A.** Yeah.

16 **Q.** -- just before we move on to perhaps the last part of  
17 your answer.

18 Could you just explain why -- although we've  
19 obviously heard a great deal of evidence about the 2011  
20 pan flu strategy and the planning for flu. Why, in  
21 essence, was the flu plan, whether it be the government  
22 strategy or any associated material, not of great or any  
23 particular help to this coronavirus outbreak with  
24 different characteristics and different potential  
25 countermeasures?  
120

1 A. Yeah, I mean, there were some differences that were to  
2 do with the difference between flu and Covid, which are  
3 more technical. Actually my view, having looked at it,  
4 was had we had a flu pandemic, with a virus that had  
5 a mortality of, for the sake of argument, 1% to 2%,  
6 which is what we were thinking of at this point in time,  
7 it would also have been woefully deficient.

8 So it was not that it was about flu and this was  
9 Covid, that had some important differences; it was about  
10 the fact this wasn't designed, in my view, to meet this  
11 particular need at all. And I think -- if I'm honest,  
12 I think it really was clearly written by people who had  
13 just been through a pandemic in which the mortality was  
14 very low.

15 Q. H --

16 A. The H1N1 2009 pandemic, and I think that had just led to  
17 a -- it wasn't that they were modelling it just on that,  
18 but it clearly didn't really meet the needs of  
19 a 1918-style flu pandemic, which, in my view, was the  
20 kind of model we needed to be thinking about. So the  
21 three big flu pandemics of the 20th century -- so 1918,  
22 1957, and 1968 -- seemed to me much closer to what we  
23 were going to see than 2009, if we saw anything at all.

24 I'm not talking about 16 January, to be clear, but  
25 I think this was by the end of January, this was my

121

1 Q. There was effectively a complete absence of plans to be  
2 able to deal with this particular crisis, this  
3 particular virus and this particular emerging pandemic;  
4 the system, in terms of beds and public health  
5 facilities, was on the edge anyway; and there had  
6 of course been no earlier consideration of what might be  
7 done because this was the first coronavirus which  
8 potentially was going to hit the United Kingdom in  
9 a major way.

10 Your statement at paragraph 7.43 says this, that:

11 "From 20 January onwards, we commenced preparations  
12 in earnest to be ready for a pandemic were one to  
13 occur."

14 Now, you'll know, of course, because it's in your  
15 statement and you were there, that there was a meeting  
16 on 25 February with the Prime Minister, the  
17 Health Secretary, Foreign Secretary, Sir Patrick, and  
18 yourself, in which ministers ordered that a plan be  
19 brought together, be drawn up, by the Civil  
20 Contingencies Secretariat, and as you know, they did  
21 produce a plan. But that plan was produced on  
22 28 February. It was a paper called "The UK's  
23 Preparedness". That was, self-evidently, over a month  
24 later.

25 Do you have a view as to the length of time that was

123

1 view.

2 Q. Yes, you say as of January 2020.

3 A. Yeah.

4 Q. Then coming back, please, to plans. You've dealt then  
5 with the genesis of the existing plan; were there any  
6 other developed plans on the part of DHSC or the Civil  
7 Contingencies Secretariat or central government  
8 generally to deal with the crisis as you saw it  
9 emerging?

10 A. Not that I personally thought were massively useful to  
11 my role. There were some important things, many of them  
12 rather morbid, like, you know, how do you --

13 Q. Excess deaths.

14 A. Excess deaths and how do you have -- number of body bags  
15 and all that kind of thing, but in terms of actually:  
16 what do you do about the pandemic, my view was we were  
17 thin on the ground on plans.

18 That in itself would not have been an issue if we  
19 had large numbers of capabilities, because I think in  
20 all emergencies, the key thing is capability.  
21 Capabilities trumps plans every single time, and it was  
22 the lack of capability which was the bigger problem, in  
23 my view.

24 Q. So this was obviously a very serious problem.

25 A. Yeah.

122

1 required to elapse before even that first attempt to  
2 bring together a combined plan was produced?

3 A. There was a lot of planning for individual components.  
4 There wasn't, as you say, an overarching plan.

5 For what it's worth, I, with some others, came up  
6 with the formulation -- which I think has been  
7 misunderstood -- of contain, delay, research, mitigate,  
8 principally to get the first three under way, and  
9 I think if you look at some of the plans as they came  
10 out, those three components were the components that  
11 were relatively worked through in terms of having some  
12 kind of meat on the bones of the plan.

13 The bit that I was directly responsible for was  
14 obviously the research bit, in my role as head of the  
15 NIHR, and we really moved on that quite fast, I think,  
16 we didn't wait for a plan from anyone else. And then  
17 there were various elements on contain. I think those  
18 were really the ones where I would say we were moving  
19 practically in by the end of January.

20 Q. Professor, I'm going to ask you again, please, to slow  
21 down.

22 A. I apologise to the stenographer in her absence. Sorry.

23 Q. I know you know that I'm waving my hand at you to try to  
24 slow you down.

25 A. It's my enthusiasm to answer your excellent questions.

124

1 **Q.** Well, long may it continue, Professor.  
 2 You must obviously have been very considerably  
 3 concerned by the absence of plans because, whilst there  
 4 were no doubt many documents dealing with particular  
 5 hospitals and NHS trusts and high dependency or HCID  
 6 beds or facilities and ICU beds and so on and so forth,  
 7 there was, in essence, and there had been no real  
 8 consideration of what sort of countermeasures might have  
 9 to be thought about and ultimately deployed; is that  
 10 a fair summary?

11 **A.** Yes, but can I --

12 **Q.** Before you answer: noting, of course, that such  
 13 countermeasures as had been used or envisaged for the  
 14 purposes of flu were not necessarily applicable to  
 15 coronavirus.

16 **A.** Yes, but can I gloss on what you've just said, because  
 17 I think this is a very central point.

18 If there had been a plan -- and I'm going to cause  
 19 upset to some of my planning colleagues, but I'm going  
 20 to do it anyway -- that was laid out: this is how the  
 21 playbook should run, it would almost certainly have been  
 22 the wrong plan and could even have slowed us down,  
 23 because we'd have then spent ages arguing about whether  
 24 this was the right plan and adapting the plan.

25 So sometimes it is easier actually to start with

125

1 **A.** It did, and I completely agree.

2 **Q.** So when you say in your statement "preparations  
 3 commenced in earnest to be ready for a pandemic were one  
 4 to occur", is that not just a reference to such  
 5 strategic thinking as was done that led to the action  
 6 plan and to various disparate parts of the system?  
 7 There was no central plan telling the government how to  
 8 respond nationally to the crisis until the end of  
 9 February?

10 **A.** That -- yeah, basically that is my view, and if I'm  
 11 honest, I would go a little bit further than that.  
 12 I would say that I -- this may seem a long way down the  
 13 track, but in mid-February -- mid-March, rather, I wrote  
 14 a kind of three-page strategy document with tactical  
 15 pillars underneath it, and I did so really because  
 16 I thought it wasn't clear what else there was. So that  
 17 was my attempt to do that. But it was a retrofitting of  
 18 a strategy and tactical pillars, in some senses, to  
 19 individual components that were there. It wasn't that  
 20 nothing was happening and -- you know, I think the thing  
 21 which people often assume is you get strategy, then  
 22 plan, then operations. Actually, in emergencies, often  
 23 that is reversed and the plan almost comes last in terms  
 24 of the strategy, how you lay the thing over the top, and  
 25 arguably, to some extent, that was true during these

127

1 a new plan, but what we needed was all the building  
 2 blocks, and in my view we had some of the building  
 3 blocks, intellectually and practically, but we  
 4 definitely did not have all, and they were constructed  
 5 in many cases in quite a rush, really, in February and  
 6 early March.

7 **Q.** But preparations, although you say they commenced in  
 8 earnest, had to await, did they not, the outcome of  
 9 whatever planning central government decided needed to  
 10 be done, in large part?

11 **A.** I would say that, as is usually the case in emergencies,  
 12 in my experience, the people who needed to act started  
 13 acting well in advance of the plan they were supposed to  
 14 be acting on.

15 **Q.** Well, you've referred to the action plan to which you  
 16 contributed, and we'll come back to that in a moment,  
 17 that's the coronavirus action plan of 3 March, which set  
 18 out the government strategy. It's been described as  
 19 a comms communication by some witnesses. As you have  
 20 accepted, obviously there were plans within NHS trusts  
 21 and within particular parts of the system. But none of  
 22 those plans, such as they were, or thinking, went  
 23 directly towards the issue of: what sort of  
 24 countermeasures nationally might we have to contemplate?  
 25 That came later, did it not?

126

1 next six weeks.

2 **Q.** You've accepted, and Sir Patrick has accepted, as have  
 3 other witnesses, that we could have gone earlier, in  
 4 very general terms, in relation to the first lockdown.

5 Do you consider that, had there been either existing  
 6 plans -- fully formulated, thought-out plans concerning  
 7 possible countermeasures, how the country should  
 8 respond -- or if these plans had been produced somewhat  
 9 speedier, more speedily than they had, acknowledging  
 10 that it took from 20 January to 28 February to produce  
 11 them, then we might have been in a position, or a better  
 12 position, to have gone earlier?

13 **A.** I don't think that -- so I think that components of the  
 14 plan were possible to draw up quite early on, and my  
 15 view is that the action plan, which is a perfectly  
 16 sensible document, at the beginning of March, had those  
 17 components in it. The fundamental bit, though, was what  
 18 was framed as mitigate, which is interpreted by lots of  
 19 people in lots of different ways, but I'm --

20 **Q.** Can we avoid the conceptual debate.

21 **A.** No, but the reason I'm making this practical point is  
 22 that bit of the plan actually really had to wait until  
 23 ministers had decided what their strategic goals were  
 24 and the end point was, and additionally, you know,  
 25 I think the big problems we had in early March, in my

128



1 view, principally arose from the fact we didn't realise  
2 how far on the path we were and the force of  
3 transmission, which was a data problem and sort of  
4 a testing problem, rather than because we lacked  
5 a document in February.

6 I apologise for sounding slightly cautious about the  
7 importance of documents, but -- of this kind, but I'm  
8 just being practical about how emergencies tend to play  
9 out, and the documents are often quite late in the  
10 process.

11 **Q.** Please don't apologise for being something that I've  
12 suggested you are by nature, Professor.

13 You're referring to the strategic decision-making of  
14 ministers. That's another important part of the -- it's  
15 another important component.

16 Along with the delay in bringing together formulated  
17 plans for how the country should respond, what could be  
18 done to prevent the spread, either by way of suppression  
19 or mitigation, it matters not, but the spread of the  
20 virus, there was the issue of the lack of strategic  
21 decision. Ministers did not grasp the nettle  
22 strategically until relatively late in the chronology,  
23 thereby enabling the planners and the doers to be able  
24 to say: this is how we should respond to this  
25 throughout.

129

1 very clear, I'm not saying I think this is the problem  
2 of the politicians. I think it might be worth us re --  
3 looping back to this discussion when we get a little bit  
4 further down the track, because I think there was  
5 a point where it could have been possible to accelerate  
6 this and where that did not happen, and I think that's  
7 probably worth reflecting on.

8 **Q.** Which point do you have in mind?

9 **A.** That was when I and others, particularly I, briefed the  
10 Prime Minister on 4 February.

11 **Q.** 4 February, all right.

12 **A.** And this was not so much the Prime Minister, but  
13 I thought the system at that point could have taken  
14 a given have different tack to the one it did.

15 **Q.** Is this on account of the obvious delay that there was  
16 in terms of output between the beginning of February and  
17 the later --

18 **A.** It's probably worth going over that in particular,  
19 because there's no specifics to it, but I think there's  
20 a reason why -- I think that that was an example where  
21 we probably need to learn for the future, without  
22 blaming any individual. I thought all the individuals  
23 themselves did a good job.

24 **Q.** I want to come back, please, to the SAGE meeting to  
25 which you referred earlier, and we're just going to look

131

1 **A.** So I think that within that, within this, there were  
2 some -- and I'm going to, I hope helpfully, actually,  
3 divide things into what I consider are technocratic  
4 elements and what I consider are political elements.

5 The technocratic element -- and I've given  
6 an indication that the bit I was most responsible for  
7 was on the research side -- could just get on. They  
8 just crack on: "We've got a job to do, we've just got to  
9 do it".

10 Once you get into things that require political  
11 decisions, and the big decisions, whether it be issues  
12 of borders, whether it be issues of lockdown, all these  
13 kind of issues, these require -- or things that have  
14 huge economic implications, either direct, ie they cost  
15 a lot, or indirect on the economy, those fundamentally  
16 are ministerial ones, and I think there is where we were  
17 definitely slower than we should have been for a variety  
18 of reasons.

19 **Q.** And it may well be, Professor, I'm sure you'd agree,  
20 that given the momentous nature and the political nature  
21 of those decisions, it's not altogether surprising that  
22 the system doesn't allow for a particularly speedy  
23 response; it takes time for government to be able to  
24 make up its mind as to what needs to be done.

25 **A.** Yeah, and on this one I'm not actually -- I want to be

130

1 through, quickly, some of the most important meetings  
2 and some of the most important events in January and  
3 February.

4 So the SAGE meeting of -- it's in fact  
5 a precautionary SAGE meeting of 22 January,  
6 INQ000174700. On page 2 at paragraph 7, there is  
7 a reference to this:

8 "This is evidence of person-to-person transmission.  
9 It is unknown whether transmission is sustainable."

10 So this is a reference to the earlier debate that we  
11 had, Professor.

12 There was produced for this meeting a commonly  
13 recognised information picture, to use the wonderful  
14 nomenclature of government, a CRIP.

15 CRIP 1, could we have that, please. INQ000047544,  
16 page 4.

17 **A.** Is this CRIP for a SAGE or a COBR?

18 **Q.** Well, it's dated, the information correct, as at Friday  
19 24 January, but the date given there on page 4 is a PHE  
20 risk assessment of 21 January. So it may have been  
21 produced for --

22 **A.** Yes, this would be typically be a COBR document, rather  
23 than a SAGE document.

24 **Q.** In the middle of the page, it does say:

25 "Sustained human-to-human transmission (i.e. long

132

1 chains of transmission within a community)."  
 2 Is that because there was a significant change  
 3 between 22 January and the 24th, or around 22 January;  
 4 in essence, it became clear that the human-to-human  
 5 transmission wasn't limited, it was sustained?

6 **A.** Yes, by this stage I think there was confidence that  
 7 there was at least some sustained transmission.  
 8 **Q.** In fact, the Imperial College report, report number 3,  
 9 to which you referred earlier, reported on 23 January to  
 10 government that human-to-human transmission --  
 11 self-sustaining human-to-human transmission -- was the  
 12 only plausible explanation for the size of the outbreak.

13 Were you certain, nevertheless -- or how sure were  
 14 you, nevertheless, at this stage, that human-to-human  
 15 transmission was sustainable?

16 **A.** I was confident and I think everyone was confident that  
 17 it was sustained -- sustainable at this point in time.  
 18 That doesn't necessarily mean that it remained  
 19 sustainable indefinitely, and if I can just take two  
 20 recent examples, because I just want to illustrate,  
 21 because I think it's quite a critical point in the way  
 22 we thought about it for the next few weeks.

23 If you think about the major Zika epidemic in  
 24 Brazil, and if you think about SARS, which has got some  
 25 similarities to this, including being a coronavirus,

133

1 Patrick Vallance and Chris Whitty last night."

2 So probably an evening, maybe 23 or 24 January.

3 So along with the clear evidence of sustained  
 4 person-to-person transmission, along with their  
 5 concerns, based upon the WHO material, there was no  
 6 doubt in your mind, was there, but that there was a high  
 7 degree of transmissibility, there was sustained  
 8 human-to-human transmission; in essence, this was a very  
 9 dangerous and transmissible virus?

10 **A.** Yes, I think -- I don't think there's any doubt that  
 11 that was true, yep.

12 **Q.** On 28 January, you emailed a health special adviser in  
 13 Number 10. Could we have INQ000047585. You identify --  
 14 and we've seen this email before -- two of four  
 15 scenarios as being probably only the ones worth  
 16 considering for planning at this point, and they are  
 17 of course at either ends of the risk scale: the first  
 18 one is China has a major outbreak but brings it under  
 19 control; the second one is the opposite end, which is  
 20 the reasonable worst-case scenario, which is that it  
 21 spreads, and it comes out of China, and there are those  
 22 consequences that you set out in terms of the  
 23 estimated -- and I emphasise the estimated -- R,  
 24 reproduction, value, the mortality, the doubling time,  
 25 the incubation period and so on.

135

1 both of those were sustainable and along long chains of  
 2 transmission for a period of time and then they died  
 3 out.

4 So the idea that there is ongoing person-to-person  
 5 transmission along long chains, and that inevitably  
 6 means that you then go on to have a sustained -- I mean  
 7 in a different sense, over multiples of months to  
 8 years -- transmission, those two are one -- the first is  
 9 necessary for the second but not sufficient.

10 **Q.** Professor, I must ask you to slow down again.

11 **A.** Sorry.

12 **Q.** You're going very fast.

13 Around this time, in fact on 25 January, there were  
 14 some emails between Professors Woolhouse and Ferguson  
 15 and with Jeremy Farrar, in which they debate -- and  
 16 Professor Woolhouse is particularly strong on the  
 17 issue -- whether or not the central estimates published  
 18 by the World Health Organisation indicate that half the  
 19 people in the United Kingdom and many other countries  
 20 were maybe infected, there would be at least a doubling  
 21 of the gross mortality rate and a completely overwhelmed  
 22 health system.

23 Now, you weren't party to those emails, but  
 24 Professor Ferguson, in one of those emails, says:

25 "Fully agree. Jeremy and I were saying the same to

134

1 So at that time, you were aware of the general  
 2 concerns about transmissibility. You were aware, were  
 3 you not, that if the virus does spread from China, then,  
 4 given these characteristics in terms of mortality,  
 5 doubling time, transmissibility and so on, there was  
 6 going to be a very real problem insofar as the  
 7 United Kingdom was concerned?

8 **A.** Yes, and that's the reason I wrote to Number 10.

9 **Q.** Indeed.

10 What thought did you give at that time to what  
 11 practical measures might be put into place between this  
 12 date, 28 January, and the end of February, which is when  
 13 we got the plans back from the Civil Contingencies  
 14 Secretariat, to stop or prevent that spread, to stop  
 15 that worst-case scenario eventuating?

16 **A.** Well, I think that one of the things that I was trying  
 17 to do in this email, and I tried to do in quite a lot of  
 18 the advice I gave, was I was concerned that government  
 19 would think that there was likely to be a middle way,  
 20 and I wanted to remove that possibility from their  
 21 planning assumptions.

22 So my view was either this -- we would get spillover  
 23 cases, but actually this would get contained in China,  
 24 it's less bad than it currently looks, and fine, that  
 25 would be a big problem in China, but it would be a much

136

1 more limited global impact, or it was going to become  
2 a pandemic. I couldn't see, based on the  
3 characteristics it had at the moment, a middle path  
4 where it was a moderate problem, and that was the point  
5 I was trying to make here.

6 **Q.** Which is why it is a dichotomous decision.

7 **A.** Exactly, why there isn't a fudge in the middle, which is  
8 obviously the temptation for people to go into. And if  
9 you have a pandemic, but not starting in your own  
10 country, there isn't a great deal you can actually do  
11 yourself to stop it. You can then do the things we  
12 talked about, so slow, delay, research and mitigate, but  
13 you can't stop it. That genie is out of the bottle and  
14 you have no control over it. So I wanted people to be  
15 aware that was basically the dichotomous position we  
16 were facing.

17 **Q.** And that is why, isn't it, you identified that the  
18 priority -- and we can see this at the bottom of the  
19 page at (4) -- is to prevent any UK transmission,  
20 because if the virus leaks out of China, then the wave  
21 is coming, that is what you're essentially saying,  
22 unless it can be prevented. This virus with these  
23 terrible characteristics is coming, because that's what  
24 viruses do.

25 So that's the key: prevent any UK transmission.

137

1 cannot be stopped if it is a pandemic, if it's  
2 sustainable human-to-human transmission and it's  
3 geographically spread out of China, it cannot be  
4 stopped; all we can do is slow -- delay the upswing, if  
5 you like, using different terminology?

6 **A.** Yeah, and I say that explicitly in the next sentence.

7 **Q.** Yes. So you were recognising, at this relatively early  
8 stage: once it leaves China, we're in trouble.

9 **A.** If it establishes -- well, I mean, spillover cases from  
10 China in themselves --

11 **Q.** Not spillover, but sustained human-to-human  
12 transmission.

13 **A.** Once you get into that situation, there is an extremely  
14 high likelihood you are in trouble, yes. Nothing in  
15 biological is certain, but an extremely high likelihood.

16 **Q.** No, but by this date, all the signs were that it was  
17 sustained human-to-human transmission. By this date,  
18 there were cases outside China; Japan, South Korea. By  
19 this date, or shortly thereafter, SPI-M-O was beginning  
20 to suggest that there was a probability it would come at  
21 some point.

22 **A.** I think -- so I'm going to just point out that,  
23 you know, the WHO, which is the normative organisation,  
24 had, I think, as of this point, still not called even  
25 a public health emergency of international concern,

139

1 **A.** Well, the key -- in a sense, this has two different  
2 aims, the prevent, in this context. If this was  
3 a SARS-like situation -- which I have to say looked  
4 increasingly unlikely by this stage, but if it was, for  
5 the sake of argument -- the point of this is simply to  
6 make sure that any spillover cases can be rapidly  
7 contained so this never establishes itself in the UK.  
8 You're not then saying this will turn into a pandemic,  
9 in fact you're saying no, this won't, but what you don't  
10 want to do is get any backwash from this. We had  
11 importations of SARS, we had importations of MERS, we  
12 had importations of Ebola; we picked them up and we  
13 treated them. That, in a sense, is the first element  
14 here.

15 If it's going to be a pandemic, you're never going  
16 to be able to stop it, and I think there's always  
17 an illusion you can stop it. You can't. You can delay  
18 it, and that was where a lot of the debate, of course,  
19 around border and other measures then took us.

20 But what we wanted people to realise is once you're  
21 in pandemic territory, the idea of stopping it is  
22 an illusion. You're not going to stop it. You can  
23 delay it, potentially, maybe.

24 **Q.** So when you referred to the priority being to prevent  
25 any UK transmission, what you really meant is the virus

138

1 which is well short of a pandemic. Pandemic was not  
2 declared until, I think from memory, 11 March. So,  
3 you know, international views, as with many things, you  
4 look back on this and say: how could they be so blind?  
5 How could they not see this? At the time, there was  
6 still quite widespread international debate amongst  
7 serious experts.

8 So, yes, there were experts who were saying, "This  
9 is definitely going to happen", there were experts who  
10 were saying, "Very doubtful", and there were points  
11 between. You know, I think it's very important we don't  
12 look back and say, "Well, of course you can see this is  
13 what would have happened", and I'm just pointing out the  
14 international evidence on this at the time is relatively  
15 clear. It was uncertain at this stage. But I think  
16 most people would agree it was heading further and  
17 further towards this is going to get bad, and my view  
18 is, you know, if this does get bad, this will be  
19 a pandemic. It's not a kind of an in-between.

20 **Q.** But your position was not predicated upon the WHO; far  
21 from it. You had your own views, your own expertise  
22 and, of course, the expertise of SAGE.

23 **A.** Yes, but --

24 **Q.** Right.

25 **A.** -- in a sense, what I -- actually, in this area, the UK

140

1 and WHO -- you know, WHO is a reasonable anchor point.  
 2 If you diverge from WHO -- and it was appropriate for us  
 3 to do so sometimes -- you have to have a good reason why  
 4 you're doing so. I think it's a reasonable, in a sense,  
 5 point of international comparison. It is the  
 6 international normative agency.

7 **Q.** Professor, you gave advice, you received advice from  
 8 SAGE, you relayed advice, and we can see from this  
 9 particular document, without any express regard being  
 10 made to the WHO's technical position and whether or not  
 11 a PHEIC or pandemic had been declared; correct?

12 **A.** The advice I consider is perfectly sensible advice.  
 13 What I'm saying is I think I would have been wrong at  
 14 this point to have said to Number 10, "The game is over  
 15 here, this is going to be a pandemic, there is no chance  
 16 of anything else". That would have been incorrect  
 17 technical advice from me to them. So what this gives us  
 18 two scenarios, one of which is a pandemic and one of  
 19 which is not, but both of which are worth taking very  
 20 seriously.

21 **Q.** And concurrently, you knew there was sustained  
 22 human-to-human transmission, or at least the signs were  
 23 all pointing in that direction. You knew, because  
 24 you've described to us how you were aware, that the  
 25 United Kingdom was poorly placed to be able to respond

141

1 previously it was reasonably housed.

2 **Q.** We presume, of course, that you wrote to the health SpAd  
 3 at Number 10 because, by this stage, the formal process  
 4 by which you gave advice to ministers and the  
 5 Prime Minister, of course, hadn't yet been set up  
 6 because, of course, SAGE itself wasn't yet operating at  
 7 full pace.

8 **A.** Yeah.

9 **Q.** There is a SAGE meeting on 28 January, INQ000203936, so  
 10 a week or so later, and on page 2 at paragraph 9 there's  
 11 a clear reference to sustained human-to-human  
 12 transmission, we can see it there.

13 Then on page 3 at paragraph 28, SAGE says this:

14 "For [United Kingdom]: SAGE agreed that the current  
 15 triggers which would require a change in HMG's approach  
 16 ... are appropriate."

17 Can you help as to why SAGE was still debating the  
 18 appropriateness of the triggers, as opposed to what  
 19 change in the United Kingdom Government's approach was  
 20 required in light of triggers being activated, which  
 21 of course you have agreed already they were?

22 **A.** Well, we -- if you're looking at those ones, "sustained  
 23 human-to-human transmission outside China", that's a key  
 24 rider to that, "and/or a severe UK case", which we had  
 25 not at that stage fortunately had.

143

1 in terms of the public health capability, in terms of  
 2 the absence of plans, in terms of the absence of control  
 3 measures to stop physically the virus reaching these  
 4 shores. So was it not therefore the case that this was  
 5 the point at which you appreciated we were in a terrible  
 6 bind; it was coming, and there was very little  
 7 practically that appeared to be possible to be able to  
 8 deal with it, other than delay the spread?

9 **A.** Well, I think "it was coming" implies certainty, which  
 10 I think is not where I'm saying I think we should have  
 11 been at this point. But, you know, it's pretty rare  
 12 that someone in my job -- not just me but my  
 13 predecessors -- writes this kind of email into  
 14 Number 10. This is not the kind of thing you do on  
 15 a kind of monthly basis or, indeed, yearly basis; this  
 16 is a rare event to say: we are very concerned. So we  
 17 have by this stage activated the SAGE mechanism, we're  
 18 writing into Number 10. As we'll go on to talk about,  
 19 a lot of briefings of very senior people across both the  
 20 official and the political system happened in short  
 21 order after this.

22 So I fully agree with you, this is a point we are  
 23 starting to move and escalate this as a major issue  
 24 across government, not just within the technical  
 25 agencies which, as we previously discussed, I thought

142

1 The point about this, though, is we think that both  
 2 of these are potentially very close in time, and that  
 3 was the reason that SAGE was meeting at all. I mean,  
 4 SAGE meets very, very rarely. To be clear, this is not  
 5 something which meets every time there is a mild  
 6 concern; SAGE meets because we think there is  
 7 the potential for a very serious all-of-government  
 8 response. If it's just a health department response,  
 9 then you would normally expect it to be dealt with  
 10 within the technical agencies of the health department.

11 **Q.** Why were there different triggers being utilised by SAGE  
 12 and, it would appear, building in a delay because SAGE's  
 13 opinion was these triggers haven't yet been triggered,  
 14 to the earlier triggers that you had advised were  
 15 appropriate, which was family-to-family or family  
 16 human-to-human transmission, geographical spread or  
 17 infection amongst healthcare workers? It rather appears  
 18 that these triggers had shifted the goalposts; they were  
 19 higher levels of trigger which would be required to  
 20 be --

21 **A.** Yes, and accepting that I rather regret that in my first  
 22 ones I used the word "triggers", because that's an  
 23 unhelpful -- probably an unhelpful framing. But I think  
 24 it was clear, and I think you're exactly right, that  
 25 they were to achieve two different levels of escalation.

144

1 So the ones that I did on 5 January were to say this  
2 needs to be escalated quite seriously within the health  
3 system, particularly Public Health England and the  
4 emergency response in the Department of Health and  
5 Social Care, which then it was. Part of that response  
6 was to trigger the SAGE system, also meetings of the  
7 permanent secretary in the Department of Health and  
8 Social Care, and at this point the SAGE triggers are  
9 about: what shall we do in terms of cross-government  
10 response, which is a significant step up from the ones  
11 that I was previously doing.

12 So you're right that they are different triggers,  
13 and the reason for that is they are to do different  
14 things, and this one is a: now the whole of government  
15 needs to be thinking about this if this is met.

16 **Q.** So from what you said earlier, the earlier triggers were  
17 there to identify a level of seriousness, you said you  
18 wanted government -- or government would then take it  
19 seriously. These triggers require, if triggered,  
20 a change in approach.

21 **A.** Yeah.

22 **Q.** What did SAGE mean and what did you understand that  
23 reference to HMG's approach to mean? Consideration of  
24 countermeasures, health campaigns, border measures?  
25 What is it that SAGE had in mind?

145

1 being triggered? What in practice does it amount to?  
2 Can you help us?

3 **A.** Well, the earliest things that would have to be  
4 considered -- and they are not easy and we should really  
5 talk about them either seriously or not at all -- are  
6 border measures, which require a lot of thinking,  
7 they've got implications for trade, they've got  
8 implications for diplomacy, they've got implications for  
9 the economy, they've got implications for consular,  
10 et cetera, but that's because one of your earliest  
11 things is to reduce the risk of importation. You also  
12 need to alert the overall economic system that this --  
13 that something which may well be a significant economic  
14 shock is in the vicinity -- doesn't mean it's going to  
15 happen, but they need to think about it -- et cetera.

16 There are a very large number of different things which  
17 will need to be considered which are for --

18 **Q.** Is this all in the context of borders?

19 **A.** No, this is in the context of -- the point about these  
20 are: what are the things which cannot just be done  
21 within the health system? That's really the question on  
22 this. And there are some things that -- very many  
23 things that can be done within the health system, but  
24 there are many things also which cannot be done within  
25 the health system, and I've just given some examples.

147

1 **A.** Well, I think at this point you're talking about  
2 measures which inevitably will require cross-government  
3 agreement and considerations, and I think you chose --  
4 you took the example of border measures, which are  
5 an extraordinarily complicated issue you might want to  
6 come back to --

7 **Q.** Professor, forgive me, we'll come back to borders.

8 **A.** No, but, in a sense, what I'm really saying is there is  
9 quite a big difference between things which are entirely  
10 within what is sometimes called the health family, where  
11 you can sort it out with a combination of NHS, public  
12 health and academia, and those things which are  
13 inevitably going to require, not just need -- indeed,  
14 not just desire, but require a cross-government  
15 response, and what these triggers would mean is a change  
16 of the whole of government. That's the HMG point. This  
17 is not a DHSC response, it's not an NHS response or  
18 a PHE response; this is an HMG response, ie whole of  
19 government.

20 **Q.** This entire debate, Professor, is of course taking place  
21 in the context of how a country and a government  
22 responds practically to an emerging crisis.

23 What in practice did SAGE understand the government  
24 would do? What was it advising it would do, what did it  
25 think it would do, in the event of these fresh triggers

146

1 There are many others.

2 **Q.** Well, let's look at borders.

3 By this date, advice on port health recommendations  
4 had already been given. You'll recall yourself and  
5 a DCMO, probably Sir Jonathan Van-Tam, advised it was  
6 too soon to do any additional measures on the basis of  
7 one case in Japan or one in Thailand.

8 On 2 February, so a few days after this, you engaged  
9 the advice of Professor Edmunds and Professor Ferguson.  
10 You made a request for their views on travel advice.

11 In relatively early February, 5 February, at a COBR  
12 meeting, you advised that, practically speaking,  
13 significant border measures -- and putting aside all the  
14 issues about the trade and commerce and flow of persons  
15 and the political connotations -- a stringent border  
16 process would be unlikely to achieve much, other than  
17 a delay to be measured in days of the emergence of the  
18 virus.

19 **A.** Yes, so that was a technical judgement.

20 **Q.** Yes.

21 **A.** And I wanted to check that other people who have  
22 different experience in this area thought this --  
23 you know, were able to challenge if they thought that  
24 this first view was incorrect. I didn't want it to be  
25 the last word. But my worry was I'd be asked for

148

1 an opinion, and I wanted to be sure that others who  
 2 I thought were good in this area had had a chance to  
 3 disagree if they felt that my opinion -- my provisional  
 4 opinion was wrong.

5 **Q.** Indeed, and I think we can deal with borders relatively  
 6 speedily, because in terms of the merits of border  
 7 measures, evidence has been received by the Inquiry to  
 8 the effect that less stringent measures, such as  
 9 screening and leafleting and temperature checks, are  
 10 unlikely to work because they can be circumnavigated,  
 11 there are very real practical difficulties with any  
 12 border system of restriction, and, scientifically, there  
 13 was no support for complete border closure or  
 14 quarantines because (a) they are very difficult to  
 15 maintain, (b) they are politically very divisive and,  
 16 thirdly, they were just unlikely to work.

17 **A.** Yes, and I think -- in a sense, I think that the  
 18 technical judgements were -- there's no evidence  
 19 subsequently that has come to light that they were  
 20 wrong, and -- but if I were to re-run this period again,  
 21 and I think it's important to be reflective, the thing  
 22 which we didn't I think consider enough was: should we  
 23 be asking people coming back from China to  
 24 self-quarantine, irrespective of symptoms, for probably  
 25 10 or 14 days? We were beginning to do so on the basis

149

1 So what other --

2 **A.** Can I just be --

3 **Q.** Yes, please.

4 **A.** -- very, very clear: unilateral border measures by the  
 5 UK, I think we were all very confident would have very  
 6 minimal effects. Had, for example, China chosen to  
 7 close its borders right at the beginning, it's difficult  
 8 to tell what would have happened and that could have led  
 9 to a different situation.

10 But in terms of the decisions the UK had sovereignty  
 11 over, ie its own borders, that was the situation, yes.

12 **Q.** I'm not concerned with what China might have done,  
 13 because coming back to the 28 January SAGE meeting and  
 14 that paragraph 28 on page 3, I was asking you: what in  
 15 practice did SAGE or you envisage HMG's approach to  
 16 mean? And you said borders was one issue and there were  
 17 a number of other public health issues -- public health  
 18 measures. But borders, bluntly, closure of borders, was  
 19 never a runner, and that was generally appreciated by  
 20 that date, by the SAGE meeting.

21 **A.** Actually, I'm going to add a caution to this. One of  
 22 the other things that are important in borders is the  
 23 maintenance of public confidence, which is not  
 24 an epidemiological or public health issue, but there  
 25 have been examples, I know, where borders have been

151

1 of symptoms.

2 Now, as it turns out, this wouldn't have made any  
 3 difference. As you've got evidence from others, the  
 4 importations that happened, as we actually were  
 5 anticipating, were mainly from our neighbours, not  
 6 directly from China.

7 **Q.** And they were largely in half term. It would have taken  
 8 time for any effective quarantine to be set up.

9 **A.** Yeah, no, in practice I think it would have made no  
 10 difference. All I'm saying is it's very -- you know, in  
 11 many areas, I think hindsight has led people to take  
 12 unduly harsh views about what should have been done.  
 13 Here's an area in which I think we probably should have  
 14 done something different, even though it probably  
 15 wouldn't have made much difference. But I think in  
 16 terms of, you know, what's our future doctrine, I think  
 17 this is an area we should probably re-examine. So  
 18 that's not the same as stopping flights or screening,  
 19 both of which I think have very profound difficulties.  
 20 This is a rather different approach.

21 **Q.** But the point, Professor, is that it was already  
 22 understood by 28 January, that SAGE meeting, or very  
 23 shortly thereafter, that in terms of efficacy, border  
 24 measures were impracticable or unlikely to work or just  
 25 impossible for a variety of reasons.

150

1 closed essentially for that reason, and that was  
 2 a reasonable political decision. So I just think it's  
 3 important -- I just want to be clear that it's  
 4 an example, slightly counterintuitively, where the  
 5 political choice might be to go further than the public  
 6 health advice necessarily would lead.

7 **Q.** My question, though, was all predicated upon your  
 8 description in paragraph (4) of that email to  
 9 William Warr, the health SpAd, that the priority was to  
 10 prevent transmission in the United Kingdom. So we are  
 11 only concerned with measures that could be taken by  
 12 the United Kingdom Government.

13 So I ask you again: what other practical measures  
 14 were in mind at the end of January/the beginning of  
 15 February, other than borders, which we've debated, which  
 16 would have been reflective of the change in HMG's  
 17 approach which SAGE envisaged would be brought about by  
 18 the triggers being triggered? What in practice was  
 19 available, Professor, and what could be done in  
 20 practice?

21 **A.** Well, I think that we should have taken a -- so there  
 22 are several different things we could have done, none of  
 23 which I think would probably have made a lot of  
 24 difference in reality, but I think that this is an area  
 25 where, in my view, government should have started, not

152

1 necessarily that day, but within the next week -- and  
 2 I'll come back to where I think we had an opportunity  
 3 and didn't go there -- to start seeing this as a massive  
 4 threat to the whole UK, economic and social as well as  
 5 medical, as indeed transpired, and that really is the  
 6 question, I think, which this should trigger.

7 But the problem we would have here -- and this is  
 8 repeatedly going to be the case, I'm afraid -- is the  
 9 point at which you can make these kind of comments in  
 10 SAGE. We didn't at this stage have any cases in the  
 11 UK --

12 **Q.** 30 January.

13 **A.** 30 January -- that we knew of. That we knew of.

14 **Q.** Well, the first case was published on 30 January, the  
 15 person in York.

16 **A.** Yeah, exactly, but --

17 **Q.** One day later, two more.

18 **A.** Yes, exactly. Once we get to this point, we're starting  
 19 to take off, but I'm just saying the numbers are very  
 20 small, we haven't got any deaths in Europe, fortunately,  
 21 for another two weeks -- at all, not just in the UK, UK  
 22 was later, fortunately -- so whether you could get  
 23 political movement based on those extremely small  
 24 numbers I think is an interesting question that we will  
 25 never know the answer to.

153

1 officials, COBR met, I briefed the Prime Minister  
 2 directly, briefed parliamentarians, briefed the  
 3 opposition, this is all over the newspapers. So the  
 4 idea that government was unaware of this because they  
 5 hadn't read this paragraph in SAGE I think is probably  
 6 a little unfair. I think --

7 **Q.** Professor, no one --

8 **A.** -- it is very clear we were escalating at quite a high  
 9 level in government. It's -- you know, these are all  
 10 things that you wouldn't do under ordinary  
 11 circumstances.

12 **Q.** No one is suggesting that the government should have  
 13 been aware of that particular paragraph. I'm referring  
 14 to your own answer, which is that perhaps -- perhaps --  
 15 the nature of the massive threat wasn't understood or it  
 16 wasn't called out clearly enough, it wasn't appreciated  
 17 perhaps by those who needed to understand it.

18 You obviously called for a precautionary SAGE and  
 19 there was a precautionary SAGE, and there were multiple  
 20 meetings of SAGE, COBR, and then a stocktake meeting on  
 21 4 February, prime ministerial meetings, Cabinet and so  
 22 on throughout February. But nowhere, beyond the debate  
 23 about the need for plans and then the need for modelling  
 24 in SAGE and the need for a proper understanding of the  
 25 position, does any part of the government openly say,

155

1 All I'm just saying is: we shouldn't assume that,  
 2 even had these triggers been met, action would  
 3 necessarily have flowed. I'm just saying that --

4 **Q.** Quite so.

5 **A.** But I think that it is important to note that this is  
 6 not just a health problem if it happens; this is clearly  
 7 going to be a societal problem that needs to be  
 8 escalated across government.

9 **Q.** Why did SAGE and yourself and other scientific advisers  
 10 in government or other advisers in government not shout  
 11 out, beyond the extent to which you did, which you wrote  
 12 an email to the health SpAd, shout out that there was in  
 13 fact a massive threat, and it was massive because the  
 14 practical means of ensuring control or keeping the virus  
 15 away from our shores were effectively absent --

16 **A.** Well, as you'll --

17 **Q.** Sorry, if you'll allow me just to finish the question --  
 18 and the data was then already clear that there was  
 19 sustained human-to-human transmission with chains of  
 20 transmission? So it's a massive threat because there  
 21 was a massive problem, and you were aware that there was  
 22 a massive threat. Why wasn't the government aware?

23 **A.** Well, as you will see over the next few days, of my  
 24 statement, which I think lays it out reasonably clearly,  
 25 over the next few days we briefed national security

154

1 "There is a massive threat and we are woefully  
 2 under-prepared for it, and something must be done at the  
 3 very highest level and with real urgency". That tenor,  
 4 Professor, appears to be missing from that material.

5 **A.** Well, in my view, it might be more useful to go through  
 6 the next few days, because I think they lay out how we  
 7 did escalate this right to the top of government, and  
 8 indeed more widely, not just the governing party. And,  
 9 you know, your point is right, but therefore we did  
 10 something. So I think that's the --

11 **Q.** You did something?

12 **A.** Yes.

13 **Q.** But why wasn't the degree of the threat, of the problem,  
 14 the massive nature of the threat, seemingly fully  
 15 understood?

16 **A.** Well --

17 **Q.** You escalated the problems and you pulled every lever  
 18 open to you in terms of the government process.

19 **A.** Well, I think it depends whether you'd like to have this  
 20 discussion now or walk through the next few days and  
 21 then I can try and retrospectively say where I think we  
 22 could have probably gone in a different direction, if  
 23 our doctrine within government was definite -- was  
 24 better in this area.

25 **Q.** All right. Well, we are going to look at those

156

1 documents, as you know well.

2 **A.** I mean, I can do it now if you prefer.

3 **Q.** No, no, no.

4 **A.** I think it works better if we kind of see some of the

5 actions we actually did take, rather than the ones you

6 are not allowing me to move on to.

7 **Q.** Professor, we will be moving on to them, and I'm

8 allowing you to move on to them.

9 By the end of January, in addition to the material

10 which we've debated, of course it was obvious that there

11 were cases in Thailand, Japan, South Korea, the

12 United Kingdom, Germany. There was also a Lancet

13 article, was there not, at the end of January which had

14 made plain the nature of the human-to-human

15 transmission? It concerned a family that had travelled

16 to Wuhan.

17 So on 2 February, you were emailed by

18 Professor Ferguson, who I think gave you a central

19 estimate of the case fatality rate; is that correct?

20 **A.** Yes.

21 **Q.** What did that tell you about the likely level of

22 morbidity -- mortality, I apologise, amongst identified

23 cases?

24 **A.** So without pulling it up, because I was sent, by

25 multiple people, multiple different versions, but all of

157

1 available which have, with the fullness of time, proved

2 to be broadly correct? So case fatality rate, infection

3 fatality rate, hospitalisation rate.

4 **A.** If you look at, for example, the email we've just

5 discussed to Number 10, none of the figures I put in

6 that have actually substantially moved since the time

7 that I read them. These weren't my numbers; I was

8 reporting other scientists' excellent work. But we'd

9 already settled -- although at that point we had wide

10 confidence intervals around all of them, actually as the

11 confidence intervals have narrowed, we've still ended up

12 in a pretty similar central position, which I think is

13 a great tribute to Chinese and UK scientists, amongst

14 many others.

15 **Q.** So we may be clear about the information available to

16 you, those were matters such as the reproduction number,

17 the doubling time, the incubation period, case fatality

18 rates, that sort of information?

19 **A.** Yes. I mean, some of those are probably intrinsic to

20 the virus, so things like the incubation period. Things

21 like doubling time and the effective R number, not

22 necessarily the R0, they will vary over time and

23 depending on a number of other factors, including

24 actually NPIs, as we will no doubt come on to.

25 **Q.** Yes.

159

1 them triangulated around somewhere between 1% and 4%

2 mortality in cases that had been found, but with a very

3 heavy health warning -- and they would have agreed with

4 this -- that calculating mortality rates early on in

5 a pandemic, when there's an upswing and you don't have

6 the ability to detect minimal or asymptomatic cases, is

7 fraught with technical difficulties.

8 So I think all of us thought that there was a very

9 wide range around these estimates. So no single one of

10 them, in my view, you get and you think: well, that's it

11 solved. It took quite a while before we were confident.

12 But the ballpark I thought was got right, actually. And

13 I think if you look back over these numbers --

14 **Q.** They're pretty good.

15 **A.** -- I think they were pretty good, actually. You know,

16 three weeks in to a completely new to the world disease,

17 relatively few of these numbers have moved very much

18 since. So that is quite a -- you know, the technical

19 response was, in that sense, impressive.

20 **Q.** And when you say since, you mean, do you, by the end of

21 January?

22 **A.** No, I mean, up to the end of -- until we get to Omicron,

23 I think the numbers that were --

24 **Q.** No, no, no, sorry, we misunderstand each other.

25 At what point were the majority of these figures

158

1 **A.** So they're not fixed. But some of them are fixed, and

2 those ones I think were pretty reasonable as a first

3 pass.

4 **Q.** There was then a SAGE meeting on 4 February. We'll have

5 that up briefly, INQ000051925. SAGE noted on page 3 at

6 paragraph 19 that:

7 "Asymptomatic transmission cannot be ruled out and

8 transmission from mildly symptomatic individuals is

9 likely."

10 Insofar as SAGE was unable to rule asymptomatic

11 transmission out, as opposed to saying it is in

12 existence, was that a reflection of the data that was

13 of course available at that point?

14 **A.** Yeah. I think this was a perfectly sensible assessment

15 of what we knew at that point, yes.

16 **Q.** Just to be clear, asymptomatic transmission or the issue

17 of asymptomatic transmission is quite different,

18 of course, from the issue of human-to-human transmission

19 that we were debating earlier.

20 **A.** Yeah, and different again from asymptomatic infection,

21 where someone catches the disease, has no symptoms and

22 does not pass it on. That's a different thing again,

23 and actually quite an important distinction, those two.

24 **Q.** Yes, and you've addressed that in your statement at some

25 length.

160



1 A. Yes.

2 Q. On 4 February, there was what we've been calling the  
3 stocktake meeting, and that's the meeting to which you  
4 referred earlier, Professor. That is, I think, at  
5 INQ000146558, or at any event this is a letter from  
6 Imran Shafi, who reported upon the meeting, and this was  
7 a meeting between yourself and the Prime Minister, the  
8 Secretary of State, and a number of advisers and  
9 colleagues.

10 A. Including the National Security Adviser.

11 Q. Including the National Security Adviser.

12 The second paragraph on that page -- it is, as it  
13 happens, the only substantive paragraph that deals with  
14 coronavirus:

15 "We began with a short update on coronavirus.  
16 Following an update from the CMO, the Prime Minister  
17 stressed the need to continue to explain our stance to  
18 maintain public confidence in the plan."

19 May we presume that's a reference to the government  
20 plan, whatever it might have been by that date?

21 A. Yeah.

22 Q. "On further travel restrictions, your Secretary of State  
23 was engaging [Foreign and Commonwealth Office] and  
24 European colleagues and would revert with a proposal on  
25 the way forward ..."

161

1 A. Yeah.

2 It was reasonable to think that we would be looking,  
3 on first pass, at maybe 100,000 to 300,000 deaths,  
4 which, to be clear, is pretty accurate compared to where  
5 we are, sadly, now. I wasn't saying this was certain.

6 Now, the important second point, this wasn't some  
7 maverick coming in and saying this; this was on the  
8 basis of SAGE meetings chaired by the Government Chief  
9 Scientific Adviser, COBR had met, the World Health  
10 Organisation has by now declared a public health  
11 emergency of international concern, this is all over the  
12 news.

13 Now, the point I would like to make on this, because  
14 I think this is actually something where we really do  
15 need to think very seriously in government, is that had,  
16 let us say, the Director General of MI5 or the Chief of  
17 the General Staff come in and said, "There is  
18 a possibility of 100,000-plus people sadly dying from  
19 a terrorist attack or an attack on the UK", the chances  
20 that this would have been the response in the letter and  
21 that this is what would have -- that the system would  
22 have continued as it did next COBR meeting, still  
23 chaired by the Secretary of State for Health and Social  
24 Care, I think is quite small.

25 The reason I'm making that point is: this was not

163

1 But in truth, the big issue of border closures or  
2 significant restrictions had already been advised upon,  
3 at least in the first instance, because it was an issue  
4 that came back, didn't it, again and again?

5 A. Yeah.

6 Q. "... which will require an assessment of what  
7 constitutes a proportionate response. Please keep No10  
8 closely involved on key decisions in the coming days."

9 There wouldn't appear, Professor, on the face of  
10 that paragraph, to be much by way of reflection of the  
11 massive threat that you described.

12 A. I agree. So can I give a little bit of a commentary on  
13 this, because I think this is a fundamental issue of --  
14 not of the individuals, and I want to be very clear.  
15 I think the private secretary, for example, is doing  
16 what he should do. He is an outstanding private  
17 secretary -- he was -- and colleague subsequently.

18 You have a situation where the Chief Medical  
19 Officer, and as you know from other documents, reported  
20 to the Prime Minister that there was a possibility -- it  
21 wasn't a certainty -- of a pandemic, and if this  
22 pandemic occurred, my view was it was reasonable to  
23 think -- this is not the same as a reasonable worst-case  
24 scenario, and I want to be clear on that --

25 Q. Can you go, please, much slower on this important issue.

162

1 a new consideration. Pandemic infection -- flu, but  
2 this is very similar to pandemic flu -- has been top of  
3 the National Risk Register for years. This is not a new  
4 potential threat. So my worry has always been -- and  
5 I think this, in a sense, reflects it -- that hard  
6 geopolitical threats are treated in a different way --  
7 and in my view an entirely appropriate way, this isn't  
8 a criticism of what they do -- to ones which are seen as  
9 natural threats or hazards. And that, I think, is  
10 something collectively that we should think about,  
11 without ascribing this to any person. I don't think --  
12 you know, I think the same could very easily have  
13 happened under a number of prime ministers and with  
14 a number of others in the room. This is not a statement  
15 about the individuals; this is a statement about the  
16 system, in my view, underplaying, relative to other  
17 threats, the natural threats, including health threats.

18 So that, I think, is quite a fundamental point,  
19 because I think had that -- yeah, had we essentially had  
20 the centre of government electrified by this, I'm not  
21 saying the outcome would have been different, but  
22 I think it would at least have led to a stronger  
23 all-of-government think-through of all the potential  
24 consequentials.

25 Q. There is a lot in that, Professor. Can I just divide it

164

1 up briefly.

2 In terms of the system, the Inquiry heard a great  
3 deal of evidence in Module 1 about how the government  
4 system is differently designed depending on whether or  
5 not it's dealing with a threat -- a terrorist outrage,  
6 for example -- as opposed to a risk.

7 Is it that divide to which you're making reference,  
8 in terms of the absence of an equally sophisticated or  
9 speedy system by which threats can be rapidly responded  
10 to, in the context of risks and, for example, public  
11 health emergencies? Is that the point you're making?

12 **A.** Yes, this is a -- this is something which was already  
13 top of the National Risk Register --

14 **Q.** Indeed.

15 **A.** -- with understood consequential across all of  
16 government, and that seems to me the reason why this is  
17 an opportunity where we probably could have moved up  
18 a gear or two, across government. And, as I say,  
19 I don't consider this is a personnel problem; I consider  
20 this is a systemic problem.

21 **Q.** If you'll allow me, you've made that point, and I'm not  
22 suggesting that this is a personnel problem. This  
23 failure, if it is -- and we'll debate that -- was not  
24 a failure on the part of any given individual.

25 But putting aside your very valid point about  
165

1 necessary electrification; that there was a complete  
2 absence of any understanding that the threat faced by  
3 the United Kingdom was of that magnitude, as you have  
4 described, the massive threat. Would you not have  
5 picked up the phone and said to somebody in  
6 Downing Street, "You've completely failed to understand  
7 the significance of this threat, the emergency that this  
8 constitutes, the magnitude of this crisis"?

9 **A.** I think that the response -- and you I think have seen  
10 some of the toing and froing -- was to debate which  
11 hundreds and thousands was the correct hundreds or  
12 thousands, which didn't strike me as material, although  
13 I wasn't actually aware of it at the time.

14 **Q.** Indeed.

15 **A.** But that's neither here nor there.

16 **Q.** Is that a reference to the text messages between  
17 Lord Sedwill and Sir Christopher Wormald?

18 **A.** Yes, and to be clear, Sir Chris Wormald was trying to  
19 push on this point. But I don't think that there is  
20 a -- and he was the person who got this into the agenda.

21 I think that the point I'm making here is: this is  
22 how -- you know, the system is not designed to  
23 understand a threat, even when it is top of the National  
24 Risk Register, where it is a health or, I would say,  
25 other natural phenomena, in fact, but let's stick to  
167

1 whether or not there might have been a different  
2 reaction if this had been a full national security  
3 crisis, the fact remains that the massive threat that  
4 you yourself have described is not apparent on the face  
5 of this paragraph. I mean, nobody at the heart of  
6 government appears to have been electrified, to use your  
7 word, by the information that there was a massive  
8 threat. Why was that?

9 **A.** Well, I mean, I think, in a sense, that is my point, is  
10 the system is surprisingly bad at, in my view,  
11 responding to threats of this kind which are not in the  
12 traditional national security system, and I think that  
13 is a -- I don't think that's an insoluble problem, which  
14 is the reason why I want to surface it, and I think it  
15 is largely to do with the way that the national security  
16 apparatus interprets its role, and I think it's an area  
17 where we could probably make significant changes,  
18 personally.

19 **Q.** You have repeatedly, if I may observe, said "we", "we in  
20 government". You personally, did you see this letter  
21 after the stocktake meeting on 4 February?

22 **A.** I can't recall whether I did. It wouldn't have  
23 particularly surprised me if I had.

24 **Q.** If you had, Professor, you would have seen from this  
25 paragraph that there was a complete absence of the  
166

1 pandemics, because that's what this Inquiry is more  
2 narrowly about.

3 **Q.** And whether it's called toing and froing on the part of  
4 government, whether it's called a failure to understand  
5 the degree of the massive threat or the magnitude of the  
6 crisis, there was a hugely important systemic failure at  
7 this point, was there not?

8 **A.** Yes. I mean, I think there's a big question about  
9 whether it would have made a difference to what  
10 subsequently transpired, and I don't think we should  
11 draw that line too firmly --

12 **Q.** No.

13 **A.** -- but I certainly think that it would have been  
14 something which -- let me be mealy-mouthed about it:  
15 under ideal circumstances, there would have been  
16 a different response.

17 **LADY HALLETT:** Apart from education or training, how would  
18 you change the approach to a terrorist threat and  
19 a natural hazard?

20 **A.** I think I would start off with: what's the level of  
21 damage that the UK is going to sustain, and start from  
22 that, rather than which type of threat is it we're  
23 talking about. Because the sort of terrorist threat,  
24 for example, or what kind of -- yes, if I use "threat",  
25 "threat" in a generic sense, rather than more narrowly.  
168

1 I think that -- do people in the security apparatus in  
2 Number 10, in other areas, Cabinet Office, view the kind  
3 of work that, for example, the UK Health Security Agency  
4 does with the same degree of interest and importance as  
5 they would view, rightly, MI5, Special Branch, all these  
6 kinds of things? And my personal view is I don't think  
7 they do, and I think these should be seen as national  
8 security problems when they're on this scale.

9 On smaller incidents, I think it's perfectly  
10 reasonable to take it differently. But I think if we're  
11 talking about something that is going to clearly have an  
12 impact across the whole of government, including very  
13 obviously on the economy, in addition to substantial  
14 loss of life, education, all these kind of things, then  
15 I think there is a strong argument for saying: why do we  
16 not put them, in a sense, on an equal footing in terms  
17 of the degree of impact they're going to have on  
18 society?

19 **LADY HALLETT:** But how do you give them an equal footing?

20 Is it a question of training, or is it a question of  
21 saying: when it does become a national security threat,  
22 given the level of potential consequences, the National  
23 Security Adviser gets -- how do you get that across?

24 **A.** I think -- so, in reality, the only people who can  
25 actually operate -- there are three departments that can

169

1 letter is a pretty clear indication of that. I just  
2 don't think this would have been the letter under  
3 different circumstances in the way I've talked about.

4 Others could take a different view, but I'm  
5 expressing an opinion because I think this is something  
6 which at least the Inquiry will want to take a view on,  
7 even if its view is they don't agree with my position.  
8 I'm just taking a position.

9 **MR KEITH:** But before the break, may I ask you to consider  
10 the question I put earlier. Your answer was not  
11 unhelpful, but it didn't in fact address the question,  
12 which is: on the premise that -- on the basis that there  
13 was, however one might describe it, a system failure or  
14 a failure to acknowledge the existential threat or the  
15 massive threat, why, as the weeks in the middle and  
16 later February began to roll out, you and others who  
17 were equally aware of the nature of that existential  
18 threat were not emailing Number 10 or shouting out your  
19 concern that central government had fundamentally failed  
20 to understand the nature of the threat that you had  
21 described?

22 **A.** Well, I mean, short of ... I mean, it's difficult to  
23 work out where you can go once you've talked to all the  
24 people I talked to, and there's a very long list of  
25 people who Sir Patrick -- and Sir Patrick had also --

171

1 operate across all when the government needs to do  
2 something: Number 10 obviously, Treasury and  
3 Cabinet Office. And my view is this should have led to  
4 them saying, "This is no longer your problem, Health,  
5 that is our problem, this is now a huge problem for the  
6 system, and this is going to come into the centre  
7 because the centre can then assess this".

8 Now, this is not to say there weren't excellent  
9 people in the Cabinet Office, in the Civil Contingencies  
10 Secretariat and so on, already on this. It wasn't that  
11 there was no interest in this from individuals within  
12 the Cabinet Office and so on. But it had not, in my  
13 view, been seized in the way that a similar kind of  
14 level of existential threat would have been from another  
15 direction.

16 I think there are a variety of ways this could be  
17 done, and it's very dangerous for me, as a Chief Medical  
18 Officer, to start doing the job of a Cabinet Secretary,  
19 because I'm clearly not, but what I do think we need to  
20 do is think through: actually, how do we get this very  
21 quickly into the centre so that it is able to take the  
22 necessary steps? And you could say: well, this was  
23 delegated to the Secretary of State for Health and COBR  
24 was meeting and so on, but that isn't how in my view it  
25 feels, and in this case in my view felt, and I feel this

170

1 I think he didn't get to cover it in his oral evidence  
2 yesterday, but he has, I think, covered it in his  
3 written one. He also, through the good offices of  
4 Mr Cummings, tried to escalate this into the centre. So  
5 it's not that there weren't attempts to do this, but  
6 I don't think -- and, you know, this in my view is  
7 a situation which I don't -- you know, I'm not convinced  
8 that had we done things differently, it would have led  
9 to a different outcome. I have said that --

10 **Q.** You have made that point.

11 **A.** -- and I want to repeatedly say that. Nevertheless,  
12 I think nobody looking at this could say this was ideal.

13 **Q.** That is, if I may say so, with the greatest of respect,  
14 quite an understatement. This was a hugely significant  
15 moment and a terrible flaw.

16 **A.** My view is that it demonstrates an issue which needs to  
17 be thought through.

18 **LADY HALLETT:** Very well, we'll break now.

19 I'm afraid I understand we're not going to finish  
20 your evidence today, Sir Chris, I'm so sorry. I think  
21 you were warned. I know the burden we're placing on you  
22 and your relatively small office, and I'm really sorry,  
23 but you know how important this is.

24 **THE WITNESS:** Thank you, my Lady.

25 **LADY HALLETT:** So I'll return at 3.30.

172

1 (3.14 pm)

2 (A short break)

3 (3.30 pm)

4 **LADY HALLETT:** Sir Chris, just so you know, I know the kind  
5 of concentration it takes to give evidence all day, and  
6 as you're going to have to come back tomorrow anyway,  
7 I've asked Mr Keith to finish tonight at about 4.30, and  
8 I think there's a limit to how much we can ask you to do  
9 in one day.

10 **THE WITNESS:** Thank you, my Lady.

11 **MR KEITH:** So we were at the point of the stocktake meeting,  
12 so-called, on 4 February.

13 There were then -- and you've referred in generality  
14 to these -- a number of meetings, COBRs, Cabinets, SAGE  
15 of course, throughout the rest of February, and your  
16 point about the number of occasions at which you  
17 addressed this looming crisis or massive threat is well  
18 made. I mean, there's hundreds of pages of learning  
19 produced by SAGE and the subcommittees, and obviously  
20 the matter is addressed at a variety of other different  
21 government meetings. There was a COBR on 5 February.

22 There was a paper produced, I think, by the London  
23 School of Hygiene and Tropical Medicine on 7 February  
24 from its division, CMMID. This isn't a memory test,  
25 Professor. Do you recall whether or not you were given

173

1 around Wuhan and the surrounding province of Hubei, it  
2 may be possible to prevent widespread infection in the  
3 UK. If the virus spread beyond China to its neighbours  
4 and across the world, then the UK would not be immune."

5 So that's the point you made earlier: that once  
6 control is lost, once the virus has leaked from China  
7 and it is sustainable geographically outside China, then  
8 game over.

9 Is it correct that by this date, 14 February, it was  
10 known that there were cases not only in Japan,  
11 South Korea and geographical regions contiguous to  
12 China, but of course in Germany, in the United Kingdom  
13 and Europe?

14 **A.** Yes.

15 **Q.** You couldn't have been very hopeful, given the nature of  
16 the transmission, the now known characteristics of the  
17 virus and the geographical spread, that the body of the  
18 outbreak -- not peripheral cases, but the body of the  
19 outbreak -- would remain confined to China and/or that  
20 the Chinese would be able to suppress it, could you?

21 **A.** I certainly by this stage -- and I think this is true  
22 for most people -- moved to a position where it was more  
23 likely than not that we were going to end up with  
24 a pandemic. Yeah.

25 **Q.** If we look at page 7, we can see that at the top of the

175

1 that paper? It was a paper which dealt with the  
2 feasibility of controlling 2019 novel coronavirus  
3 outbreaks by isolation of cases and contacts.

4 **A.** I can't recall, only because I received multiple  
5 versions of multiple papers, and remembering that far  
6 back I think would be optimistic.

7 **Q.** Indeed. Essentially -- and this is the evidence of  
8 Professor Edmunds, that he produced a report, or rather  
9 CMMID produced a report, which showed that a very high  
10 number of contacts or fractions of contacts would have  
11 to be traced and isolated for effective control to work.

12 There was also -- and you've referred to this  
13 earlier -- a report 4 from ICL dated 10 February, this  
14 is the one you referred to, which said this: that there  
15 was an overall case fatality rate in all infections,  
16 asymptomatic or symptomatic, of approximately 1%.

17 There followed thereafter an important Cabinet  
18 meeting on 14 February. Perhaps we can have a look at  
19 that. It's INQ000056138. If we look, please, at page 6  
20 of this meeting, we can see the following is reported:

21 "THE GOVERNMENT'S CHIEF MEDICAL OFFICER said that  
22 the published figures of around 60,000 cases of the  
23 virus in China could in reality be ten times higher.  
24 There were over 1,000 people in China reported to have  
25 died from the virus ... If the virus remained centred

174

1 page it says this:

2 "Concluding, THE GOVERNMENT'S CHIEF MEDICAL OFFICER  
3 said that if the virus became widespread in the UK,  
4 there were plans in place that could slow down its  
5 spread."

6 Accepting, of course, that this may not be  
7 an accurate reflection of what was said, if you said,  
8 "If the virus became widespread in the United Kingdom",  
9 would that be an accurate reflection of your  
10 understanding that, the virus having left China, spread  
11 to the United Kingdom was inevitable?

12 **A.** Well, leaving China, you could certainly have chains of  
13 transmission outside China and it would still be in the  
14 scenario where it was controlled globally, but I think  
15 by this stage it was much less rather than more likely.  
16 So, as I say, this probability was not a binary one, it  
17 was gradually shifting, but it had now shifted, I think,  
18 to this being, I think, more likely than not that we  
19 were going to end up with a pandemic.

20 **Q.** Did the government, to whom of course you were reporting  
21 at this Cabinet meeting, understand that it was still  
22 conditional, that if the virus became widespread, there  
23 were plans in place; or do you think they did understand  
24 it was a pandemic, ie it wasn't just a regional  
25 outbreak, not just an epidemic, that it had spread

176

1 beyond China, it was in the United Kingdom and it was  
 2 sustained transmission? Do you think they got that?  
 3 **A.** I do think that, and actually it's extremely rare, in  
 4 fact, that the Chief Medical Officer is invited to  
 5 Cabinet under ordinary circumstances. This reflects the  
 6 fact, I think, that government was acknowledging that  
 7 this was a substantial threat.

8 May I just pick up one point in this which is not  
 9 relevant to your question but I think may be useful  
 10 later on, which is just to make the point that we were  
 11 already -- we were making very clear this could be more  
 12 than one peak, because I think that got a bit lost in  
 13 some of the --

14 **Q.** We'll come back to that.

15 **A.** -- narratives.

16 **Q.** You also say to Cabinet there were plans in place that  
 17 could slow down its spread. Mindful of what you've told  
 18 us about the lack of efficacy in terms of border  
 19 controls, the information which you knew anyway but  
 20 which you had received saying practical measures of  
 21 controlling spread were difficult, what plans in place  
 22 did you have in mind when you said there were plans in  
 23 place that could slow down its spread?

24 **A.** Yes, I think you should read this two ways, and both  
 25 would be correct. One is that there are things we could

177

1 **A.** Certainly. I think by this stage, I think that there  
 2 was quite a recognition that there was a significant  
 3 threat. The way this is reported is a fairly bland way,  
 4 but that doesn't necessarily mean it was a bland  
 5 presentation.

6 **Q.** Indeed.

7 **A.** I can't, frankly, exactly remember what I said, in  
 8 exactly which words I used it. But I think, you know,  
 9 this is a -- you know, if I were listening to this in  
 10 Cabinet, I would be concerned. I think that one of the  
 11 things that, however, we really did not find easy to get  
 12 across, and I found this surprisingly -- surprising,  
 13 given that so many people in both politics and in the  
 14 official system are trained in economics, is the  
 15 extraordinary power of exponential growth to get you  
 16 from small numbers to large numbers very quickly.  
 17 People just don't get that intrinsically. I think  
 18 they've got it a bit more now because of having seen it,  
 19 but certainly prior to this pandemic, I think people  
 20 just didn't understand how quickly you move from it's  
 21 actually very small numbers to it's actually very large  
 22 numbers and doubling every few days, that that can be  
 23 really quite quick.

24 **Q.** I'm sorry to press you on this, Professor. You said you  
 25 do think that they recognised that there was

179

1 do to slow, but I wanted to be clear that there was  
 2 nothing we could do to stop, and that is an important --  
 3 in a sense, that is an important -- and I was clear not  
 4 to say. But this is where the slow -- this is where the  
 5 delay bit of the contain, delay, research, mitigate,  
 6 formulation really comes in. Obviously the biggest  
 7 elements of this in the early stages was identification  
 8 of cases and case-finding and isolation. For the  
 9 reasons you've given from Professor Edmunds and his  
 10 team, but I think this is widely accepted in the  
 11 literature, once you get to a very large amount of  
 12 transmission, those really are highly unlikely to work.  
 13 But in the early stages, a case-finding and isolation  
 14 strategy has a realistic chance, if you can find the  
 15 majority of the cases -- that's the big "if" -- in  
 16 significantly delaying the spread.

17 **Q.** The point I'm seeking to make is a slightly different  
 18 one, which is: sitting in the shoes of government and  
 19 reading those words or hearing them set out by the Chief  
 20 Medical Officer, "if the virus became widespread ...  
 21 there were plans ... that could slow down its spread",  
 22 they might not have been sufficiently, to use your  
 23 words, electrified, and therefore I wonder whether or  
 24 not this is a correct reflection of what you actually  
 25 said. Did what you say communicate the threat?

178

1 a significant threat. Did they sufficiently recognise  
 2 there was a threat of the order that you've described  
 3 earlier, the massive threat, the existential threat?  
 4 And it may be because members of government, as you say,  
 5 don't naturally understand the science. The notion of  
 6 exponential growth is a difficult one to grasp.

7 **A.** I think -- and you'll cast your mind back to remembering  
 8 the political environment at this stage -- the fact that  
 9 at this point they were devoting a sufficient amount of  
 10 Cabinet to this particular issue I think does mean that,  
 11 at a certain level, this has lodged as a major issue for  
 12 government, because it was quite a busy political  
 13 period, is my memory. However, you know, do I think  
 14 that most people round the table fully grasped what  
 15 would happen if this started to run exponentially?  
 16 I suspect the answer to that is no. But I wouldn't want  
 17 to put -- I wouldn't want to interpret their thoughts.

18 **Q.** No, but you recognise, of course, that one of the hugely  
 19 important functions of the Chief Medical Officer is to  
 20 be able to get them to understand the seriousness of the  
 21 position.

22 **A.** I was doing my best.

23 **Q.** Later in February, further information was received from  
 24 the Diamond Princess outbreak, that's to say the  
 25 outbreak of the virus on the Diamond Princess cruise

180

1 ship, which I think had taken place in early February,  
 2 but certain time passed before all the figures could be  
 3 computed and the estimates and the analysis done. But  
 4 if it was not already clear, it became abundantly clear  
 5 by the last week in February that the infection fatality  
 6 rate, that's to say the number of people who would die  
 7 having been infected, was of the order which had been  
 8 estimated, the case fatality rate was of the order as  
 9 had been originally estimated, that this virus was  
 10 hugely transmissible, and had significant -- around  
 11 about 30% -- asymptomatic transmission. All right.

12 **A.** Well, actually, on the last point, I think that was  
 13 a bit less clear, but it certainly strengthened the  
 14 principle that asymptomatic transmission was occurring.  
 15 I think 30% is probably --

16 **Q.** The estimates from Professor Edmunds, who had reported  
 17 on the data, were to that effect; would you accept that?

18 **A.** Yes, I would accept that. I'm just saying -- you said  
 19 it was very clear. I'm just saying I think it's not  
 20 quite that clear, but that's a technical point.

21 **Q.** You mentioned earlier the debate concerning reasonable  
 22 worst-case scenario, and I want to ask you briefly about  
 23 your views on that doctrine.

24 You make clear in your statement that the reasonable  
 25 worst-case scenario concerning pandemic influenza was

181

1 **Q.** Slow down.

2 **A.** I'm sorry.

3 **Q.** I'm sorry, Professor, please slow down.

4 **A.** Apologies.

5 So you quote the reasonable worst-case scenario,  
 6 which actually in the context of an unmitigated pandemic  
 7 or epidemic, where you know the mortality and the R, is  
 8 very easy to calculate. You can do it with a hand  
 9 calculator. It's not a complicated process. And then  
 10 they will say: well, how likely is that? To which the  
 11 answer is: extraordinarily unlikely, and then everyone  
 12 relaxes, but of course that's because it was the thing  
 13 which is highly unlikely to happen, which is nobody will  
 14 pay any attention to this, not just government but the  
 15 general population, and medicine will not find  
 16 countermeasures. So it can lead to a misunderstanding  
 17 and, counterintuitively, it can lead to people  
 18 underestimating the risk because they ask, in a sense,  
 19 the wrong question, which is how likely is the  
 20 reasonable worst-case scenario, to which the answer is  
 21 always: very unlikely. In fact, if that wasn't the  
 22 case, it isn't a reasonable worst-case scenario.

23 **Q.** In terms of efficiency of movement, or perhaps of  
 24 government, spending time talking about the probability  
 25 of something which is itself wholly improbable is not

183

1 predicated upon an unmitigated reasonable worst-case  
 2 scenario; that is to say that no steps are taken by the  
 3 government significantly to be able to respond, it's  
 4 unmitigated. Therefore, you make the point that,  
 5 actually, in terms of the reasonable worst-case scenario  
 6 being examined by government in its various forms, but  
 7 particularly in relation to pandemics, it's a wholly  
 8 improbable outcome, because no government will ever do  
 9 nothing.

10 **A.** Yes. So I think that the principle of reasonable  
 11 worst-case scenario is a reasonable one for certain  
 12 planning purposes, and it's basically to ask the  
 13 questions like: what is the maximum number of burials  
 14 we'll need to deal with, all of these really quite  
 15 morbid but important issues to consider. So to that  
 16 extent it has a use. It also has a use to say how much  
 17 further below the reasonable worst-case scenario do we  
 18 need to get something under certain circumstances. So  
 19 I'm not saying it is without use.

20 It has two fundamental problems, in my view, both in  
 21 a sense of communication. The first one is -- and  
 22 actually this was a problem both for Sir Patrick and for  
 23 me at various points -- in the kind of doctrine, people  
 24 say: well, what's the reasonable worst-case scenario?  
 25 So you quote the reasonable worst-case scenario --

182

1 the most efficient use of time; would you agree?

2 **A.** Arguably, yes, and I think the other problem is -- and  
 3 you will see this in various witness statements,  
 4 including some of my modelling colleagues -- people use  
 5 the term to mean: my central estimate of the bad  
 6 outcome, rather than to mean: a reasonable worst outcome  
 7 as it is understood in planning doctrine.

8 So I think it has a number -- it is a perfectly  
 9 sensible thing for people to use amongst people who are  
 10 disaster planners; they know what they're doing, it's  
 11 understood between all of them. But I think using it  
 12 with people who are not used to it, I think it can lead  
 13 to confusion of a variety of different sorts. So I'm  
 14 not saying it should be done away with, I'm just saying  
 15 I think it should be used with quite considerable care.

16 **Q.** As we will see in a moment, a great deal of time was  
 17 spent focusing on not just what the probability was of  
 18 the reasonable worst-case scenario eventuating, but also  
 19 on how to plan for the reasonable worst-case scenario,  
 20 what steps might need to be taken to address it.

21 Is there a danger or was there a danger, in your  
 22 view, that, as a system, if government is focusing on  
 23 something that it knows is a wholly improbable outcome,  
 24 it may take its eye off the ball, it may allow a sense  
 25 of optimism bias to infiltrate the system, because it

184

1 thinks it's wholly improbable, it's never going to  
 2 happen, and that may just deprive the system of the  
 3 required degree of immediacy and speed?  
 4 **A.** Yes. So I think in an ideal world you'd have a small  
 5 number of people thinking seriously about how you deal  
 6 with the reasonable worst-case scenario if you lose  
 7 complete control of any environment, but the great  
 8 majority of people concentrating much more on: how do we  
 9 get this down to the lowest possible level given the  
 10 threat we face, of whatever type, but certainly in  
 11 pandemics that would be true.  
 12 **Q.** Because then there would be focus necessarily on the  
 13 actuality, the real scenario, what is likely, generally  
 14 likely, to eventuate.  
 15 **A.** Yeah.  
 16 **Q.** And I ask, Professor, because it's plain that from COBR  
 17 meetings in the middle of February, from a reasonable  
 18 worst-case scenario clinical alignment planning meeting  
 19 on 14 February, a SAGE meeting on 27 February, numerous  
 20 WhatsApps in the first week in March, a huge amount of  
 21 time is dedicated towards trying to assess how probable  
 22 the reasonable worst-case scenario is?  
 23 **A.** Yes, that's correct.  
 24 **Q.** And that doesn't appear to have been a profitable use of  
 25 anybody's time.

185

1 definitions, it has a role, and I don't want to  
 2 undermine that role. But I think it's one of those  
 3 slippery concepts, and the kind of last place you really  
 4 want to be dealing with it is in WhatsApp conversations.  
 5 **Q.** But the wider point, Professor, is this, and would you  
 6 agree with this proposition: given the immediacy of the  
 7 problem, that time was vital, that the government had to  
 8 face up to the immediacy of the massive threat, two to  
 9 three weeks of persistent debate about reasonable  
 10 worst-case scenario was not a good use of the  
 11 government's planning time, was it?  
 12 **A.** I don't think most of the planning time was taken there,  
 13 but I think more time -- I would accept more time was  
 14 spent on that than I think was probably useful, compared  
 15 to trying to reduce it.  
 16 **Q.** Can I now turn, please, to look with you at some of the  
 17 other standalone issues which you had to consider and on  
 18 which you gave advice in the lead-up to the lockdown, if  
 19 we can call it that, the lockdown decision.  
 20 Mass gatherings. Is this the position: SAGE -- and  
 21 also, I think at the beginning, perhaps NERVTAG but  
 22 certainly SAGE -- advised repeatedly on the issue of  
 23 mass gatherings; is that right?  
 24 **A.** That's correct.  
 25 **Q.** And was that because government, mindful of the

187

1 **A.** I think, as I say, it's useful if you can hive it off  
 2 from the majority of the work, which should be around  
 3 trying to mitigate the reasonable worst-case scenario  
 4 and make it less worst.  
 5 **Q.** And it's not an easy process, is it? I mean, you were  
 6 asked to opine in WhatsApps on 2 March, the "No10 DHSC  
 7 Covid" group, what the probability is, and you said --  
 8 or rather Sir Patrick Vallance said:  
 9 "... Chris and I both think ... the [reasonable  
 10 worst-case scenario] is relatively low probability ... 1  
 11 in 5 ..."  
 12 That's 2 March, and on 8 March, in a meeting with  
 13 the then Chancellor and Sir Patrick Vallance, the note  
 14 of the meeting records a probability of the reasonable  
 15 worst-case scenario being 10%.  
 16 So it's ...  
 17 **A.** And --  
 18 **Q.** It's a very difficult process.  
 19 **A.** Yes, and one of the problems here, I think, is that  
 20 people then get pushed on, and Sir Patrick and I were  
 21 both pushed on, giving what both of us think are  
 22 spurious numbers about another spurious number, leading  
 23 to a misunderstanding.  
 24 As I say, used carefully between people who know  
 25 what they are talking about and share the same

186

1 political connotations surrounding mass gatherings,  
 2 repeatedly came to SAGE to say, "What is your view and  
 3 should we still be allowing mass gathering events,  
 4 sporting events, to continue?"  
 5 **A.** Yeah, and I think government in that sense was asking  
 6 a very reasonable question, and SAGE repeatedly gave  
 7 a correct but I think probably unhelpful answer.  
 8 **Q.** In February and in March, and then in fact in a paper  
 9 dated 11 March from the London School of Hygiene and  
 10 Tropical Medicine, the advice was given as follows:  
 11 essentially, in terms of infection control, outdoor  
 12 events are safer than indoors. That's fairly  
 13 self-evident.  
 14 SAGE and the London School of Hygiene and Tropical  
 15 Medicine looked at the degree, however, to which  
 16 infections might spread in bars or trains and so on and  
 17 so forth, and other close quarters, in queues, whether  
 18 alongside sporting events, or if sporting events were to  
 19 be shut, so for example if everyone goes to the pub  
 20 instead to watch the game.  
 21 Do you assess now -- and obviously it's with  
 22 hindsight -- that they may have overstated the -- or  
 23 rather they may have underplayed the public health  
 24 message which allowing sporting events and mass  
 25 gatherings to remain open amounted to?

188

1 **A.** Yes, and I think that -- so, in a sense, I think they  
2 were -- their actual analysis is correct. Had we had  
3 a situation, for example, where large numbers of people  
4 were over for a football match and you close the  
5 football match and they all go to the pub, you are  
6 probably increasing risk rather than decreasing it, or  
7 they watched the game from the pub. So the point they  
8 were making was in one sense correct, and the risks of  
9 outdoor events, even if quite crowded, is small relative  
10 to many of the other things. So I don't disagree, in  
11 retrospect, with what was said by them and collectively  
12 by us on SAGE, so I'm taking ownership of that.

13 I think where it -- what we were really not paying  
14 enough attention to -- and it's sort of obvious with  
15 hindsight -- is the message this was sending; that  
16 seeing mass gatherings going on signalled to the general  
17 public that the government couldn't be that worried  
18 because, if it was, it would be closing the mass  
19 gatherings.

20 So I think that the problem was not the gatherings  
21 themselves, which I don't think there's good evidence  
22 has had a major material effect directly, but the  
23 impression it gives of normality at a time that what  
24 you're trying to signal is anything but normality.

25 So I think, again, were we to re-run, I think that's  
189

1 "The CHAIR invited the Director of the Civil  
2 Contingencies Secretariat to give an update on planning  
3 for the [reasonable worst-case scenario]."

4 So there is the reasonable worst-case scenario  
5 appearing.

6 "The DIRECTOR OF THE CIVIL CONTINGENCIES SECRETARIAT  
7 said that there was work to be done to create a clear  
8 plan of activity (across the UK Government) from the  
9 moment of sustained transmission [mindful, of course,  
10 there was already and there had been for weeks sustained  
11 transmission] to its estimated peak, which was likely to  
12 be a period of three months."

13 Were you concerned, mindful of what you had said at  
14 the stocktake meeting about the need to plan for this  
15 massive threat, that by this date, 18 February, the  
16 director of the body required to produce central  
17 government plans was still talking about work to be done  
18 to create a clear plan of activity across government?

19 **A.** I mean, I think it was reasonable that this work was  
20 continuing, but if this was at the expense of other  
21 work, I think as you've implied, that's not really  
22 a sensible use of time.

23 I think around this time -- and this is just to give  
24 an idea of what's happening in parallel -- I think you  
25 can see debates between me and others where our firm --  
191

1 one of the things that we would -- I would certainly do  
2 differently or push to do differently.

3 **Q.** And, in truth, having a debate on the application of the  
4 precautionary principle over the closure of, say,  
5 primary schools whilst allowing sporting events to  
6 continue and mass gatherings to remain open, was in  
7 hindsight rather unfortunate.

8 **A.** Yes, it is in a sense technically correct and logically  
9 incoherent to the general public, quite reasonably.  
10 Yes.

11 **Q.** There was a COBR meeting on 18 February, around the  
12 time, in fact, that there was repeated advice given on  
13 mass gatherings. It's INQ000056227, and if we just have  
14 a look briefly at pages 1 to 3, we will see the  
15 attendees.

16 If we scroll then forward to 2 and 3 -- I think if  
17 we go back one page -- I'm sure you were there. Maybe  
18 you weren't there. Yes, you are, thank you,  
19 "Officials".

20 Then on page 5 -- and mindful, therefore, Professor,  
21 that this is 18 February, so some time has wound on  
22 since the beginning of February and the stocktake  
23 meeting on 4 February.

24 In fact, sorry, could we have page 7, please,  
25 paragraph 17:  
190

1 my firm view certainly is -- or our aim is to find the  
2 collection of things that would bring R below 1, which  
3 in a sense is a different strand of work and I think  
4 takes us in quite a different direction.

5 **Q.** Yes. And that point, Professor, is this: is that when  
6 it became clear -- it having become clear that there was  
7 sustained community transmission in the United Kingdom,  
8 and that containment had, by necessary inference,  
9 failed, what you advocated was a delay in the upswing of  
10 the overarching first pandemic wave?

11 **A.** That's correct, although to be clear, that was not clear  
12 that that had happened at this point in time.

13 **Q.** No, no, I said when it --

14 **A.** Yeah, no, I agree, I just wanted to make sure we  
15 separate those out in time. It was later that that  
16 occurred, yep.

17 **Q.** The strategy that there should be a delay in the  
18 upswing, which some people have called a mitigation  
19 strategy as opposed to suppression, but there's a huge  
20 debate to be had about whether delaying a wave or  
21 squashing the peak or squashing the sombrero is just  
22 a form of suppression, and we're not going to go into  
23 that debate.

24 **A.** I can give you a long answer, but --

25 **Q.** Yes, that's in part, Professor, why we're not going to  
192



1 go into that debate.  
 2 So certainly by the end of February and the  
 3 beginning of March, it was apparent to you that, means  
 4 of control having failed, the virus was here, it's  
 5 transmitting throughout the community. We now know,  
 6 of course, there were hundreds if not thousands of  
 7 seedings during the February half term from Italy,  
 8 France and Spain. Strategically that was, it seemed to  
 9 you, to be the appropriate response?

10 **A.** What, the --

11 **Q.** To delay the upswing of the pandemic wave.

12 **A.** Yes. I mean, I think the things which delay a wave and  
 13 the things that pull R below 1 are, for practical  
 14 purposes, once you've lost control, the same things, at  
 15 least initially. Before -- can I just introduce  
 16 a public health concept which I think is useful for  
 17 this, which is the ladder of intervention, where you  
 18 start at the things which have the lowest, in a sense,  
 19 negative impact, and you escalate up. So you'd start  
 20 off with, to take this example, you know, washing your  
 21 hands and cough etiquette, and you move up through  
 22 isolation of cases, up to really quite intensive things  
 23 like closing schools and, as we ended up, in a place  
 24 I don't think we really would have anticipated, using  
 25 the full force of the law to insist on people staying at

193

1 **Q.** Being aware that, of course, the Chinese had applied  
 2 lockdowns and they had worked -- at least that was the  
 3 general understanding by the end of February in the  
 4 United Kingdom -- why, as you developed the strategy of  
 5 delaying the upswing of the wave or squashing the level  
 6 or squashing the sombrero, did you rule out a complete  
 7 suppression strategy? Was it because of the risks of  
 8 the uncoiled second wave, as we've heard, or for some  
 9 other reason?

10 **A.** I think some of the output of some of the modelling is  
 11 slightly misleading, in my view, because it implies you  
 12 would have a completely mitigated first wave and then  
 13 completely unmitigated second wave, which makes no  
 14 logical sense unless -- it makes no logical sense at  
 15 least.

16 Ultimately, I think people, in a sense,  
 17 overcomplicate and think humans can do things more  
 18 precisely than they can. Ultimately, my view with  
 19 epidemics is they're either doubling or they're halving,  
 20 and the idea that you can somehow hold something at an R  
 21 of 1 strikes me as fanciful. So you either are above 1  
 22 or you're below 1, and if you're above 1, it's going to  
 23 carry on exponentially. You can slow it down. So delay  
 24 doesn't necessarily imply that you're going to get R  
 25 below 1; you could just reduce the R significantly and

195

1 home. That escalation, the idea of that is that you  
 2 escalate up as you need to, adding things that are more  
 3 and more onerous or more and more interrupting of  
 4 people's normal life, economic and social, as you get  
 5 further and further into trouble, basically.

6 I'm not saying that's exactly what we were doing  
 7 here, but I'm just saying that concept was part of  
 8 I think what many people, including me, were I think  
 9 trying to think through at this stage.

10 **Q.** And to be clear about when it became apparent to you  
 11 that steps might need to be taken to delay the upswing  
 12 of an epidemic, as opposed to suppressing it entirely,  
 13 you had in fact started raising this issue as early as  
 14 the end of January, because you emailed  
 15 Professor Ferguson, I think, asking for his view as to  
 16 what could be done to delay the upswing of --

17 **A.** Well, yes, and I -- from very early on, my view was we  
 18 need to find out a group of things that will get R  
 19 below 1, if that is possible. And the Chinese had  
 20 demonstrated it is possible, so the then question is:  
 21 can you do it in a way that is sustainable? And  
 22 sustainability was my other big concern here.

23 **Q.** Can we come back to sustainability. It's a subject all  
 24 of its own.

25 **A.** Yeah.

194

1 therefore push out the number of days it's doubling --  
 2 and I'm sorry I'm giving you a technical answer, but  
 3 I think it's quite an important point here. So, in  
 4 theory, you could delay but still not get R below 1. So  
 5 those two are compatible. But the only way you're going  
 6 to get an epidemic wave to turn over is to get R below  
 7 1, in reality.

8 **Q.** The Inquiry has heard a great deal of evidence about the  
 9 overarching need to get the reproduction number below 1.

10 Why then -- how did this whole debate -- and we've  
 11 seen it reflected in witness evidence and in the press,  
 12 the statement of David Halpern of the Behavioural  
 13 Insights Team in Downing Street -- did this notion  
 14 that -- or rather a belief that you and your colleagues  
 15 were flattening the curve, were delaying the peak,  
 16 rather than focusing on bringing R below 1, which is  
 17 what, epidemiologically, you were seeking to do? There  
 18 appears to have been an enormous debate about whether or  
 19 not you were squashing the sombrero, flattening the  
 20 curve, mitigating, suppressing. What was the genesis of  
 21 all that?

22 **A.** Well -- so, ultimately, my view was quite a lot of  
 23 rather fanciful discussion occurred, including between  
 24 people who didn't, in my view, fully grasp the technical  
 25 aspects they were talking about, if I'm blunt, which led

196

1 to quite a confused public debate. That applied to  
2 a number of things -- herd immunity was one, there were  
3 a number of other ones -- and on several occasions, as  
4 you have probably had the privilege of reading my rather  
5 dull, compared to other people's, WhatsApps, I implore  
6 people not to try and talk about some of these issues,  
7 because I think they are confusing rather than  
8 enlightening the public. But there we are. Lots of  
9 people like to talk.

10 So I think it was a -- I think there was  
11 a confusion. Some of it stemmed from an actual  
12 strategic lack of clarity, and some of it, in my view,  
13 stemmed from, if I'm honest, a little knowledge being  
14 a dangerous thing.

15 **Q.** In terms of strategy, you've referred to the coronavirus  
16 action plan on 3 March. Could we have that up:  
17 INQ000057508.

18 This was published, as you know, on 3 March. You  
19 provided comments on multiple iterations of this plan,  
20 according to your statement, and no doubt it reflected  
21 your views on the clinical and public health matters.

22 Why was this plan, to the extent that it dealt, as  
23 you've said, with clinical and public health matters,  
24 not put before SAGE, do you know?

25 **A.** It's a policy document. If we put all policy documents  
197

1 "... if it does take hold, lowering the peak impact  
2 and pushing it away from the winter season."

3 So there is a reference there to the peak, so that  
4 refers back to our earlier debate.

5 But surely, as the Chief Medical Officer, you must  
6 have had a view on the publication of a document on  
7 3 March commissioned in the first week in February, on  
8 10 February in fact, by the Secretary of State which --  
9 and it was the sole document, strategy document,  
10 published by the British Government --

11 **A.** I think this is a --

12 **Q.** It was out of date by the time it was published.

13 **A.** Well, I think that, going back to the previous  
14 discussion, once you're in an exponential curve, you get  
15 out of date remarkably quickly.

16 **Q.** You have repeatedly said "we", "we, the government",  
17 "we", "we", "we"; you knew that SAGE had not been  
18 consulted on this. You had drafted various iterations  
19 of this document, or contributed at least to the text.

20 **A.** Contributed.

21 **Q.** You couldn't have been unaware of the fact that this  
22 sole strategy document was out of date by the date of  
23 publication. You more than anybody knew containment had  
24 been lost weeks before.

25 **A.** No, I disagree that containment had been lost weeks  
199

1 before SAGE, they would have had an even more difficult  
2 job.

3 I mean, essentially, it's got three components --  
4 well, it's got four components, three of which I think  
5 are reasonably thought through for this point in the  
6 pandemic, but one of which was, for practical purposes,  
7 almost irrelevant by the time it had arrived.

8 **Q.** Contain?

9 **A.** Contain. So it's contain, delay, research and mitigate.  
10 My view is the strategy -- the -- well, the tactical  
11 points made --

12 **Q.** Slow down, Professor.

13 **A.** Sorry.

14 The tactical points made under those three  
15 components, which had been thought through reasonably,  
16 in my view, were okay for a document at this quite high  
17 level. Admirably, there was an attempt to make this  
18 a four nations document, but by the time you've got  
19 something going round all of the government and in  
20 four nations, it's not an overnight process, and the  
21 contain stage of things was near or at its end pretty  
22 well at the point that this document hit the printing  
23 presses. So that's a -- that's just a practical  
24 reality.

25 **Q.** Paragraph 3.9 on page 10 says this:  
198

1 before. I think that it was close to the point where  
2 you had to abandon it around this time, but we can come  
3 back to that if you want, so it wasn't weeks before.

4 The problem with this document is essentially  
5 a very -- there's nothing wrong with the document, it's  
6 just too late. If it had been published when it was  
7 first conceived, as I recall it, it would have been much  
8 more in date. That -- you know, this is one of the  
9 problems of trying to develop these kind of documents on  
10 the hoof during an exponential rise. That's just  
11 a reality.

12 **Q.** And no doubt you regret that this document was published  
13 at all, given that it was out of date?

14 **A.** Well, it was a lot better than no document, according to  
15 your previous perfectly reasonable points.

16 **Q.** Professor, you cannot seek to sustain the value of  
17 a single strategy document, the only document published  
18 by the UK Government that you knew, to your certain  
19 knowledge, had been out of date in relation to its first  
20 and important strategic plan, contain?

21 **A.** There will maybe come a point where the Chief Medical  
22 Officer is given plenipotentiary powers to run policy  
23 documents across government, but that is not that  
24 moment.

25 You know, I think -- I completely accept there are  
200

1 bits of this document that are out of date. There are  
2 other bits of this document I thought are actually  
3 pretty good document, and not publishing any of the  
4 document -- the problem about documents that are agreed  
5 across all of government --

6 **Q.** Slow down, Professor.

7 **A.** Sorry -- across all of government and across multiple  
8 nations is redrafting them every single time. You have  
9 to go round everybody and say, "Are you content with  
10 these changes?"

11 So I think the admirable aim to try to make this  
12 across government and four nations document, and I think  
13 that was sensible in one sense, itself mitigates against  
14 it being timely, given the speed at which this is going  
15 to happen. You can argue such a document should not  
16 have existed but, in a sense, I think some document is  
17 better than no document. I actually think in most  
18 elements this is a pretty good document, given that we  
19 had no document previously that anybody could look at.  
20 So I'm going to stand behind the publication of the  
21 document without saying that I agree that every single  
22 word of it was exactly current at the point it came out.

23 **Q.** Did you email anybody or call anybody in government to  
24 say, "I just don't want to put my name to a document  
25 that I know to my certain knowledge is out of date in  
201

1 Organisation had still not declared that this was  
2 a pandemic.

3 **Q.** Well, we've addressed that issue. Your own advice,  
4 of course, simply didn't rest upon what the WHO was  
5 doing?

6 **A.** No.

7 **Q.** You, of course, reached your own view as to what needed  
8 to be done in the context of the United Kingdom.

9 **A.** May I give a slightly hard-edged answer --

10 **Q.** Professor, I think in light of the time, would you --

11 **A.** Okay, well, if you wish to push it, I will give  
12 a hard-edged answer --

13 **Q.** Professor, I've asked you a question and you've answered  
14 in your own way.

15 **LADY HALLETT:** No, I think Sir Chris should be given the  
16 opportunity to say what he wishes to say.  
17 Go on, Sir Chris.

18 **A.** Yeah, if I had spent my time trying to redraft every  
19 document, I'd have done nothing in all the much more  
20 important things in my view that I was supposed to be  
21 doing. At a certain point you have to say "Move on".  
22 This didn't strike me as something that would do any  
23 harm and the opportunity cost at the time for me of  
24 trying to sort out wording in cross-government documents  
25 did not seem to me to be terribly material. That's my  
203

1 material part"?

2 **A.** No, because if I had done that we would have had  
3 virtually every single document I'd have been emailing  
4 on that basis, so --

5 **Q.** That's not, if I may suggest, a good reason for not  
6 raising the problem.

7 **A.** Well, I think there was a clamour for something that  
8 people could at least hold on to, even if it was to some  
9 extent out of date. And it wasn't actually technically  
10 out of date, contain was still the strategy at the point  
11 this was published in fact. So by definition, if  
12 contain is still the strategy -- but what I said almost  
13 contemporaneously with this, and I know you can't  
14 interrogate on this, but it's all laid out for people  
15 who are not lawyers in the House of Commons, made clear  
16 that my view was that we were mainly in delay but had  
17 some elements of contain. That was largely because that  
18 was a negotiated position in government at this point,  
19 so it would have in fact have been not in line with  
20 government policy at this point of publication had we  
21 claimed at this point that contain was not there.

22 You can argue whether that's a good argument or not,  
23 in practical terms I don't think it made much  
24 difference. And I would also point out that at this  
25 point, when this was published, the World Health  
202

1 hard-edged answer.

2 **MR KEITH:** Forgive me, you're the Chief Medical Officer --

3 **A.** Correct. There's only one of me, that's my point.

4 **Q.** There is only one of you, and on this central issue --

5 **LADY HALLETT:** I think we've got his answers, thank you,  
6 Mr Keith.

7 **MR KEITH:** All right.

8 On 21 February there were some emails between  
9 yourself and Professor Ferguson.

10 INQ000236382.

11 If we could look at page 3 briefly, you say to  
12 Professor Ferguson and Professor John Edmunds:

13 "Thanks for the previous emails ...

14 "An event like this in the [United Kingdom] could  
15 obviously happen at any point. It is not easy to  
16 predict when; it may be very soon, in weeks ... Failure  
17 of contact tracing is obviously one possible reason, but  
18 failure of people with minimal symptoms to identify  
19 their importance, or choosing not to come forward even  
20 if they do ... is another."

21 In this email, just in outline, you are dealing with  
22 or you're expressing your views as to the likelihood of  
23 the pandemic ensuing. You describe the email as "Local  
24 spread in Europe"; do you recall this email?

25 **A.** I do.

204

1 Q. There are references in this email to speculative  
2 scenarios, although I can't -- yes, in the bottom line.  
3 "I am not however not convinced that presenting  
4 speculative scenarios are always helpful in public  
5 understanding."

6 And this is a view expressed in the context of this  
7 paragraph, which is where you say -- or you refer to the  
8 tactical aims of contain, delay, research and mitigate.  
9 What was speculative about the scenario of onward  
10 transmission or a pandemic ensuing in the  
11 United Kingdom, if that's what the reference to  
12 "speculative scenarios" --

13 A. No, "scenarios" I was using in its modelling sense. So  
14 as you will recall from extensive evidence you have  
15 heard from the modellers, what I didn't think was  
16 sensible was to put large numbers of different models,  
17 based on different things, into the public domain, at  
18 a point when actually what people wanted was relatively  
19 straightforward. And this goes back to a  
20 conversation --

21 Q. Slow, Professor, please.

22 A. I do apologise.

23 This goes back to a conversation we had earlier,  
24 which is my view is modelling is not always the best way  
25 in which to communicate information, particularly at  
205

1 first country in the world to abandon containment on the  
2 basis of this analysis, which is the logical implication  
3 if we are certain, are non trivial."

4 What were the implications of the United Kingdom  
5 being seen to be the first country, Professor?  
6 Presumably the sole issue, and we've just debated the  
7 relevancy of the issue in the context of the action plan  
8 of 3 March, was had we lost control, had there been  
9 a loss of containment, or had there not? Why did it  
10 matter if we were the first country to abandon  
11 containment?

12 A. So the -- remembering that at this point we didn't  
13 actually have evidence of domestic transmission. From  
14 memory, the number of cases was, I think, still under  
15 ten, I could be wrong about those numbers, and we had no  
16 deaths. If we'd been in a situation where -- at two  
17 levels, either where we had said to the general public,  
18 "Right, that's it, we're going to stop trying to contain  
19 this, everyone else is trying to contain this but we're  
20 giving up now", I think it would domestically have been  
21 very difficult to sustain, but also internationally the  
22 point about containment is it is an international issue  
23 and, you know, it's much best done if this is done, in  
24 a sense, as a collective decision globally to accept  
25 this is now a pandemic and containment is really  
207

1 a time of concern.

2 Q. The email does refer to modelling specifically in the  
3 third paragraph and to different interventions, but it's  
4 bound to be said that that last paragraph appears to be  
5 referring to an uncontained global epidemic, and to  
6 onward transmission.

7 A. I was being very clear as -- actually, if you look at my  
8 public statements, that that was a risk at this point in  
9 time. So that's not -- you know, I -- the only way that  
10 you can operate if you're a doctor or a public health  
11 person is by clear transparency of what you're trying to  
12 say. This is in no way a reference to implying we  
13 should not be being straight with the public,  
14 I absolutely think we should, this is a point about  
15 modelling, that's why I'm discussing it between  
16 modellers.

17 Q. Page 2, Professor Ferguson says:

18 "Thanks Chris, I will respond more fully tomorrow.  
19 I agree with 90% of what you say. But I really do feel  
20 it's not a matter of if but when. That is ... where all  
21 the data is pointing."

22 If you can scroll back out, Chris Whitty:

23 "Thanks Neil

24 "I think these debates are best done within SAGE ...

25 "The implications of the [United Kingdom] being the  
206

1 a non-achievable outcome. Which is not the point where  
2 the WHO were, it took a long time before they got to  
3 declaring this a pandemic, it wasn't where other  
4 countries were.

5 My point was really to Professor Ferguson: yes, your  
6 models are probably right actually, by this stage I'd  
7 taken the view that this was probably correct, but that  
8 didn't flow into, given the small numbers of cases in  
9 our country, that we should therefore declare  
10 containment essentially dead. That is the reason for  
11 this discussion.

12 And the other point which I would reiterate and  
13 I was very firmly of the view that we -- some people,  
14 including extremely eminent colleagues like these, were  
15 having conversations in a sense out of the SAGE or any  
16 other process when my view is they were much better done  
17 in that process where the scientific debate could be had  
18 with all the right people in a minuted conversation.  
19 So, I was -- you know, that's the other thing I was  
20 trying to avoid, was this becoming a kind of informal  
21 policymaking process driven by particular people's views  
22 based on their own models. All of whom I have to say  
23 I have huge respect for, it was not a comment about the  
24 individuals.

25 Q. You have of course in the course of your evidence,  
208

1 Professor, repeatedly said "we" and, as I have noted,  
2 referred to government and to "we" including yourself  
3 and government.

4 **A.** Yeah.

5 **Q.** Were you concerned politically about the ramifications  
6 of the United Kingdom being the first country to be seen  
7 to abandon containment?

8 **A.** No, it's not my job to have a political view, it's  
9 a public health view.

10 **Q.** All right.

11 On 24 February, Professor Ferguson sent to you and  
12 Sir Patrick an initial analysis of the potential impact  
13 of a variety of non-pharmaceutical interventions.

14 **A.** Yep.

15 **Q.** So this was Imperial College London's -- one of their  
16 first stabs at setting out a suite of measures. In  
17 essence, as you'll recall, ICL suggested or identified  
18 a package combining multiple measures and supposed or  
19 estimated that they would have, likely have major  
20 effect.

21 **A.** Yeah.

22 **Q.** That report was discussed at SAGE on 25 February, the  
23 next day. Professor Ferguson, in his statement, refers  
24 to the fact that your response to the production of  
25 these non-pharmaceutical interventions was a concern

209

1 assumed that all decisions were starting from the models  
2 they were having. My view was I was starting from what  
3 had previously happened in pandemics.

4 So they are correct that I was concerned about the  
5 winter, and many people say I talked about that multiple  
6 times in SAGE; I did. That didn't mean that I was  
7 worried that in February or indeed in March, I thought  
8 there was a strong risk that we were going to be able to  
9 push things just by delay alone into the winter months.  
10 That struck me, frankly, actually, as quite improbable.

11 So I think, in a sense, I think this is a genuine  
12 misunderstanding, misremembering by Professor Ferguson  
13 of the reasons for my concerns about the winter, but he  
14 is correct that I was concerned about it, and I think  
15 that was reasonable. There are multiple other emails of  
16 mine that make it clear that that was my view, just to  
17 be clear.

18 **Q.** INQ000151558 is a presentation from the Cabinet  
19 secretariat entitled "Interventions Overview". It's  
20 dated 6 March. There is a reference in this to --  
21 page 3, I think it must be.

22 **A.** Is this where there's this wholly improbable suggestion  
23 that you completely suppress a wave and then choose not  
24 to in any way mitigate the subsequent wave? I mean,  
25 that, I think, is what you were talking about, this --

211

1 that, on account of their relatively aggressive nature,  
2 they were more stringent than what had come before, that  
3 pushing the epidemic to the autumn or winter might  
4 worsen the consequences, so the notion that if you apply  
5 countermeasures, the wave is delayed, or suppressed,  
6 there is a risk that a second wave may come back or  
7 maybe that wave may come back in a winter season and the  
8 consequences may be worse.

9 Can you please tell the Inquiry to what extent you  
10 were concerned about the potential consequences in  
11 of course February about the introduction of more  
12 aggressive countermeasures?

13 **A.** So I think Professor Ferguson and actually some of the  
14 others misremember a very strong view of mine, but they  
15 misremember the reasons for it, which was that a wave in  
16 the winter was going to be very problematic, this is the  
17 following winter. But my view was that -- and remember  
18 this was my view based in large part on what had  
19 happened to previous flu pandemics, accepting all the  
20 differences, where the second wave, in the winter, was,  
21 from memory, in all three of the major ones in the  
22 20th century, worse than the first and was in the  
23 winter.

24 My view was not based on their models, and I think  
25 this is where the misunderstanding came from, was they

210

1 **Q.** It is these words:

2 "... very stringent social and behavioural  
3 inventions (such as those in China) have the potential  
4 to prevent a major epidemic establishing but risks  
5 a large epidemic re-establishing when lifted ..."

6 Putting aside the accuracy or not of the green line,  
7 that sentence is reflective, is it not, of the uncoiled  
8 spring debate?

9 **A.** Yes, and this is, in a sense, just a statement of fact,  
10 which is if you go for a suppression strategy, for  
11 however long you do it -- and China has demonstrated  
12 this pretty clearly in the last year -- at a certain  
13 point you will have to release it, and then the pandemic  
14 is still with you and then you will have what is called  
15 in epidemiology an exit wave. There's no -- you know,  
16 you can hold -- if you've managed to suppress it this  
17 far, you may lose control over winter because of  
18 epidemiological reasons, but let's say you manage to  
19 hold it for two years. The same still applies. So  
20 essentially the wave comes at the point you choose to  
21 release the measures and, as I say, I think what  
22 happened in China is a really clear epidemiological  
23 outplaying of that fact. So this is trying to make  
24 clear to people: if you go for suppression, don't think  
25 that that's your problem done, you just have to suppress

212

1 for a bit and you're done. At some point you're going  
 2 to have to face this, and the question is: at what point  
 3 do you want to?  
 4 **Q.** Did you prepare this or contribute to this presentation?  
 5 **A.** No. I mean, I may well have seen it, but this is --  
 6 these are modelling things. But what I'm talking about  
 7 here is really trying to talk through what the logic of  
 8 this in reality is. I think it's -- in a sense, I think  
 9 it's misleading, the way that it's presented, but it  
 10 does make the point that if you suppress, at some point  
 11 you will get an exit wave. It doesn't say where.  
 12 **Q.** Professor, did your concern about the relatively severe  
 13 consequences of a virus re-establishing itself in  
 14 a subsequent winter, or of a virus recoiling like  
 15 an uncoiled spring, or however you wish to describe it,  
 16 did your concern influence in any way your willingness  
 17 to countenance the more stringent interventions which  
 18 were being recommended at the time and which, as we now  
 19 know, of course ultimately came to be imposed?  
 20 **A.** No, and, you know, you should recall that in the three  
 21 flu pandemics I was talking about, they didn't do any of  
 22 these, and they still got a bigger winter wave. So this  
 23 idea that this only happens if you do suppression in my  
 24 view flies in the face of our last three experiences of  
 25 major respiratory pandemics. So, in my view, my  
 213

1 But, again, you cannot -- I cannot see a situation  
 2 where anybody with what I will bluntly call an ounce of  
 3 common sense would suppress a virus until the winter and  
 4 then deliberately release it, which is, in a sense, if  
 5 you were taking an absolutely literal interpretation of  
 6 this, you would take. Clearly that's not going to be  
 7 a logical thing to do, and I don't think anybody, as far  
 8 as I'm aware, ever suggested that.

9 **MR KEITH:** My Lady.

10 **LADY HALLETT:** Certainly.

11 Thank you very much indeed. It's 9.30 tomorrow.

12 **MR KEITH:** Yes, please.

13 **(4.30 pm)**

14 **(The hearing adjourned until 9.30 am**  
 15 **on Wednesday, 22 November 2023)**

1 position was based on history. The modelling wasn't  
 2 actually the basis on which I had that view.  
 3 **Q.** Well, then, either the suggestion that you did allow --  
 4 you held those concerns and you allowed them to  
 5 influence your willingness to engage these and support  
 6 these more stringent interventions is correct, or this  
 7 important Cabinet secretariat presentation is materially  
 8 misleading insofar as it suggests that a large epidemic  
 9 will be re-established when measures are lifted. Which  
 10 is it?  
 11 **A.** It's a statement of fact that if you have a circulating  
 12 pandemic for which there is zero immunity, so assuming  
 13 we haven't yet got a vaccine, and potentially even if  
 14 you have got a vaccine, as China demonstrated, if you  
 15 suppress for a long period of time, at some point you  
 16 will have to have an exit wave.  
 17 Now, if you have a completely effective vaccine,  
 18 that may be eliminated. If you have extraordinarily  
 19 effective treatment, it may be you get an exit wave with  
 20 no deaths. There are a lot of scenarios. That's  
 21 a perfectly logical thing to do. But the idea that you  
 22 can, absent an extremely effective vaccine, suppress and  
 23 then not have an exit wave, is not realistic, and that's  
 24 really what this point makes -- this slide makes. It  
 25 may make the point rather badly.  
 214

<b>INDEX</b>		<b>PAGE</b>
3	PROFESSOR SIR CHRIS WHITTY (sworn) .....	1
5	Questions from COUNSEL TO THE INQUIRY .....	1

<b>LADY HALLETT:</b> <b>[18]</b> 1/3 1/8 59/24 60/1 60/6 64/1 64/22 112/16 118/7 118/14 168/17 169/19 172/18 172/25 173/4 203/15 204/5 215/10 <b>MR KEITH:</b> <b>[13]</b> 1/4 1/13 59/25 60/7 64/23 112/20 118/15 171/9 173/11 204/2 204/7 215/9 215/12 <b>THE WITNESS:</b> <b>[3]</b> 1/12 172/24 173/10	121/24 <b>16th [6]</b> 24/1 26/6 109/2 109/15 118/3 118/4 <b>17 [1]</b> 190/25 <b>18 February [3]</b> 190/11 190/21 191/15 <b>18 months [1]</b> 53/21 <b>1855 [1]</b> 7/17 <b>1860s [1]</b> 7/15 <b>19 [5]</b> 3/13 4/24 5/1 55/13 160/6 <b>1918 [1]</b> 121/21 <b>1918/19 [1]</b> 55/13 <b>1957 [1]</b> 121/22 <b>1968 [1]</b> 121/22	25/18 25/19 <b>233 [1]</b> 12/22 <b>23rd [1]</b> 26/14 <b>24 February [1]</b> 209/11 <b>24 January [2]</b> 132/19 135/2 <b>24 January 2020 [1]</b> 39/24 <b>24th [1]</b> 133/3 <b>25 February [2]</b> 123/16 209/22 <b>25 January [1]</b> 134/13 <b>27 February [1]</b> 185/19 <b>274 times [1]</b> 36/6 <b>28 [2]</b> 143/13 151/14 <b>28 February [2]</b> 123/22 128/10 <b>28 January [6]</b> 77/9 135/12 136/12 143/9 150/22 151/13	<b>7</b> <b>7 February [1]</b> 173/23 <b>7.39 [1]</b> 118/16 <b>7.43 [1]</b> 123/10 <b>75 [1]</b> 83/11	165/3 165/25 168/2 168/8 168/14 168/23 169/11 171/3 173/7 173/16 177/18 181/11 181/22 183/24 185/5 186/22 186/25 187/9 191/14 191/17 192/20 194/10 196/8 196/18 196/25 197/6 201/4 205/9 206/14 207/15 207/22 208/23 209/5 210/10 210/11 211/4 211/5 211/13 211/14 211/25 213/6 213/12 213/21 <b>above [2]</b> 195/21 195/22 <b>absence [17]</b> 38/20 41/7 41/11 42/12 54/17 72/23 72/24 103/9 117/16 123/1 124/22 125/3 142/2 142/2 165/8 166/25 167/2 <b>absent [4]</b> 4/5 41/24 154/15 214/22 <b>absolute [1]</b> 11/15 <b>absolutely [13]</b> 14/10 22/7 42/12 71/16 80/18 85/7 88/21 89/18 91/10 96/24 106/11 206/14 215/5 <b>absorb [1]</b> 64/10 <b>abundantly [1]</b> 181/4 <b>abuse [1]</b> 85/3 <b>academia [1]</b> 146/12 <b>Academy [1]</b> 2/15 <b>accelerate [1]</b> 131/5 <b>accept [10]</b> 49/4 49/14 65/7 72/3 90/12 181/17 181/18 187/13 200/25 207/24 <b>accepted [5]</b> 23/5 126/20 128/2 128/2 178/10 <b>accepting [3]</b> 144/21 176/6 210/19 <b>accident [1]</b> 95/3 <b>accordance [1]</b> 98/25 <b>according [4]</b> 12/22 36/5 197/20 200/14 <b>account [2]</b> 131/15 210/1 <b>accrued [1]</b> 29/1 <b>accruing [1]</b> 14/9 <b>accumulated [3]</b> 28/25 111/19 117/2 <b>accumulation [2]</b> 25/23 115/7 <b>accuracy [2]</b> 10/13 212/6 <b>accurate [5]</b> 66/7 71/13 163/4 176/7
'significant' <b>[1]</b> 103/5	<b>2</b> <b>2 February [2]</b> 148/8 157/17 <b>2 March [2]</b> 186/6 186/12 <b>2 o'clock [1]</b> 118/10 <b>2-metre [1]</b> 10/23 <b>2.00 pm [1]</b> 118/13 <b>20 [1]</b> 65/14 <b>20 January [2]</b> 123/11 128/10 <b>20 people [1]</b> 11/16 <b>2009 [3]</b> 2/21 121/16 121/23 <b>2011 [1]</b> 120/19 <b>2015 [1]</b> 2/21 <b>2016 [1]</b> 2/25 <b>2017 [1]</b> 2/23 <b>2018 [2]</b> 2/23 2/25 <b>2019 [2]</b> 3/4 174/2 <b>2020 [13]</b> 4/10 16/8 16/8 16/10 19/3 39/24 41/9 42/13 46/17 74/12 100/2 118/17 122/2 <b>2021 [2]</b> 89/21 90/19 <b>2022 [1]</b> 16/10 <b>2023 [4]</b> 1/1 1/18 1/19 215/15 <b>20th [1]</b> 121/21 <b>20th century [2]</b> 55/12 210/22 <b>21 February [1]</b> 204/8 <b>21 January [2]</b> 115/10 132/20 <b>21 November 2023</b> <b>[1]</b> 1/1 <b>22 August 2023 [1]</b> 1/19 <b>22 January [3]</b> 132/5 133/3 133/3 <b>22 November 2023</b> <b>[1]</b> 215/15 <b>23 [1]</b> 135/2 <b>23 January [1]</b> 133/9 <b>23 March [3]</b> 24/1	<b>3</b> <b>3 March [5]</b> 126/17 197/16 197/18 199/7 207/8 <b>3.14 pm [1]</b> 173/1 <b>3.30 [1]</b> 172/25 <b>3.30 pm [1]</b> 173/3 <b>3.9 [1]</b> 198/25 <b>30 [3]</b> 153/14 181/11 181/15 <b>30 January [2]</b> 153/12 153/13 <b>30 pages [1]</b> 65/14 <b>300,000 [1]</b> 163/3 <b>340 pages [1]</b> 1/21	<b>9.30 [1]</b> 215/11 <b>9.30 am [1]</b> 215/14 <b>90 [1]</b> 206/19	<b>A</b> <b>abandon [4]</b> 200/2 207/1 207/10 209/7 <b>abided [1]</b> 97/24 <b>ability [6]</b> 5/18 45/4 54/8 61/16 96/19 158/6 <b>able [33]</b> 4/10 4/17 5/12 5/19 25/11 41/13 41/23 52/25 63/11 63/12 68/7 71/24 96/8 97/17 97/21 110/19 114/12 115/12 116/25 117/3 117/12 123/2 129/23 130/23 138/16 141/25 142/7 148/23 170/21 175/20 180/20 182/3 211/8 <b>about [138]</b> 1/20 2/17 9/17 11/10 12/22 21/9 23/11 25/3 25/23 28/19 29/18 33/2 33/19 36/5 36/19 36/21 40/18 42/6 42/9 44/4 46/11 49/23 55/7 57/20 58/11 59/1 70/12 74/6 75/8 76/23 77/14 77/21 78/6 78/7 79/21 81/19 81/21 84/2 84/22 88/2 89/16 94/12 94/14 100/18 100/19 100/22 101/7 103/8 103/8 103/18 103/20 107/12 109/23 111/3 111/4 111/10 114/19 114/22 114/23 119/25 120/2 120/2 120/3 120/19 121/8 121/9 121/20 121/24 122/16 125/9 125/23 129/6 129/8 133/22 133/23 133/24 136/2 137/12 142/18 144/1 145/9 145/15 146/1 147/5 147/15 147/19 148/14 150/12 152/17 155/23 157/21 159/15 164/10 164/15 164/15
<b>1</b> <b>1 October 2019 [1]</b> 3/4 <b>1,000 [1]</b> 174/24 <b>1.01 pm [1]</b> 118/11 <b>10 [20]</b> 63/8 66/23 67/2 70/8 95/5 98/7 113/15 135/13 136/8 141/14 142/14 142/18 143/3 149/25 159/5 169/2 170/2 171/18 186/15 198/25 <b>10 February [5]</b> 33/15 33/20 34/3 174/13 199/8 <b>10.00 am [1]</b> 1/2 <b>100 [1]</b> 83/20 <b>100,000 [1]</b> 163/3 <b>100,000-plus [1]</b> 163/18 <b>107 international [1]</b> 16/11 <b>11 March [2]</b> 140/2 188/9 <b>11.23 am [1]</b> 60/3 <b>11.40 [1]</b> 60/2 <b>11.40 am [1]</b> 60/5 <b>12 [2]</b> 56/19 108/14 <b>12 February [2]</b> 31/2 33/13 <b>13 January [1]</b> 103/2 <b>13th [1]</b> 81/20 <b>14 days [1]</b> 149/25 <b>14 February [3]</b> 174/18 175/9 185/19 <b>14 January [4]</b> 104/18 104/19 105/11 106/9 <b>15 [1]</b> 81/20 <b>15 August 2023 [1]</b> 1/18 <b>16 January [8]</b> 108/6 108/9 108/13 109/24 111/8 111/22 114/19	<b>4</b> <b>4 February [8]</b> 131/10 131/11 155/21 160/4 161/2 166/21 173/12 190/23 <b>4.30 [1]</b> 173/7 <b>4.30 pm [1]</b> 215/13 <b>44 meetings [1]</b> 16/8 <b>49%/51 [1]</b> 38/3	<b>5</b> <b>5 February [2]</b> 148/11 173/21 <b>5 January [3]</b> 100/8 107/10 145/1 <b>50 [1]</b> 10/10 <b>51 [2]</b> 10/10 38/3 <b>52 [1]</b> 10/18	<b>6</b> <b>6 March [1]</b> 211/20 <b>6.2 [1]</b> 12/10 <b>60,000 [1]</b> 174/22 <b>61 [1]</b> 12/10	<b>6</b> <b>6 March [1]</b> 186/12

<p><b>A</b></p> <p><b>accurate... [1]</b> 176/9</p> <p><b>accurately [3]</b> 17/3 17/23 65/24</p> <p><b>achievable [1]</b> 208/1</p> <p><b>achieve [4]</b> 4/11 59/4 144/25 148/16</p> <p><b>acknowledge [1]</b> 171/14</p> <p><b>acknowledging [2]</b> 128/9 177/6</p> <p><b>across [25]</b> 6/17 15/20 39/17 39/20 52/24 58/3 79/16 89/24 142/19 142/24 154/8 165/15 165/18 169/12 169/23 170/1 175/4 179/12 191/8 191/18 200/23 201/5 201/7 201/7 201/12</p> <p><b>act [7]</b> 6/7 21/20 27/9 32/25 117/17 118/1 126/12</p> <p><b>acted [1]</b> 118/2</p> <p><b>acting [3]</b> 117/15 126/13 126/14</p> <p><b>action [17]</b> 26/4 26/13 27/11 29/10 29/12 83/21 106/13 111/14 115/18 116/17 126/15 126/17 127/5 128/15 154/2 197/16 207/7</p> <p><b>actions [7]</b> 19/14 20/20 20/20 29/13 47/17 77/11 157/5</p> <p><b>activate [1]</b> 115/20</p> <p><b>activated [4]</b> 116/9 116/11 142/17 143/20</p> <p><b>activity [3]</b> 54/17 191/8 191/18</p> <p><b>acts [1]</b> 45/3</p> <p><b>actual [15]</b> 74/8 74/8 74/13 74/18 74/23 75/1 76/3 81/8 81/21 81/22 81/23 82/5 85/22 189/2 197/11</p> <p><b>actuality [2]</b> 78/22 185/13</p> <p><b>actually [105]</b> 4/16 6/2 11/6 11/10 15/2 16/23 17/3 17/17 19/8 21/3 24/9 24/10 24/23 26/11 26/17 29/15 29/18 30/9 31/13 31/24 32/11 36/4 39/21 43/2 45/14 45/23 47/8 49/12 49/17 50/3 51/8 55/13 57/21 58/4 58/6 59/16 59/20 61/8 61/9 61/10 63/14 64/16 67/7 67/13 69/6 70/10</p>	<p>70/15 71/9 74/16 78/6 79/15 80/10 80/22 82/4 83/18 95/20 97/13 99/10 101/15 103/15 111/2 111/23 112/1 115/20 121/3 122/15 125/25 127/22 128/22 130/2 130/25 136/23 137/10 140/25 150/4 151/21 157/5 158/12 158/15 159/6 159/10 159/24 160/23 163/14 167/13 169/25 170/20 177/3 178/24 179/21 179/21 181/12 182/5 182/22 183/6 201/2 201/17 202/9 205/18 206/7 207/13 208/6 210/13 211/10 214/2</p> <p><b>actually particularly [1]</b> 83/18</p> <p><b>adapting [1]</b> 125/24</p> <p><b>add [3]</b> 5/5 88/15 151/21</p> <p><b>added [1]</b> 11/6</p> <p><b>adding [2]</b> 83/16 194/2</p> <p><b>addition [5]</b> 3/15 88/15 105/1 157/9 169/13</p> <p><b>additional [2]</b> 46/4 148/6</p> <p><b>additionally [2]</b> 24/22 128/24</p> <p><b>address [4]</b> 26/23 89/20 171/11 184/20</p> <p><b>addressed [5]</b> 50/12 160/24 173/17 173/20 203/3</p> <p><b>addressing [1]</b> 106/7</p> <p><b>adequately [4]</b> 31/12 67/3 69/23 98/13</p> <p><b>adherence [1]</b> 83/21</p> <p><b>adjourned [1]</b> 215/14</p> <p><b>adjournment [1]</b> 118/12</p> <p><b>administrations [2]</b> 38/22 119/22</p> <p><b>administrative [2]</b> 95/8 95/11</p> <p><b>admirable [1]</b> 201/11</p> <p><b>Admirably [1]</b> 198/17</p> <p><b>advance [6]</b> 18/17 58/4 81/1 81/2 114/9 126/13</p> <p><b>advantage [2]</b> 35/18 71/14</p> <p><b>advantages [2]</b> 30/13 96/10</p> <p><b>adverse [1]</b> 22/5</p> <p><b>advice [106]</b> 6/14 7/16 8/14 9/9 10/7 10/19 11/19 12/3 13/9</p>	<p>14/16 17/8 17/13 17/14 18/9 18/17 18/20 21/20 24/10 24/11 24/21 24/21 26/1 26/2 26/2 26/3 26/3 26/3 26/9 26/10 27/11 27/15 27/23 28/1 28/2 29/17 29/24 30/15 35/22 36/9 36/10 36/11 38/12 39/19 43/19 47/15 47/15 47/17 47/20 49/2 49/5 49/8 50/17 52/20 52/22 53/1 58/14 58/16 64/6 68/3 72/11 72/17 72/18 72/20 72/21 72/22 73/4 73/5 73/17 73/17 73/19 74/4 75/19 77/14 86/2 86/2 86/17 89/3 89/11 90/12 90/17 90/23 90/23 90/25 91/3 91/22 93/5 93/8 94/3 94/11 97/15 136/18 141/7 141/7 141/8 141/12 141/12 141/17 143/4 148/3 148/9 148/10 152/6 187/18 188/10 190/12 203/3</p> <p><b>advise [9]</b> 11/4 11/23 77/10 77/11 88/3 88/6 88/14 89/22 90/20</p> <p><b>advised [13]</b> 10/12 10/12 10/22 19/15 51/2 51/4 57/5 90/3 144/14 148/5 148/12 162/2 187/22</p> <p><b>adviser [16]</b> 2/20 2/22 6/8 7/1 43/22 43/25 44/16 45/24 85/5 91/6 93/25 135/12 161/10 161/11 163/9 169/23</p> <p><b>advisers [12]</b> 8/12 12/16 28/22 44/14 67/16 95/7 95/23 96/14 98/9 154/9 154/10 161/8</p> <p><b>advising [5]</b> 22/5 26/19 49/10 57/13 146/24</p> <p><b>advisory [5]</b> 12/4 43/13 43/21 48/4 72/10</p> <p><b>advocate [1]</b> 53/24</p> <p><b>advocated [1]</b> 192/9</p> <p><b>advocating [1]</b> 51/21</p> <p><b>afforded [1]</b> 1/16</p> <p><b>afraid [2]</b> 153/8 172/19</p> <p><b>Africa [1]</b> 15/8</p> <p><b>after [6]</b> 24/4 41/19 71/2 142/21 148/8</p>	<p>166/21</p> <p><b>again [25]</b> 1/15 16/1 20/4 21/14 27/23 28/12 28/18 33/20 35/4 43/15 45/25 51/10 70/2 75/6 92/11 124/20 134/10 149/20 152/13 160/20 160/22 162/4 162/4 189/25 215/1</p> <p><b>against [6]</b> 14/25 23/12 28/6 85/4 85/22 201/13</p> <p><b>agencies [4]</b> 39/2 115/22 142/25 144/10</p> <p><b>agency [2]</b> 141/6 169/3</p> <p><b>agenda [2]</b> 87/16 167/20</p> <p><b>agendas [1]</b> 17/2</p> <p><b>ages [1]</b> 125/23</p> <p><b>aggressive [2]</b> 210/1 210/12</p> <p><b>agree [34]</b> 17/1 17/2 17/4 20/11 44/9 48/15 50/18 50/20 52/15 58/20 60/14 60/18 61/1 61/2 71/20 75/6 76/10 80/9 88/16 110/9 110/18 116/13 127/1 130/19 134/25 140/16 142/22 162/12 171/7 184/1 187/6 192/14 201/21 206/19</p> <p><b>agreed [14]</b> 16/22 17/21 17/21 18/4 21/15 27/7 28/15 39/3 60/23 71/11 143/14 143/21 158/3 201/4</p> <p><b>agreement [3]</b> 17/20 54/5 146/3</p> <p><b>agrees [1]</b> 82/8</p> <p><b>ahead [2]</b> 20/2 30/14</p> <p><b>aid [1]</b> 37/4</p> <p><b>Aidan [1]</b> 9/7</p> <p><b>aim [5]</b> 69/8 71/13 72/7 192/1 201/11</p> <p><b>aimed [1]</b> 99/19</p> <p><b>aims [2]</b> 138/2 205/8</p> <p><b>alarm [2]</b> 108/25 110/13</p> <p><b>alarmism [2]</b> 79/24 80/3</p> <p><b>alarms [1]</b> 20/3</p> <p><b>albeit [3]</b> 11/23 37/21 108/19</p> <p><b>alert [5]</b> 13/15 57/6 90/4 90/12 147/12</p> <p><b>alerted [1]</b> 104/18</p> <p><b>alerts [2]</b> 13/17 16/15</p> <p><b>aligned [1]</b> 35/23</p> <p><b>alignment [1]</b> 185/18</p> <p><b>all [143]</b> 1/10 2/7 7/20 8/25 9/11 13/13</p>	<p>14/16 15/22 16/25 20/10 20/19 21/3 21/5 24/15 25/2 28/15 31/15 32/16 33/4 33/16 35/15 35/25 38/7 38/15 38/18 38/23 39/12 39/13 43/11 44/7 45/24 46/1 46/9 46/13 47/6 49/5 50/6 51/8 51/15 53/2 53/16 54/15 56/9 58/1 61/10 63/24 65/6 65/8 70/7 72/6 75/7 77/8 79/19 80/3 80/15 80/15 80/16 82/20 83/18 85/1 85/19 86/11 86/13 89/1 89/22 92/6 94/13 98/10 98/11 98/12 98/15 99/21 99/24 102/13 104/13 107/10 108/24 109/11 111/24 114/15 115/11 117/5 117/16 121/11 121/23 122/15 122/20 126/1 126/4 130/12 131/11 131/22 139/4 139/16 141/23 144/3 144/7 147/5 147/18 148/13 150/10 151/5 152/7 153/21 154/1 155/3 155/9 156/25 157/25 158/8 159/10 163/11 164/23 164/23 165/15 169/5 169/14 170/1 171/23 173/5 174/15 181/2 181/11 182/14 184/11 189/5 194/23 196/21 197/25 198/19 200/13 201/5 201/7 202/14 203/19 204/7 206/20 208/18 208/22 209/10 210/19 210/21 211/1</p> <p><b>all right [16]</b> 7/20 9/11 13/13 43/11 77/8 79/19 82/20 85/1 89/1 99/24 102/13 131/11 156/25 181/11 204/7 209/10</p> <p><b>allow [8]</b> 45/1 68/11 115/19 130/22 154/17 165/21 184/24 214/3</p> <p><b>allowed [4]</b> 5/23 35/21 99/11 214/4</p> <p><b>allowing [5]</b> 157/6 157/8 188/3 188/24 190/5</p> <p><b>almost [13]</b> 8/23 47/4 63/7 63/8 63/9 66/5 81/2 92/15 112/5 125/21 127/23 198/7 202/12</p> <p><b>alone [4]</b> 20/25</p>
--	---	--	--	---



<b>A</b>	<b>ambiguous [1]</b> 85/17	115/8 118/23 120/4	79/22	149/14 149/15 151/22
<b>alone... [3]</b> 105/16 116/10 211/9	<b>among [1]</b> 104/23	120/22 120/22 122/5	<b>approach [14]</b> 17/10	152/10 152/22 153/19
<b>along [11]</b> 13/10 24/2 37/11 84/4 114/13	<b>amongst [5]</b> 140/6 144/17 157/22 159/13 184/9	131/22 135/10 137/19	23/3 41/22 59/14	155/9 156/1 156/25
115/25 129/16 134/1 134/5 135/3 135/4	<b>amount [7]</b> 34/7 95/7 109/11 147/1 178/11 180/9 185/20	137/25 138/6 138/10	103/13 111/20 143/15	157/6 159/19 160/1
<b>alongside [2]</b> 79/15 188/18	<b>amounted [2]</b> 86/7 188/25	138/25 141/9 148/6	143/19 145/20 145/23	163/5 164/6 164/8
<b>Alpha [1]</b> 15/24	<b>ample [1]</b> 97/2	149/11 150/2 150/8	150/20 151/15 152/17	166/11 169/25 170/16
<b>Alpha wave [1]</b> 15/24	<b>amusement [1]</b> 112/15	153/10 153/20 155/25	168/18	177/25 178/12 179/14
<b>already [26]</b> 1/16 32/14 32/18 32/20	<b>analogous [1]</b> 72/25	161/5 164/11 165/24	<b>approaches [3]</b> 13/11 35/20 78/8	182/2 184/9 184/12
32/21 33/22 34/2	<b>analogue [2]</b> 72/13 72/14	167/2 183/14 185/7	<b>appropriate [22]</b> 12/1	186/21 186/25 188/12
59/20 78/3 98/6 105/9	<b>analysis [7]</b> 76/20 77/17 113/23 181/3	201/3 203/22 204/15	19/17 19/18 27/22	189/5 190/18 193/13
105/10 105/10 111/11	189/2 207/2 209/12	208/15 211/24 213/16	27/25 28/1 29/20	194/2 195/21 196/5
115/8 143/21 148/4	<b>analytical [1]</b> 79/16	213/21	30/23 49/8 54/7 57/9	197/7 197/8 198/5
150/21 154/18 159/9	<b>anchor [2]</b> 64/16 141/1	<b>anybody [7]</b> 54/22	59/17 70/15 93/24	200/25 201/1 201/1
162/2 165/12 170/10	<b>Angela [1]</b> 45/25	199/23 201/19 201/23	103/13 112/13 113/14	201/2 201/4 201/9
177/11 181/4 191/10	<b>another [19]</b> 7/10 20/23 30/2 33/5 40/19	201/23 215/2 215/7	141/2 143/16 144/15	202/15 204/21 205/1
<b>also [72]</b> 2/19 4/23 6/10 7/1 7/21 7/24 8/2	44/18 45/16 50/4	<b>anybody's [1]</b> 185/25	164/7 193/9	205/4 206/24 207/3
8/9 8/12 8/20 9/5 12/4	53/25 67/25 71/20	<b>anyone [3]</b> 7/12 59/11 124/16	<b>appropriately [1]</b> 100/6	207/3 208/6 211/4
13/14 13/19 14/7	106/17 109/6 129/14	<b>anything [7]</b> 66/25 87/19 88/13 111/21	<b>appropriateness [1]</b> 143/18	211/15 213/6 214/9
16/13 19/18 21/20	129/15 153/21 170/14	121/23 141/16 189/24	<b>approved [1]</b> 60/9	214/20
25/17 26/10 26/11	186/22 204/20	<b>anyway [4]</b> 123/5 125/20 173/6 177/19	<b>approved [1]</b> 60/9	<b>area [16]</b> 4/2 11/2 11/22 11/23 11/25
34/21 37/2 37/12	<b>another two weeks</b> <b>[1]</b> 153/21	<b>Apart [1]</b> 168/17	<b>approved [1]</b> 60/9	18/18 108/2 110/20
38/16 39/20 40/12	<b>another's [1]</b> 71/25	<b>apophism [1]</b> 117/23	<b>approved [1]</b> 60/9	140/25 148/22 149/2
42/6 42/14 44/2 45/19	<b>answer [22]</b> 11/12 11/13 42/8 58/12	<b>Apologies [2]</b> 22/16 183/4	<b>approved [1]</b> 60/9	150/13 150/17 152/24
47/21 49/13 51/6	67/22 68/13 68/14	<b>apologise [5]</b> 124/22 129/6 129/11 157/22	<b>approved [1]</b> 60/9	156/24 166/16
52/21 54/2 64/13	120/17 124/25 125/12	205/22	<b>approved [1]</b> 60/9	<b>areas [26]</b> 4/11 4/19 7/2 10/12 10/18 11/11
64/15 64/18 70/11	153/25 155/14 171/10	<b>apology [1]</b> 1/8	<b>approved [1]</b> 60/9	15/6 17/18 19/13
75/3 75/6 79/6 80/1	180/16 183/11 183/20	<b>apparatus [3]</b> 113/4 166/16 169/1	<b>approved [1]</b> 60/9	20/23 25/10 37/8
80/22 83/25 88/25	188/7 192/24 196/2	<b>apparent [10]</b> 25/14 60/8 69/18 97/19	<b>approved [1]</b> 60/9	38/24 39/16 46/19
90/16 91/10 92/13	203/9 203/12 204/1	97/25 103/22 105/11	<b>approved [1]</b> 60/9	47/18 53/4 54/3 54/4
92/14 102/17 102/24	<b>answerable [1]</b> 93/6	166/4 193/3 194/10	<b>approved [1]</b> 60/9	54/6 66/3 74/23 91/4
104/3 115/1 115/13	<b>answered [2]</b> 118/7 203/13	153/25 155/14 171/10	<b>approved [1]</b> 60/9	95/20 150/11 169/2
116/21 117/9 121/7	<b>answers [4]</b> 70/2 84/20 100/6 204/5	180/16 183/11 183/20	<b>approved [1]</b> 60/9	<b>aren't [2]</b> 80/19 110/23
145/6 147/11 147/24	<b>anthropology [2]</b> 52/4 52/4	188/7 192/24 196/2	<b>approved [1]</b> 60/9	<b>arguably [5]</b> 44/11 45/13 45/14 127/25
157/12 171/25 172/3	<b>anti [1]</b> 5/14	203/9 203/12 204/1	<b>approved [1]</b> 60/9	184/2
174/12 177/16 182/16	<b>anticipated [1]</b> 193/24	<b>appear [7]</b> 29/1 69/22 84/11 106/8 144/12	<b>approved [1]</b> 60/9	<b>argue [7]</b> 56/11 56/12 59/9 80/10 80/12
184/18 187/21 202/24	<b>anticipating [1]</b> 150/5	162/9 185/24	<b>approved [1]</b> 60/9	201/15 202/22
207/21	<b>antithetic [1]</b> 30/3	<b>appeared [2]</b> 19/19 142/7	<b>approved [1]</b> 60/9	<b>arguing [1]</b> 125/23
<b>altered [1]</b> 65/20	<b>antiviral [1]</b> 5/10	<b>appearing [1]</b> 191/5	<b>approved [1]</b> 60/9	<b>argument [11]</b> 23/21 25/8 30/13 52/8 65/23
<b>alternative [2]</b> 43/18 111/7	<b>any [64]</b> 8/17 9/13 11/2 14/25 23/1 23/22	<b>appears [5]</b> 144/17 156/4 166/6 196/18	<b>approved [1]</b> 60/9	87/12 117/15 121/5
<b>alternatives [2]</b> 44/7 71/9	27/5 27/23 27/24	206/4	<b>approved [1]</b> 60/9	138/5 169/15 202/22
<b>although [9]</b> 48/18 58/4 96/23 120/18	35/14 37/20 37/23	<b>applicable [1]</b> 125/14	<b>approved [1]</b> 60/9	<b>arguments [3]</b> 6/2 42/25 66/9
126/7 159/9 167/12	38/9 52/1 66/24 68/10	<b>application [2]</b> 34/1 190/3	<b>approved [1]</b> 60/9	<b>arise [1]</b> 53/9
192/11 205/2	80/3 82/8 83/21 90/7	<b>applied [3]</b> 84/22 195/1 197/1	<b>approved [1]</b> 60/9	<b>armageddon [2]</b> 31/12 31/13
<b>altogether [1]</b> 130/21	91/13 92/2 92/4 92/13	<b>applies [2]</b> 5/4 212/19	<b>approved [1]</b> 60/9	<b>arose [2]</b> 75/11 129/1
<b>always [17]</b> 11/11 18/11 25/6 64/11	95/9 96/19 100/24	<b>apply [4]</b> 94/14 94/19 103/13 210/4	<b>approved [1]</b> 60/9	<b>around [37]</b> 1/20 12/22 14/16 16/8
65/17 66/18 75/5	107/2 107/11 114/21	<b>appointed [1]</b> 3/3	<b>approved [1]</b> 60/9	21/14 34/6 36/5 39/3
85/16 89/11 93/23		<b>apportioned [1]</b> 79/24	<b>approved [1]</b> 60/9	44/1 44/4 49/19 59/7
117/15 118/1 138/16		<b>appreciate [2]</b> 61/23 74/10	<b>approved [1]</b> 60/9	59/7 61/19 64/12
164/4 183/21 205/4		<b>appreciated [3]</b> 142/5 151/19 155/16	<b>approved [1]</b> 60/9	81/19 90/22 91/2
205/24		<b>appreciation [1]</b>	<b>approved [1]</b> 60/9	95/11 95/17 107/3
<b>am [9]</b> 1/2 1/14 6/12 31/17 60/3 60/5			<b>approved [1]</b> 60/9	107/13 114/19 119/13
112/11 205/3 215/14			<b>approved [1]</b> 60/9	133/3 134/13 138/19

**A**  
**around...** [1] 200/2  
**arrived** [1] 198/7  
**article** [1] 157/13  
**as** [253]  
**ascribe** [2] 33/7  
 41/11  
**ascribing** [1] 164/11  
**aside** [5] 62/13  
 113/21 148/13 165/25  
 212/6  
**ask** [21] 4/4 25/22  
 46/21 67/21 77/8  
 77/13 85/6 96/17  
 100/6 109/20 112/5  
 114/21 124/20 134/10  
 152/13 171/9 173/8  
 181/22 182/12 183/18  
 185/16  
**asked** [12] 40/21  
 49/13 66/22 77/10  
 77/11 83/12 89/20  
 96/17 148/25 173/7  
 186/6 203/13  
**asking** [6] 50/25  
 117/25 149/23 151/14  
 188/5 194/15  
**aspect** [2] 67/25 72/9  
**aspects** [6] 6/5 9/8  
 22/9 44/23 49/6  
 196/25  
**assess** [6] 45/5  
 95/10 98/11 170/7  
 185/21 188/21  
**assessed** [2] 94/5  
 115/23  
**assessment** [4]  
 103/11 132/20 160/14  
 162/6  
**assessments** [2]  
 10/13 76/5  
**assign** [1] 83/20  
**assist** [1] 5/18  
**assistance** [2] 1/15  
 69/25  
**assisted** [1] 15/6  
**associated** [2] 19/25  
 120/22  
**assume** [3] 103/16  
 127/21 154/1  
**assumed** [1] 211/1  
**assuming** [1] 214/12  
**assumption** [1]  
 83/13  
**assumptions** [1]  
 136/21  
**AstraZeneca** [1] 4/21  
**asymptomatic** [14]  
 33/17 102/18 102/20  
 103/19 103/21 158/6  
 160/7 160/10 160/16  
 160/17 160/20 174/16  
 181/11 181/14

**at** [280]  
**attack** [2] 163/19  
 163/19  
**attacks** [1] 8/22  
**attempt** [4] 84/16  
 124/1 127/17 198/17  
**attempts** [1] 172/5  
**attend** [1] 12/7  
**attendance** [1] 48/13  
**attended** [2] 12/11  
 16/7  
**attendees** [3] 66/13  
 66/22 190/15  
**attending** [3] 48/14  
 66/15 67/2  
**attention** [2] 183/14  
 189/14  
**attributes** [1] 96/18  
**audience** [1] 83/9  
**August** [3] 1/18 1/19  
 16/10  
**August 2020** [1]  
 16/10  
**Australia** [1] 15/20  
**automatically** [1]  
 85/21  
**autumn** [1] 210/3  
**available** [13] 26/15  
 33/25 49/22 58/6 63/4  
 73/7 74/18 103/7  
 108/9 152/19 159/1  
 159/15 160/13  
**avoid** [5] 11/10 27/8  
 62/25 128/20 208/20  
**await** [1] 126/8  
**aware** [31] 8/9 18/23  
 20/25 21/21 26/17  
 27/18 28/11 29/12  
 32/25 33/13 42/12  
 42/14 43/20 44/1  
 48/10 55/24 57/4  
 57/24 58/2 108/13  
 136/1 136/2 137/15  
 141/24 154/21 154/22  
 155/13 167/13 171/17  
 195/1 215/8  
**awareness** [1]  
 118/17  
**away** [7] 21/6 34/10  
 34/13 119/21 154/15  
 184/14 199/2

**B**  
**baby** [1] 65/21  
**back** [47] 5/17 7/15  
 28/12 34/11 36/18  
 55/10 56/23 69/16  
 70/24 75/15 82/10  
 84/5 89/9 91/24 96/2  
 100/21 104/25 109/13  
 119/7 122/4 126/16  
 131/3 131/24 136/13  
 140/4 140/12 146/6  
 146/7 149/23 151/13

153/2 158/13 162/4  
 173/6 174/6 177/14  
 180/7 190/17 194/23  
 199/4 199/13 200/3  
 205/19 205/23 206/22  
 210/6 210/7  
**backed** [2] 83/1 86/4  
**background** [2] 1/25  
 84/9  
**backgrounds** [2]  
 35/18 35/20  
**backing** [1] 97/3  
**backwash** [1] 138/10  
**bad** [11] 41/19 41/19  
 90/9 92/6 92/7 117/7  
 136/24 140/17 140/18  
 166/10 184/5  
**badly** [1] 214/25  
**bags** [1] 122/14  
**balance** [15] 21/2  
 23/7 23/16 29/19 34/2  
 34/3 45/5 50/12 50/19  
 50/20 70/19 73/19  
 87/10 92/1 93/17  
**balancing** [1] 38/12  
**ball** [1] 184/24  
**ballot** [1] 93/6  
**ballpark** [1] 158/12  
**band** [1] 56/14  
**barriers** [1] 42/5  
**bars** [1] 188/16  
**base** [2] 41/23 42/1  
**based** [17] 39/6 39/7  
 41/2 64/10 64/11  
 76/18 76/23 82/9  
 111/15 135/5 137/2  
 153/23 205/17 208/22  
 210/18 210/24 214/1  
**basic** [5] 3/23 75/18  
 76/4 77/16 78/25  
**basically** [8] 31/17  
 54/5 60/18 108/3  
 127/10 137/15 182/12  
 194/5  
**basing** [1] 113/24  
**basis** [23] 39/3 39/6  
 43/25 47/10 49/12  
 64/2 68/2 68/6 103/16  
 105/22 110/24 113/19  
 115/21 116/10 142/15  
 142/15 148/6 149/25  
 163/8 171/12 202/4  
 207/2 214/2  
**bathwater** [1] 65/21  
**battle** [1] 32/13  
**baulk** [1] 51/20  
**be** [347]  
**bears** [1] 69/13  
**beautiful** [1] 31/4  
**became** [11] 4/20  
 5/11 25/14 133/4  
 176/3 176/8 176/22  
 178/20 181/4 192/6  
 194/10

**because** [112] 5/23  
 6/21 6/25 8/25 12/1  
 14/19 17/24 18/14  
 29/9 36/23 40/20 43/8  
 43/22 49/9 50/5 55/10  
 56/20 57/11 61/8 61/9  
 61/21 63/23 66/6  
 66/23 67/2 68/1 68/3  
 69/17 69/19 71/15  
 72/6 80/7 80/22 80/23  
 81/14 86/14 87/20  
 88/23 89/18 91/18  
 92/19 93/2 97/4  
 101/17 102/18 103/20  
 106/1 106/13 108/2  
 109/20 111/6 114/18  
 122/19 123/7 123/14  
 125/3 125/16 125/23  
 127/15 129/4 131/4  
 131/19 133/2 133/20  
 133/21 137/20 137/23  
 141/23 143/3 143/6  
 144/6 144/12 144/22  
 147/10 149/6 149/10  
 149/14 151/13 154/13  
 154/20 155/4 156/6  
 157/24 162/3 162/13  
 163/13 164/19 168/1  
 168/23 170/7 170/19  
 171/5 174/4 177/12  
 179/18 180/4 180/12  
 182/8 183/12 183/18  
 184/25 185/12 185/16  
 187/25 189/18 194/14  
 195/7 195/11 197/7  
 202/2 202/17 212/17  
**become** [11] 33/24  
 80/13 80/20 86/22  
 86/23 104/24 105/16  
 111/2 137/1 169/21  
 192/6  
**becomes** [3] 66/8  
 103/22 116/4  
**becoming** [2] 9/22  
 208/20  
**bedded** [1] 119/10  
**bedevils** [1] 105/17  
**beds** [5] 119/11  
 119/11 123/4 125/6  
 125/6  
**beef** [1] 41/20  
**been** [136] 2/2 7/16  
 17/21 18/9 21/9 34/22  
 38/19 41/6 43/3 43/8  
 43/22 44/20 49/6 52/9  
 52/17 55/6 55/24 56/7  
 56/10 57/6 57/8 57/25  
 59/7 59/12 59/17 62/1  
 62/7 65/1 65/22 66/4  
 67/8 67/10 67/25 68/7  
 68/11 70/9 70/12  
 70/15 71/9 71/10  
 72/14 72/25 77/4  
 81/18 82/21 85/16

85/16 94/12 96/7 96/8  
 96/8 97/19 98/23  
 103/4 103/4 103/7  
 103/15 104/19 105/25  
 106/14 108/16 108/17  
 108/25 109/5 109/11  
 109/15 111/9 111/22  
 121/7 121/13 122/18  
 123/6 124/6 125/2  
 125/7 125/13 125/18  
 125/21 126/18 128/5  
 128/8 128/11 130/17  
 131/5 132/20 141/11  
 141/13 141/16 142/11  
 143/5 144/13 148/4  
 149/7 150/12 151/25  
 151/25 152/16 154/2  
 155/13 158/2 161/2  
 161/20 162/2 163/20  
 164/2 164/4 164/21  
 166/1 166/2 166/6  
 168/13 168/15 170/13  
 170/14 171/2 175/15  
 178/22 181/7 181/7  
 181/9 185/24 191/10  
 196/18 198/15 199/17  
 199/21 199/24 199/25  
 200/6 200/7 200/19  
 202/3 202/19 207/8  
 207/16 207/20  
**befits** [1] 1/22  
**before** [38] 9/12  
 18/19 20/10 20/20  
 21/19 22/18 25/14  
 25/24 28/19 32/4 32/5  
 32/6 33/21 41/6 68/1  
 79/23 88/21 96/6 99/8  
 103/21 106/17 112/5  
 112/6 120/16 124/1  
 125/12 135/14 158/11  
 171/9 181/2 193/15  
 197/24 198/1 199/24  
 200/1 200/3 208/2  
 210/2  
**began** [3] 67/2  
 161/15 171/16  
**beginning** [20] 9/18  
 16/22 23/22 23/25  
 41/9 49/16 49/17 61/5  
 92/3 104/7 120/2  
 128/16 131/16 139/19  
 149/25 151/7 152/14  
 187/21 190/22 193/3  
**behaving** [1] 107/10  
**behaviour** [4] 82/24  
 83/2 83/4 84/13  
**behavioural** [5] 45/8  
 46/6 48/7 196/12  
 212/2  
**behind** [4] 10/23 30/2  
 57/12 201/20  
**being** [51] 5/12 5/19  
 22/1 30/2 42/11 42/21  
 43/24 45/22 49/13

<b>B</b>	177/1	149/12 149/13 150/23 151/4 162/1 177/18	<b>burials [1]</b> 182/13	133/19 137/10 137/11
<b>being...</b> [42] 57/7 57/15 76/22 84/1 85/15 93/9 93/12 94/6 95/25 97/21 99/21 105/6 109/22 111/3 112/4 113/5 113/14 115/6 115/23 116/11 129/8 129/11 133/25 135/15 138/24 141/9 143/20 144/11 147/1 152/18 176/18 182/6 186/15 195/1 197/13 201/14 206/7 206/13 206/25 207/5 209/6 213/18	<b>bias [2]</b> 67/22 184/25	<b>borderlines [1]</b> 22/21	<b>busy [1]</b> 180/12	137/18 137/22 138/6 138/17 138/17 138/22 139/4 140/12 141/8 143/12 143/17 146/11 147/2 147/23 149/5 149/10 151/2 153/9 156/21 157/2 162/12 162/25 164/25 165/9 169/24 169/25 170/7 171/23 173/8 174/18 174/20 175/25 178/14 179/22 183/8 183/16 183/17 184/12 186/1 187/16 187/19 191/25 192/24 193/15 194/21 194/23 195/17 195/18 195/20 195/23 200/2 201/15 202/22 206/10 206/22 210/9 212/16 214/22
<b>belief [1]</b> 196/14	<b>big [14]</b> 71/14 78/10 78/12 83/22 110/25 121/21 128/25 130/11 136/25 146/9 162/1 168/8 178/15 194/22	<b>borders [15]</b> 38/11 38/12 130/12 146/7 147/18 148/2 149/5 151/7 151/11 151/16 151/18 151/18 151/22 151/25 152/15	<b>but [351]</b>	
<b>believe [2]</b> 16/7 72/24	<b>bigger [2]</b> 122/22 213/22	<b>both [29]</b> 16/1 17/14 21/21 24/10 24/21 31/5 33/16 35/1 62/19 62/22 71/16 71/19 73/18 80/13 81/25 92/22 113/12 134/1 141/19 142/19 144/1 150/19 177/24 179/13 182/20 182/22 186/9 186/21 186/21	<b>C</b>	
<b>below [11]</b> 58/24 182/17 192/2 193/13 194/19 195/22 195/25 196/4 196/6 196/9 196/16	<b>binary [3]</b> 105/19 108/2 176/16	<b>bottle [1]</b> 137/13	<b>Cabinet [21]</b> 12/12 63/9 66/23 67/1 70/5 70/6 70/7 155/21 169/2 170/3 170/9 170/12 170/18 174/17 176/21 177/5 177/16 179/10 180/10 211/18 214/7	
<b>below 1 [1]</b> 194/19	<b>bind [1]</b> 142/6	<b>bottom [2]</b> 137/18 205/2	<b>Cabinet Office [10]</b> 63/9 66/23 67/1 70/5 70/6 70/7 169/2 170/3 170/9 170/12	
<b>beneficial [1]</b> 5/23	<b>biological [1]</b> 139/15	<b>bound [2]</b> 31/4 206/4	<b>Cabinets [1]</b> 173/14	
<b>benefit [4]</b> 21/8 36/19 52/21 108/1	<b>biomedical [1]</b> 47/1	<b>boundaries [1]</b> 46/15	<b>calculate [2]</b> 77/22 183/8	
<b>benefits [1]</b> 38/13	<b>biomedics [2]</b> 48/6 50/14	<b>bounded [1]</b> 48/1	<b>calculating [1]</b> 158/4	
<b>benefitted [1]</b> 52/1	<b>bit [36]</b> 4/5 11/5 21/8 21/18 30/4 37/9 48/25 51/6 53/6 60/21 73/14 73/15 76/8 84/8 87/2 87/4 87/9 91/21 92/6 99/17 113/4 117/6 117/7 124/13 124/14 127/11 128/17 128/22 130/6 131/3 162/12 177/12 178/5 179/18 181/13 213/1	<b>box [1]</b> 93/6	<b>calculator [1]</b> 183/9	
<b>best [15]</b> 41/13 49/21 49/22 53/17 54/8 61/16 68/15 85/17 110/8 111/15 120/12 180/22 205/24 206/24 207/23	<b>bits [13]</b> 32/22 45/13 47/15 47/20 73/18 113/14 113/17 115/13 116/5 116/6 116/9 201/1 201/2	<b>Brace [1]</b> 32/13	<b>call [12]</b> 26/25 26/25 52/12 65/17 106/18 112/21 112/25 114/11 116/4 187/19 201/23 215/2	
<b>better [21]</b> 22/1 28/25 43/18 44/12 44/20 51/15 61/4 62/8 62/8 65/12 68/8 72/4 103/15 104/5 111/8 128/11 156/24 157/4 200/14 201/17 208/16	<b>blaming [1]</b> 131/22	<b>Brazil [1]</b> 133/24	<b>called [16]</b> 4/24 20/21 40/10 81/19 112/6 112/22 123/22 139/24 146/10 155/16 155/18 168/3 168/4 173/12 192/18 212/14	
<b>between [52]</b> 2/21 2/23 9/14 16/8 16/9 19/1 19/1 19/5 21/11 21/17 21/18 23/8 26/19 28/13 36/7 37/21 44/25 45/17 49/17 50/12 57/18 59/22 74/3 80/21 83/11 83/22 84/20 87/10 88/24 93/3 93/4 96/13 98/14 101/11 111/10 121/2 131/16 133/3 134/14 136/11 140/11 140/19 146/9 158/1 161/7 167/16 184/11 186/24 191/25 196/23 204/8 206/15	<b>blind [1]</b> 140/4	<b>break [4]</b> 60/4 171/9 172/18 173/2	<b>calling [4]</b> 29/2 62/10 109/14 161/2	
<b>beyond [8]</b> 46/6 48/12 102/25 115/7 154/11 155/22 175/3	<b>blocks [3]</b> 35/5 126/2 126/3	<b>breaker [2]</b> 10/17 89/8	<b>calls [3]</b> 4/14 38/3 62/6	
	<b>blunt [2]</b> 89/15 196/25	<b>breakers [1]</b> 86/6	<b>came [17]</b> 24/18 25/12 35/17 46/5 46/8 49/4 67/12 87/16 99/4 124/5 124/9 126/25 162/4 188/2 201/22 210/25 213/19	
	<b>bluntly [4]</b> 71/4 88/9 151/18 215/2	<b>briefed [5]</b> 131/9 154/25 155/1 155/2 155/2	<b>capture [3]</b> 61/17 66/25 101/23	
	<b>blurred [2]</b> 8/23 93/3	<b>briefings [6]</b> 61/22 66/16 80/7 98/7 98/12 142/19	<b>captured [2]</b> 55/4 102/2	
	<b>board [1]</b> 7/22	<b>briefly [6]</b> 101/21 160/5 165/1 181/22 190/14 204/11	<b>care [14]</b> 7/22 12/15 12/18 46/20 48/12 81/6 81/7 84/22 113/12 115/14 145/5 145/8 163/24 184/15	
	<b>bodies [5]</b> 2/16 3/21 47/19 115/9 116/23	<b>bring [4]</b> 1/18 117/2 124/2 192/2	<b>career [1]</b> 20/8	
	<b>body [16]</b> 17/23 39/9 45/2 45/20 48/4 50/8 51/4 72/11 73/1 102/20 102/22 113/9 122/14 175/17 175/18 191/16	<b>bringing [4]</b> 116/23 116/23 129/16 196/16	<b>careful [5]</b> 20/14 51/7 89/15 90/21 114/1	
	<b>bones [1]</b> 124/12	<b>brings [1]</b> 135/18	<b>carefully [2]</b> 118/8 186/24	
	<b>book [3]</b> 18/24 19/7 20/5	<b>British [1]</b> 199/10	<b>carried [1]</b> 39/13	
	<b>border [13]</b> 138/19 145/24 146/4 147/6 148/13 148/15 149/6	<b>British Government [1]</b> 199/10	<b>carry [1]</b> 195/23	
		<b>broadly [1]</b> 159/2	<b>case [62]</b> 21/2 21/5 27/9 30/13 30/23 32/4 33/15 35/14 35/25 41/17 41/21 45/6 47/4 47/6 50/5 53/20 59/21 71/21 73/3 73/9 108/7 108/14 126/11 135/20 136/15 142/4 143/24 148/7 153/8 153/14 157/19 159/2 159/17 162/23 170/25 174/15 178/8 178/13 181/8	
		<b>brought [5]</b> 23/11 46/18 116/6 123/19 152/17		
		<b>building [4]</b> 35/5 126/1 126/2 144/12		
		<b>burden [2]</b> 71/1 172/21		
		<b>burdensome [1]</b> 71/10		

<b>C</b>	207/3 212/12	<b>cherry</b> [5] 94/6 94/8 94/9 94/10 95/3	<b>circularity</b> [1] 69/13	197/23
<b>case...</b> [23] 181/22 181/25 182/1 182/5 182/11 182/17 182/24 182/25 183/5 183/20 183/22 183/22 184/18 184/19 185/6 185/18 185/22 186/3 186/10 186/15 187/10 191/3 191/4	<b>certainly</b> [27] 23/22 27/5 27/9 28/9 44/8 46/12 50/16 55/2 55/11 63/8 63/13 63/22 73/3 111/3 125/21 168/13 175/21 176/12 179/1 179/19 181/13 185/10 187/22 190/1 192/1 193/2 215/10	<b>cherry-pick</b> [1] 95/3	<b>circulating</b> [1] 214/11	<b>clinicians</b> [2] 37/8 40/11
<b>case-finding</b> [1] 178/8	<b>certainty</b> [3] 60/11 142/9 162/21	<b>cherry-picking</b> [4] 94/6 94/8 94/9 94/10	<b>circumnavigated</b> [1] 149/10	<b>close</b> [10] 36/8 100/13 100/25 101/24 105/13 144/2 151/7 188/17 189/4 200/1
<b>cases</b> [28] 25/15 37/2 64/7 74/25 81/23 102/24 108/18 109/3 109/6 126/5 136/23 138/6 139/9 139/18 153/10 157/11 157/23 158/2 158/6 174/3 174/22 175/10 175/18 178/8 178/15 193/22 207/14 208/8	<b>cetera</b> [3] 28/15 147/10 147/15	<b>chew</b> [1] 38/1	<b>circumstances</b> [13] 8/18 8/24 33/12 36/12 61/11 93/16 95/16 96/1 155/11 168/15 171/3 177/5 182/18	<b>closed</b> [2] 10/14 152/1
<b>cast</b> [1] 180/7	<b>chains</b> [5] 133/1 134/1 134/5 154/19 176/12	<b>chief</b> [34] 2/20 2/22 3/3 3/8 6/6 6/6 7/14 8/10 8/11 10/19 10/21 37/1 37/3 40/13 43/22 43/24 44/13 44/15 45/24 50/22 85/5 112/23 162/18 163/8 163/16 170/17 174/21 176/2 177/4 178/19 180/19 199/5 200/21 204/2	<b>civil</b> [10] 26/11 27/24 85/22 95/13 122/6 123/19 136/13 170/9 191/1 191/6	<b>closely</b> [6] 12/4 35/14 39/12 95/6 102/9 162/8
<b>catches</b> [1] 160/21	<b>chair</b> [7] 16/19 16/20 16/21 16/23 17/1 43/16 191/1	<b>childcare</b> [1] 46/20	<b>claimed</b> [1] 202/21	<b>closer</b> [1] 121/22
<b>cause</b> [2] 83/7 125/18	<b>chaired</b> [9] 2/24 2/25 3/10 13/8 16/25 40/11 43/14 163/8 163/23	<b>children</b> [1] 36/22	<b>claiming</b> [1] 39/17	<b>closest</b> [1] 38/23
<b>caused</b> [1] 67/12	<b>chairing</b> [1] 50/2	<b>China</b> [42] 9/16 57/25 59/2 76/21 76/24 78/24 100/20 102/25 109/3 109/4 109/5 114/25 135/18 135/21 136/3 136/23 136/25 137/20 139/3 139/8 139/10 139/18 143/23 149/23 150/6 151/6 151/12 174/23 174/24 175/3 175/6 175/7 175/12 175/19 176/10 176/12 176/13 177/1 212/3 212/11 212/22 214/14	<b>claims</b> [1] 85/23	<b>closing</b> [3] 54/15 189/18 193/23
<b>causes</b> [2] 10/22 34/24	<b>challenge</b> [5] 45/16 49/14 50/3 73/8 148/23	<b>Chinese</b> [8] 15/17 58/18 59/14 109/6 159/13 175/20 194/19 195/1	<b>clamour</b> [1] 202/7	<b>closure</b> [3] 149/13 151/18 190/4
<b>causing</b> [1] 32/21	<b>challenges</b> [5] 38/16 38/18 51/11 96/10 118/24	<b>chip</b> [1] 62/21	<b>clarify</b> [2] 71/22 79/5	<b>closure</b> [3] 149/13 151/18 190/4
<b>caution</b> [2] 66/2 151/21	<b>challenging</b> [1] 50/7	<b>choice</b> [2] 96/5 152/5	<b>clarity</b> [1] 197/12	<b>closures</b> [2] 56/5 162/1
<b>cautious</b> [9] 20/6 20/10 29/4 29/23 29/24 53/6 73/15 103/8 129/6	<b>chance</b> [3] 141/15 149/2 178/14	<b>chose</b> [4] 27/17 90/18 211/23 212/20	<b>clear</b> [76] 9/24 20/19 21/9 26/4 27/7 27/10 34/2 36/20 36/21 37/14 38/4 58/12 68/24 74/24 88/23 89/15 90/8 90/16 91/10 91/25 93/3 94/14 96/23 97/1 99/23 101/17 104/1 105/12 109/18 109/25 110/1 111/7 120/3 121/24 127/16 131/1 133/4 135/3 140/15 143/11 144/4 144/24 151/4 152/3 154/18 155/8 159/15 160/16 162/14 162/24 163/4 167/18 171/1 177/11 178/1 178/3 181/4 181/4 181/13 181/19 181/20 181/24 191/7 191/18 192/6 192/6 192/11 192/11 194/10 202/15 206/7 206/11 211/16 211/17 212/22 212/24	<b>CMMID</b> [2] 173/24 174/9
<b>cavalry</b> [1] 25/12	<b>chancellor</b> [3] 94/17 94/18 186/13	<b>choosing</b> [1] 204/19	<b>clearer</b> [1] 24/13	<b>CMO</b> [14] 5/18 6/21 7/1 7/7 11/22 12/23 22/2 42/19 86/9 88/2 89/4 91/5 112/10 161/16
<b>caveat</b> [2] 73/6 78/10	<b>chances</b> [1] 163/19	<b>chose</b> [4] 62/13 94/21 101/20 146/3	<b>clearing</b> [2] 66/5 70/7	<b>CMO's</b> [1] 7/16
<b>caveats</b> [1] 80/8	<b>change</b> [14] 43/5 81/16 81/18 81/19 81/20 83/1 87/15 133/2 143/15 143/19 145/20 146/15 152/16 168/18	<b>chosen</b> [1] 151/6	<b>clearly</b> [22] 9/19 25/4 26/7 29/19 29/22 32/12 39/18 57/13 57/25 59/21 86/13 86/15 117/10 121/12 121/18 154/6 154/24 155/16 169/11 170/19 212/12 215/6	<b>CMOs</b> [12] 6/22 12/16 35/6 35/9 35/13 36/1 38/25 40/1 40/12 89/22 90/3 91/4
<b>central</b> [30] 10/6 10/8 11/20 12/7 17/9 17/22 24/22 28/19 47/16 53/13 53/14 60/19 61/2 61/19 64/17 65/25 113/16 115/20 116/10 122/7 125/17 126/9 127/7 134/17 157/18 159/12 171/19 184/5 191/16 204/4	<b>changed</b> [3] 82/4 111/22 113/17	<b>Chris</b> [19] 1/5 1/6 1/8 1/13 4/4 28/4 64/1 112/16 118/8 135/1 167/18 172/20 173/4 186/9 203/15 203/17 206/18 206/22 216/3	<b>clearer</b> [1] 24/13	<b>co</b> [9] 2/24 3/10 4/21 9/21 16/20 17/4 43/14 43/16 62/23
<b>centre</b> [6] 17/5 164/20 170/6 170/7 170/21 172/4	<b>changes</b> [6] 60/15 82/24 83/3 84/13 166/17 201/10	<b>Chris Whitty</b> [4] 1/5 1/13 135/1 206/22	<b>clearing</b> [2] 66/5 70/7	<b>co-chair</b> [2] 16/20 43/16
<b>centred</b> [1] 174/25	<b>changing</b> [1] 77/25	<b>Christmas</b> [1] 90/22	<b>clearly</b> [22] 9/19 25/4 26/7 29/19 29/22 32/12 39/18 57/13 57/25 59/21 86/13 86/15 117/10 121/12 121/18 154/6 154/24 155/16 169/11 170/19 212/12 215/6	<b>co-chaired</b> [3] 2/24 3/10 43/14
<b>centuries</b> [1] 56/7	<b>chaos</b> [2] 97/24 98/17	<b>Christopher</b> [1] 167/17	<b>clearer</b> [1] 24/13	<b>co-chairs</b> [2] 17/4 62/23
<b>century</b> [3] 55/12 121/21 210/22	<b>chaotic</b> [2] 95/20 95/21	<b>chronology</b> [4] 3/17 35/12 112/21 129/22	<b>clearing</b> [2] 66/5 70/7	<b>CO-CIN</b> [1] 4/21
<b>CEO</b> [3] 3/18 4/9 5/18	<b>characterisation</b> [1] 29/9	<b>CIN</b> [1] 4/21	<b>clearly</b> [22] 9/19 25/4 26/7 29/19 29/22 32/12 39/18 57/13 57/25 59/21 86/13 86/15 117/10 121/12 121/18 154/6 154/24 155/16 169/11 170/19 212/12 215/6	<b>co-ordination</b> [1] 9/21
<b>certain</b> [18] 4/11 48/24 61/11 68/14 95/8 116/3 133/13 139/15 163/5 180/11 181/2 182/11 182/18 200/18 201/25 203/21	<b>characteristics</b> [5] 120/24 136/4 137/3 137/23 175/16	<b>circuit</b> [3] 10/17 86/6 89/8	<b>clearer</b> [1] 24/13	<b>coalface</b> [1] 48/9
	<b>chat</b> [1] 115/17	<b>circuit breakers</b> [1] 86/6	<b>clearing</b> [2] 66/5 70/7	<b>COBR</b> [15] 12/11 12/12 47/24 109/15 132/17 132/22 148/11 155/1 155/20 163/9 163/22 170/23 173/21 185/16 190/11

<b>C</b>	<b>commentaries [1]</b> 97/13	124/10 127/19 128/13 128/17 198/3 198/4 198/15	<b>connotations [2]</b> 148/15 188/1	209/7
<b>colleagues... [15]</b> 32/9 32/22 41/18 42/23 44/3 83/7 91/2 100/22 107/3 125/19 161/9 161/24 184/4 196/14 208/14	<b>commentary [3]</b> 58/9 63/4 162/12	<b>comprising [1]</b> 45/7	<b>cons [1]</b> 38/8	<b>contemplate [2]</b> 54/12 126/24
<b>collected [2]</b> 4/23 13/8	<b>commentators [2]</b> 86/23 94/22	<b>compulsory [1]</b> 84/13	<b>consensus [3]</b> 60/10 60/20 62/11	<b>contemplation [1]</b> 54/18
<b>collection [1]</b> 192/2	<b>commenting [1]</b> 38/24	<b>computed [1]</b> 181/3	<b>consequences [13]</b> 21/23 22/5 23/13 23/19 27/3 82/25 88/7 135/22 169/22 210/4 210/8 210/10 213/13	<b>contemporaneously [1]</b> 202/13
<b>collective [13]</b> 7/24 8/4 8/25 36/15 36/19 36/23 36/23 37/4 37/6 37/17 38/2 38/5 207/24	<b>comments [3]</b> 10/14 153/9 197/19	<b>concede [1]</b> 114/4	<b>consequential [2]</b> 164/24 165/15	<b>content [1]</b> 201/9
<b>collectively [9]</b> 36/3 36/9 36/10 36/11 37/2 37/10 97/21 164/10 189/11	<b>commerce [1]</b> 148/14	<b>conceived [1]</b> 200/7	<b>consider [16]</b> 14/23 19/15 25/8 29/14 38/22 59/18 128/5 130/3 130/4 141/12 149/22 165/19 165/19 171/9 182/15 187/17	<b>context [12]</b> 31/23 54/11 111/10 138/2 146/21 147/18 147/19 165/10 183/6 203/8 205/6 207/7
<b>College [5]</b> 2/14 31/1 33/14 133/8 209/15	<b>commission [1]</b> 68/2	<b>concentrates [1]</b> 3/22	<b>considerable [5]</b> 40/22 46/10 69/4 103/24 184/15	<b>contiguous [1]</b> 175/11
<b>College's [1]</b> 108/10	<b>commissioned [2]</b> 70/4 199/7	<b>concentrating [1]</b> 185/8	<b>considerably [1]</b> 125/2	<b>Contingencies [6]</b> 122/7 123/20 136/13 170/9 191/2 191/6
<b>colleges [3]</b> 8/2 8/7 39/5	<b>committed [1]</b> 32/18	<b>concentration [1]</b> 173/5	<b>consideration [6]</b> 57/8 114/19 123/6 125/8 145/23 164/1	<b>contingent [1]</b> 78/19
<b>combination [1]</b> 146/11	<b>committee [5]</b> 7/21 31/11 31/15 48/14 60/8	<b>concept [2]</b> 193/16 194/7	<b>considered [7]</b> 3/5 45/22 48/20 54/19 118/19 147/4 147/17	<b>continual [1]</b> 104/16
<b>combine [1]</b> 5/23	<b>committees [2]</b> 18/2 62/24	<b>concepts [1]</b> 187/3	<b>considering [3]</b> 100/13 100/25 135/16	<b>continue [6]</b> 29/8 96/8 125/1 161/17 188/4 190/6
<b>combined [2]</b> 5/2 124/2	<b>common [3]</b> 17/12 18/21 215/3	<b>conceptual [1]</b> 128/20	<b>consistent [1]</b> 97/2	<b>continuing [2]</b> 103/11 191/20
<b>combining [1]</b> 209/18	<b>commonly [1]</b> 132/12	<b>concern [13]</b> 20/16 55/3 107/15 107/23 139/25 144/6 163/11 171/19 194/22 206/1 209/25 213/12 213/16	<b>consistently [2]</b> 97/23 117/5	<b>continuous [1]</b> 119/18
<b>come [46]</b> 14/16 17/7 21/7 21/10 31/8 37/16 40/5 45/21 46/2 46/14 49/23 49/25 50/22 57/10 59/17 65/12 67/9 69/2 72/24 75/15 80/7 82/18 89/21 93/16 102/8 113/16 114/13 126/16 131/24 139/20 146/6 146/7 149/19 153/2 159/24 163/17 170/6 173/6 177/14 194/23 200/2 200/21 204/19 210/2 210/6 210/7	<b>Commons [1]</b> 202/15	<b>concerned [21]</b> 22/3 55/3 55/7 85/16 109/9 109/23 111/3 111/4 125/3 136/7 136/18 142/16 151/12 152/11 157/15 179/10 191/13 209/5 210/10 211/4 211/14	<b>Consortium [1]</b> 4/24	<b>contrary [1]</b> 45/3
<b>comes [7]</b> 51/1 60/21 115/5 127/23 135/21 178/6 212/20	<b>Commonwealth [1]</b> 161/23	<b>concerns [4]</b> 135/5 136/2 211/13 214/4	<b>constituted [1]</b> 50/16	<b>contrast [1]</b> 20/12
<b>comfortable [1]</b> 38/7	<b>comms [1]</b> 126/19	<b>concluding [1]</b> 176/2	<b>constitutes [2]</b> 162/7 167/8	<b>contribute [2]</b> 67/20 213/4
<b>coming [16]</b> 33/24 56/23 77/2 79/4 82/10 108/15 115/3 122/4 137/21 137/23 142/6 142/9 149/23 151/13 162/8 163/7	<b>communicate [2]</b> 178/25 205/25	<b>conclusion [2]</b> 49/25 50/23	<b>constrained [1]</b> 11/5	<b>contributed [5]</b> 86/2 98/17 126/16 199/19 199/20
<b>coming weeks [1]</b> 33/24	<b>communicating [2]</b> 34/7 61/21	<b>conclusions [3]</b> 37/23 49/23 103/8	<b>constructed [1]</b> 126/4	<b>contribution [2]</b> 3/25 85/12
<b>command [1]</b> 13/5	<b>communication [3]</b> 64/12 126/19 182/21	<b>concurrently [1]</b> 141/21	<b>consular [1]</b> 147/9	<b>control [17]</b> 46/24 47/8 48/12 49/8 52/10 135/19 137/14 142/2 154/14 174/11 175/6 185/7 188/11 193/4 193/14 207/8 212/17
<b>commenced [3]</b> 123/11 126/7 127/3	<b>communications [1]</b> 69/15	<b>conditional [1]</b> 176/22	<b>consultant [1]</b> 2/3	<b>controlled [3]</b> 5/4 5/24 176/14
<b>comment [4]</b> 40/21 64/20 99/1 208/23	<b>community [9]</b> 46/24 48/12 49/9 102/3 105/7 105/16 133/1 192/7 193/5	<b>conduit [1]</b> 65/3	<b>consulted [3]</b> 42/19 42/21 199/18	<b>controlling [3]</b> 115/4 174/2 177/21
	<b>compare [1]</b> 119/6	<b>conferences [1]</b> 99/9	<b>contact [3]</b> 56/6 101/24 204/17	<b>controls [1]</b> 177/19
	<b>compared [4]</b> 105/24 163/4 187/14 197/5	<b>confidence [10]</b> 60/13 60/13 61/6 61/6 113/24 133/6 151/23 159/10 159/11 161/18	<b>contacts [3]</b> 174/3 174/10 174/10	<b>convenient [2]</b> 72/5 93/19
	<b>completely [17]</b> 47/9 50/21 61/1 70/14 76/10 87/3 88/16 111/9 127/1 134/21 158/16 167/6 195/12 195/13 200/25 211/23 214/17	<b>confident [9]</b> 20/18 38/6 84/1 84/3 106/2 133/16 133/16 151/5 158/11	<b>contain [15]</b> 124/7 124/17 178/5 198/8 198/9 198/9 198/21 200/20 202/10 202/12 202/17 202/21 205/8 207/18 207/19	<b>conversation [6]</b> 69/18 99/5 99/6 205/20 205/23 208/18
	<b>compatible [1]</b> 196/5	<b>confined [1]</b> 175/19	<b>contained [2]</b> 136/23 138/7	<b>conversations [3]</b> 107/13 187/4 208/15
	<b>complementary [1]</b> 17/18	<b>confines [1]</b> 97/15	<b>containment [10]</b> 192/8 199/23 199/25 207/1 207/9 207/11 207/22 207/25 208/10	<b>convinced [2]</b> 172/7 205/3
	<b>complete [6]</b> 123/1 149/13 166/25 167/1 185/7 195/6	<b>confirmed [2]</b> 98/6 108/7		<b>Corbyn [1]</b> 96/7
	<b>complex [2]</b> 146/5 183/9	<b>confused [1]</b> 197/1		<b>coronavirus [13]</b> 33/17 104/21 108/14 109/25 120/23 123/7 125/15 126/17 133/25
	<b>component [1]</b> 129/15	<b>confusing [1]</b> 197/7		
	<b>components [10]</b> 120/7 124/3 124/10	<b>confusion [4]</b> 51/1 95/8 184/13 197/11		

<b>C</b>	<b>couldn't [6]</b> 44/18 55/18 137/2 175/15 189/17 199/21 <b>Council [3]</b> 3/24 8/7 39/8 <b>COUNSEL [2]</b> 1/7 216/5 <b>countenance [1]</b> 213/17 <b>counterintuitively [2]</b> 152/4 183/17 <b>countermeasures [10]</b> 25/9 120/25 125/8 125/13 126/24 128/7 145/24 183/16 210/5 210/12 <b>countervailing [1]</b> 93/12 <b>countries [14]</b> 14/4 14/7 15/1 15/14 15/18 15/25 16/9 41/13 42/15 42/17 43/20 95/23 134/19 208/4 <b>country [21]</b> 15/10 25/25 27/1 48/10 52/1 52/24 53/2 91/3 95/25 107/14 115/3 115/5 128/7 129/17 137/10 146/21 207/1 207/5 207/10 208/9 209/6 <b>couple [2]</b> 28/4 101/7 <b>course [92]</b> 1/13 1/22 3/5 4/6 5/25 6/16 8/9 9/5 10/2 12/14 13/14 15/16 15/23 16/20 18/14 22/3 25/3 28/21 28/21 31/6 33/5 33/13 35/2 38/13 40/24 42/12 42/14 42/15 42/19 43/12 48/3 53/20 54/3 54/13 54/24 56/23 60/9 61/20 64/18 64/19 64/25 66/13 66/19 67/10 72/5 72/7 72/10 73/4 81/17 82/15 83/24 85/10 86/1 86/22 88/6 90/1 96/24 97/4 97/16 102/24 110/12 115/10 123/6 123/14 125/12 135/17 138/18 140/12 140/22 143/2 143/5 143/6 143/21 146/20 157/10 160/13 160/18 173/15 175/12 176/6 176/20 180/18 183/12 191/9 193/6 195/1 203/4 203/7 208/25 208/25 210/11 213/19 <b>courses [1]</b> 26/20 <b>court [1]</b> 24/19 <b>CoV [1]</b> 41/1 <b>cover [1]</b> 172/1	<b>covered [3]</b> 5/6 85/21 172/2 <b>Covid [21]</b> 3/13 4/3 4/24 5/1 5/9 5/25 8/3 8/22 9/17 12/13 12/13 13/12 32/7 32/19 34/24 34/25 76/7 95/1 121/2 121/9 186/7 <b>Covid-19 [3]</b> 3/13 4/24 5/1 <b>Covid-O [1]</b> 12/13 <b>Covid-S [1]</b> 12/13 <b>crack [1]</b> 130/8 <b>create [2]</b> 191/7 191/18 <b>created [2]</b> 40/25 43/3 <b>CRIP [3]</b> 132/14 132/15 132/17 <b>CRIP 1 [1]</b> 132/15 <b>crisis [14]</b> 18/7 19/25 69/25 87/23 95/9 98/4 122/8 123/2 127/8 146/22 166/3 167/8 168/6 173/17 <b>critical [3]</b> 55/16 61/14 133/21 <b>criticism [3]</b> 68/18 80/3 164/8 <b>criticisms [1]</b> 82/10 <b>cross [7]</b> 115/21 116/3 116/5 145/9 146/2 146/14 203/24 <b>cross-government [4]</b> 115/21 145/9 146/2 203/24 <b>crowded [1]</b> 189/9 <b>cruise [1]</b> 180/25 <b>CSA [1]</b> 89/4 <b>Cummings [4]</b> 66/21 67/11 67/12 172/4 <b>Cummings' [1]</b> 67/6 <b>curiously [1]</b> 89/22 <b>current [4]</b> 53/14 70/13 143/14 201/22 <b>currently [1]</b> 136/24 <b>curve [5]</b> 30/2 105/21 196/15 196/20 199/14	<b>D</b>	<b>dairies [1]</b> 20/4 <b>damage [3]</b> 21/23 59/4 168/21 <b>damages [1]</b> 21/3 <b>damaging [1]</b> 74/13 <b>Dame [3]</b> 9/6 37/12 45/25 <b>Dame Angela [1]</b> 45/25 <b>Dame Jenny Harries [1]</b> 37/12 <b>danger [4]</b> 27/1 69/8 184/21 184/21 <b>dangerous [4]</b> 96/3	135/9 170/17 197/14 <b>dangers [1]</b> 28/6 <b>data [47]</b> 4/22 20/11 25/23 28/25 74/8 74/13 74/18 74/18 74/21 74/22 74/23 75/1 75/18 76/3 76/9 76/13 76/13 78/5 78/24 79/4 81/8 81/12 81/13 81/13 81/21 81/22 81/23 82/5 82/7 82/9 108/15 111/19 113/22 113/25 114/20 114/23 115/7 115/19 116/10 116/20 117/2 117/6 129/3 154/18 160/12 181/17 206/21 <b>date [26]</b> 33/13 105/11 106/9 109/22 109/25 132/19 136/12 139/16 139/17 139/19 148/3 151/20 161/20 175/9 191/15 199/12 199/15 199/22 199/22 200/8 200/13 200/19 201/1 201/25 202/9 202/10 <b>dated [6]</b> 1/18 1/19 132/18 174/13 188/9 211/20 <b>David [1]</b> 196/12 <b>David Halpern [1]</b> 196/12 <b>day [10]</b> 54/15 54/15 89/19 91/21 94/4 153/1 153/17 173/5 173/9 209/23 <b>days [16]</b> 23/14 33/20 58/5 105/25 106/17 117/11 148/8 148/17 149/25 154/23 154/25 156/6 156/20 162/8 179/22 196/1 <b>DCMO [3]</b> 8/18 9/20 148/5 <b>DCMOs [6]</b> 8/10 8/17 9/3 9/14 11/17 36/2 <b>dead [1]</b> 208/10 <b>deal [17]</b> 41/6 45/12 78/16 95/5 113/11 117/3 120/19 122/8 123/2 137/10 142/8 149/5 165/3 182/14 184/16 185/5 196/8 <b>dealing [15]</b> 30/4 30/11 31/7 46/23 47/1 47/10 48/8 49/5 74/21 95/9 106/23 125/4 165/5 187/4 204/21 <b>deals [1]</b> 161/13 <b>dealt [6]</b> 47/8 47/9 122/4 144/9 174/1 197/22 <b>death [8]</b> 32/5 32/6	33/18 77/17 79/2 101/12 102/21 114/24 <b>deaths [15]</b> 23/10 23/10 25/15 34/25 74/6 81/23 82/12 82/17 88/11 122/13 122/14 153/20 163/3 207/16 214/20 <b>debatable [2]</b> 59/19 80/22 <b>debate [44]</b> 24/3 28/19 28/21 29/18 45/1 45/4 63/6 67/9 69/4 69/23 70/23 71/3 80/14 80/14 81/17 86/22 87/2 87/3 87/9 87/23 110/13 111/9 113/1 128/20 132/10 134/15 138/18 140/6 146/20 155/22 165/23 167/10 181/21 187/9 190/3 192/20 192/23 193/1 196/10 196/18 197/1 199/4 208/17 212/8 <b>debated [3]</b> 152/15 157/10 207/6 <b>debates [3]</b> 80/21 191/25 206/24 <b>debating [3]</b> 80/24 143/17 160/19 <b>decades [1]</b> 56/7 <b>decide [2]</b> 32/15 115/20 <b>decided [3]</b> 117/17 126/9 128/23 <b>decision [36]</b> 12/24 26/1 32/19 37/5 40/5 40/14 40/16 42/20 67/14 68/5 72/16 73/23 76/18 86/1 88/7 89/12 89/19 90/10 90/11 91/17 92/16 93/5 94/2 94/15 94/25 96/21 98/5 99/12 99/15 111/14 129/13 129/21 137/6 152/2 187/19 207/24 <b>decision-makers [3]</b> 68/5 94/15 94/25 <b>decision-making [12]</b> 12/24 26/1 37/5 40/14 76/18 86/1 96/21 98/5 99/12 99/15 111/14 129/13 <b>decisions [29]</b> 22/2 35/24 76/12 86/3 86/5 86/7 86/8 86/12 86/13 86/20 88/21 89/16 91/12 92/16 92/19 94/25 95/19 96/22 97/6 97/22 110/19 110/25 114/15 130/11 130/11 130/21 151/10
----------	--	---	----------	--	--	--

<b>D</b>	194/20 212/11 214/14	<b>develop [2]</b> 116/21 200/9	166/22 176/20 176/23 177/22 178/25 179/11	192/3 192/4 205/16 205/17 206/3
<b>decisions... [2]</b> 162/8 211/1	<b>demonstrates [4]</b> 81/4 107/15 117/10 172/16	<b>developed [3]</b> 53/20 122/6 195/4	180/1 195/6 196/10 196/13 201/23 203/25	<b>differentiate [2]</b> 17/16 50/25
<b>declare [1]</b> 208/9	<b>demonstrating [1]</b> 36/24	<b>Development [1]</b> 2/21	207/9 211/6 213/4 213/12 213/16 214/3	<b>differentiation [1]</b> 115/24
<b>declared [6]</b> 108/7 109/11 140/2 141/11 163/10 203/1	<b>demonstration [1]</b> 31/19	<b>developments [1]</b> 110/11	<b>didn't [46]</b> 23/22 27/11 27/20 34/19 40/11 46/12 51/8 51/9	<b>differently [7]</b> 50/21 110/16 165/4 169/10 172/8 190/2 190/2
<b>declaring [2]</b> 34/13 208/3	<b>depart [1]</b> 3/16	<b>deviating [1]</b> 27/5	55/19 58/7 61/11 61/22 67/3 69/23 74/23 93/2 93/23	<b>difficult [26]</b> 18/8 18/10 23/7 23/25 32/11 32/14 38/10 42/2 54/12 59/11 62/6
<b>decreasing [1]</b> 189/6	<b>department [11]</b> 2/20 7/22 12/17 63/10 113/11 115/13 116/2 144/8 144/10 145/4 145/7	<b>devolved [3]</b> 6/22 38/21 63/24	94/14 98/20 98/21 99/19 101/25 102/11 104/1 105/6 120/5 121/18 124/16 129/1 148/24 149/22 153/3 153/10 162/4 167/12 171/11 172/1 179/20 196/24 203/4 203/22 205/15 207/12 208/8 211/6 213/21	<b>difficulties [6]</b> 20/24 32/22 97/20 149/11 150/19 158/7
<b>dedicated [2]</b> 52/25 185/21	<b>departments [3]</b> 63/5 63/24 169/25	<b>devoting [1]</b> 180/9	<b>die [4]</b> 76/1 88/9 101/10 181/6	<b>difficulty [2]</b> 96/25 97/1
<b>deep [2]</b> 26/5 83/7	<b>depend [1]</b> 77/21	<b>dexamethasone [2]</b> 5/8 5/10	<b>died [4]</b> 34/24 34/25 134/2 174/25	<b>diplomacy [2]</b> 94/1 147/8
<b>defend [1]</b> 114/3	<b>depended [1]</b> 64/8	<b>DHSC [7]</b> 6/15 12/24 13/1 13/5 122/6 146/17 186/6	<b>differ [1]</b> 28/22	<b>diplomas [1]</b> 2/9
<b>deficiencies [1]</b> 119/2	<b>dependency [1]</b> 125/5	<b>diagnosis [1]</b> 117/24	<b>difference [16]</b> 6/25 9/14 19/5 26/19 28/16 60/20 83/22 111/10 121/2 146/9 150/3 150/10 150/15 152/24 168/9 202/24	<b>direct [7]</b> 15/12 15/15 16/16 23/18 88/7 90/18 130/14
<b>deficiency [1]</b> 46/22	<b>dependent [2]</b> 14/10 14/22	<b>diagnostic [2]</b> 40/25 41/3	<b>differences [8]</b> 19/8 20/15 20/15 28/13 60/15 121/1 121/9 210/20	<b>directed [2]</b> 85/3 96/20
<b>deficient [1]</b> 121/7	<b>depending [3]</b> 45/21 159/23 165/4	<b>Diamond [3]</b> 78/25 180/24 180/25	<b>different [87]</b> 4/19 9/8 13/6 15/21 16/15 18/15 19/20 21/1 24/12 26/20 28/13 33/9 33/12 35/17 35/19 35/19 35/20 35/24 39/1 39/14 39/15 40/2 41/22 43/23 46/9 47/11 47/11 49/23 49/25 50/21 50/23 51/4 51/10 63/2 65/9 69/5 70/14 71/8 74/23 84/20 84/20 91/6 93/15 93/16 96/9 98/3 107/11 111/10 112/9 114/14 120/24 120/24 128/19 131/14 134/7 138/1 139/5 144/11 144/25 145/12 145/13 147/16 148/22 150/14 150/20 151/9 152/22 156/22 157/25 160/17 160/20 160/22 164/6 164/21 166/1 168/16 171/3 171/4 172/9 173/20 178/17 184/13	<b>direction [5]</b> 24/19 141/23 156/22 170/15 192/4
<b>defined [1]</b> 8/6	<b>depends [2]</b> 46/10 156/19	<b>Diamond Princess [3]</b> 78/25 180/24 180/25	<b>Director-General [1]</b> 13/25	<b>directions [1]</b> 71/19
<b>definite [1]</b> 156/23	<b>deployed [1]</b> 125/9	<b>dichotomous [2]</b> 137/6 137/15	<b>directly [14]</b> 5/24 6/15 23/9 46/21 63/7 68/7 70/5 88/14 89/25 124/13 126/23 150/6 155/2 189/22	<b>director [6]</b> 13/25 91/2 163/16 191/1 191/6 191/16
<b>definitely [5]</b> 48/1 94/20 126/4 130/17 140/9	<b>deployment [1]</b> 47/12	<b>dichotomy [2]</b> 31/5 31/20	<b>disagree [6]</b> 23/2 23/2 27/25 149/3 189/10 199/25	<b>disagreements [2]</b> 37/20 37/24
<b>definition [1]</b> 202/11	<b>depression [1]</b> 22/19	<b>did [130]</b> 3/18 4/10 5/17 5/18 6/1 6/2 10/3 11/4 12/6 12/18 12/21 12/23 12/23 13/19 13/21 13/22 13/24 14/5 14/10 17/12 18/18 19/4 19/16 20/16 20/17 22/8 22/10 25/22 26/24 26/25 28/6 31/15 34/14 34/15 35/6 35/11 37/2 39/1 39/2 39/18 40/22 41/21 42/24 45/12 47/16 48/5 51/12 54/25 58/5 58/9 58/13 59/14 61/13 66/1 66/24 68/15 70/25 71/25 72/24 78/9 78/9 79/14 80/4 83/2 89/9 89/22 89/25 90/8 90/17 90/19 90/25 93/4 93/4 93/8 94/19 95/10 95/15 97/4 99/9 103/12 106/24 108/24 112/20 113/2 114/18 115/16 123/20 126/4 126/8 126/25 127/1 127/15 129/21 131/6 131/14 131/23 136/10 145/1 145/22 145/22 146/23 146/24 151/15 154/9 154/11 156/7 156/9 156/11 157/5 157/21 163/22 166/20	<b>disappear [1]</b> 104/13	
<b>definitions [1]</b> 187/1	<b>deprived [1]</b> 185/2	<b>deprivation [5]</b> 19/13 20/24 22/22 22/22 88/24	<b>disaster [1]</b> 184/10	<b>disband [1]</b> 42/20
<b>definitively [1]</b> 34/12	<b>depth [1]</b> 42/5	<b>deprive [1]</b> 185/2	<b>discharge [1]</b> 4/8	<b>disciplinary [1]</b> 35/17
<b>degree [25]</b> 2/6 2/6 19/4 21/15 28/16 62/3 72/1 79/24 88/17 94/6 95/8 97/24 98/17 102/19 102/24 103/24 107/23 108/25 135/7 156/13 168/5 169/4 169/17 185/3 188/15	<b>deputy [3]</b> 8/10 10/21 37/3	<b>deprive [1]</b> 185/2	<b>discipline [2]</b> 52/19 61/5	<b>disciplines [2]</b> 45/9 46/6
<b>degrees [2]</b> 65/20 93/12	<b>derived [4]</b> 55/19 55/20 78/5 94/24	<b>deprive [1]</b> 185/2	<b>discomfort [2]</b> 80/5 80/5	
<b>delay [24]</b> 124/7 129/16 131/15 137/12 138/17 138/23 139/4 142/8 144/12 148/17 178/5 178/5 192/9 192/17 193/11 193/12 194/11 194/16 195/23 196/4 198/9 202/16 205/8 211/9	<b>describe [4]</b> 83/8 171/13 204/23 213/15	<b>deprive [1]</b> 185/2		
<b>delayed [1]</b> 210/5	<b>described [14]</b> 16/19 33/15 54/9 65/2 89/2 89/3 98/18 126/18 141/24 162/11 166/4 167/4 171/21 180/2	<b>deprive [1]</b> 185/2		
<b>delaying [4]</b> 178/16 192/20 195/5 196/15	<b>describing [2]</b> 33/6 54/11	<b>deprive [1]</b> 185/2		
<b>delegated [1]</b> 170/23	<b>description [2]</b> 12/10 152/8	<b>deprive [1]</b> 185/2		
<b>deliberately [1]</b> 215/4	<b>design [1]</b> 95/4	<b>deprive [1]</b> 185/2		
<b>Delta [2]</b> 15/7 15/11	<b>designed [9]</b> 42/1 106/4 106/14 106/15 112/13 119/13 121/10 165/4 167/22	<b>deprive [1]</b> 185/2		
<b>demands [3]</b> 5/20 9/1 30/5	<b>desire [1]</b> 146/14	<b>deprive [1]</b> 185/2		
<b>demarcation [1]</b> 93/4	<b>detail [6]</b> 1/25 42/16 58/10 62/3 78/4 89/2	<b>deprive [1]</b> 185/2		
<b>democracy [1]</b> 87/13	<b>detailed [1]</b> 62/1	<b>deprive [1]</b> 185/2		
<b>democratic [1]</b> 86/16	<b>details [2]</b> 16/6 90/5	<b>deprive [1]</b> 185/2		
<b>democratically [1]</b> 91/11	<b>detect [1]</b> 158/6	<b>deprive [1]</b> 185/2		
<b>demonstrably [1]</b> 39/1	<b>detected [2]</b> 15/24 109/6	<b>deprive [1]</b> 185/2		
<b>demonstrate [2]</b> 5/8 105/23	<b>determine [1]</b> 96/25	<b>deprive [1]</b> 185/2		
<b>demonstrated [3]</b>		<b>deprive [1]</b> 185/2		

<b>D</b>	61/11 63/21 66/5 66/10 67/18 68/19 68/24 72/5 73/1 75/4 77/21 78/13 83/2 83/8 83/18 83/19 86/21 87/12 89/9 90/7 91/2 94/3 97/9 97/11 98/11 98/15 107/4 107/9 107/11 112/1 112/24 117/18 121/2 122/12 122/14 122/16 122/16 123/25 125/20 127/17 128/5 130/8 130/9 131/8 136/17 136/17 137/10 137/11 137/24 138/10 139/4 141/3 142/14 145/9 145/13 146/24 146/24 146/25 148/6 149/25 155/10 157/2 158/20 162/16 163/14 164/8 166/15 169/1 169/7 169/15 169/19 169/23 170/1 170/19 170/20 170/20 172/5 173/8 173/25 176/23 177/2 177/3 178/1 178/2 179/25 180/13 182/8 182/17 183/8 185/8 188/21 190/1 190/2 194/21 195/17 196/17 197/24 203/22 204/20 204/24 204/25 205/22 206/19 212/11 213/3 213/21 213/23 214/21 215/7 <b>doctor [5]</b> 11/7 11/12 24/13 27/23 206/10 <b>doctorate [1]</b> 2/6 <b>doctrine [5]</b> 150/16 156/23 181/23 182/23 184/7 <b>document [36]</b> 62/4 127/14 128/16 129/5 132/22 132/23 141/9 197/25 198/16 198/18 198/22 199/6 199/9 199/9 199/19 199/22 200/4 200/5 200/12 200/14 200/17 200/17 201/1 201/2 201/3 201/4 201/12 201/15 201/16 201/17 201/18 201/19 201/21 201/24 202/3 203/19 <b>documents [13]</b> 1/22 58/22 100/5 125/4 129/7 129/9 157/1 162/19 197/25 200/9 200/23 201/4 203/24 <b>doers [1]</b> 129/23 <b>does [25]</b> 6/6 11/12 29/1 31/19 57/2 69/22 82/16 86/11 89/4 91/9 105/23 106/8 117/22	132/24 136/3 140/18 147/1 155/25 160/22 169/4 169/21 180/10 199/1 206/2 213/10 <b>doesn't [14]</b> 12/1 26/13 39/14 42/14 81/6 84/22 87/21 130/22 133/18 147/14 179/4 185/24 195/24 213/11 <b>doing [23]</b> 25/11 32/19 34/5 37/4 42/17 43/6 44/7 73/2 80/19 80/25 83/19 83/23 102/23 107/20 141/4 145/11 162/15 170/18 180/22 184/10 194/6 203/5 203/21 <b>domain [2]</b> 87/25 205/17 <b>domains [1]</b> 79/16 <b>domestic [1]</b> 207/13 <b>domestically [1]</b> 207/20 <b>dominate [1]</b> 53/12 <b>dominates [1]</b> 63/1 <b>don't [65]</b> 7/11 23/1 24/15 27/19 27/23 28/8 28/17 29/14 29/15 38/9 42/21 43/7 46/11 47/22 51/19 59/10 59/11 61/18 70/14 72/20 78/7 84/6 84/10 92/4 95/2 95/18 97/13 98/1 107/19 109/13 109/18 110/16 111/1 111/5 111/21 113/18 116/13 117/8 128/13 129/11 135/10 138/9 140/11 158/5 164/11 165/19 166/13 167/19 168/10 169/6 171/2 171/7 172/6 172/7 179/17 180/5 187/1 187/12 189/10 189/21 193/24 201/24 202/23 212/24 215/7 <b>done [59]</b> 3/23 11/17 21/23 23/17 32/16 46/16 47/11 47/13 56/7 57/20 57/20 76/20 79/25 81/6 81/6 81/7 95/3 99/1 99/5 107/8 107/9 110/16 111/22 112/9 114/22 115/2 115/25 116/1 116/2 123/7 126/10 127/5 129/18 130/24 147/20 147/23 147/24 150/12 150/14 151/12 152/19 152/22 156/2 170/17 172/8 181/3 184/14 191/7 191/17 194/16 202/2 203/8	203/19 206/24 207/23 207/23 208/16 212/25 213/1 <b>doses [1]</b> 117/23 <b>dosing [1]</b> 38/13 <b>double [1]</b> 5/21 <b>double-edged [1]</b> 5/21 <b>doubling [9]</b> 84/4 134/20 135/24 136/5 159/17 159/21 179/22 195/19 196/1 <b>doubt [13]</b> 27/23 36/9 52/14 87/17 92/5 94/12 96/16 125/4 135/6 135/10 159/24 197/20 200/12 <b>doubtful [3]</b> 33/2 95/21 140/10 <b>down [26]</b> 4/5 27/16 29/13 43/4 56/9 72/7 77/12 100/15 104/14 107/21 124/21 124/24 125/22 127/12 131/4 134/10 176/4 177/17 177/23 178/21 183/1 183/3 185/9 195/23 198/12 201/6 <b>Downing [2]</b> 167/6 196/13 <b>Downing Street [2]</b> 167/6 196/13 <b>downside [1]</b> 30/16 <b>downsides [10]</b> 26/9 26/17 26/20 27/10 27/12 27/19 28/11 28/14 30/12 30/12 <b>Doyle [1]</b> 100/9 <b>dozens [1]</b> 107/2 <b>Dr [2]</b> 9/7 9/7 <b>Dr Aidan Fowler [1]</b> 9/7 <b>Dr Thomas Waite [1]</b> 9/7 <b>drafted [1]</b> 199/18 <b>dramatic [1]</b> 119/18 <b>draw [2]</b> 128/14 168/11 <b>drawing [1]</b> 5/17 <b>drawn [2]</b> 45/5 123/19 <b>driven [1]</b> 208/21 <b>drivers [1]</b> 57/16 <b>driving [1]</b> 68/6 <b>drove [1]</b> 81/20 <b>drugs [1]</b> 25/9 <b>Duchy [1]</b> 94/18 <b>due [6]</b> 9/5 10/2 13/14 54/13 64/19 81/17 <b>dull [1]</b> 197/5 <b>during [14]</b> 2/24 3/11 4/3 8/22 9/3 26/24 42/19 43/23 46/1	85/10 95/1 127/25 193/7 200/10 <b>dying [5]</b> 76/8 80/12 101/2 105/2 163/18
			<b>E</b>	
			<b>each [4]</b> 15/9 36/7 37/22 158/24 <b>earlier [29]</b> 10/4 21/12 28/12 56/13 57/9 75/2 79/21 84/21 88/19 97/19 118/2 123/6 128/3 128/12 131/25 132/10 133/9 144/14 145/16 145/16 160/19 161/4 171/10 174/13 175/5 180/3 181/21 199/4 205/23 <b>earliest [3]</b> 107/6 147/3 147/10 <b>early [40]</b> 4/9 4/13 4/15 10/4 15/16 19/2 21/2 22/5 23/14 28/7 30/5 33/10 35/12 58/11 74/5 74/20 76/15 76/20 77/24 91/15 99/16 99/25 100/1 106/9 112/22 117/15 117/17 118/1 119/16 126/6 128/14 128/25 139/7 148/11 158/4 178/7 178/13 181/1 194/13 194/17 <b>early weeks [1]</b> 19/2 <b>earnest [3]</b> 123/12 126/8 127/3 <b>easier [3]</b> 81/8 114/4 125/25 <b>easily [1]</b> 164/12 <b>easy [10]</b> 45/15 66/10 75/1 92/2 92/13 147/4 179/11 183/8 186/5 204/15 <b>ebb [3]</b> 70/22 71/3 71/7 <b>Ebola [2]</b> 102/1 138/12 <b>economic [17]</b> 2/10 22/11 30/19 54/16 72/14 72/23 73/1 73/4 73/5 73/17 88/12 93/25 130/14 147/12 147/13 153/4 194/4 <b>economically [1]</b> 21/24 <b>economics [3]</b> 46/13 95/14 179/14 <b>economy [5]</b> 22/23 24/6 130/15 147/9 169/13 <b>edge [3]</b> 15/2 22/22 123/5 <b>edged [4]</b> 5/21 203/9 203/12 204/1	



<b>E</b>	135/12 157/17 194/14	<b>enlightening [1]</b> 197/8	<b>escalate [6]</b> 110/10 142/23 156/7 172/4 193/19 194/2	116/25 185/14
<b>Edmunds [5]</b> 148/9 174/8 178/9 181/16 204/12	<b>emailing [2]</b> 171/18 202/3	<b>enormous [3]</b> 18/7 48/16 196/18	<b>escalated [3]</b> 145/2 154/8 156/17	<b>eventuating [2]</b> 136/15 184/18
<b>education [4]</b> 38/13 88/25 168/17 169/14	<b>emails [7]</b> 16/15 134/14 134/23 134/24 204/8 204/13 211/15	<b>enough [8]</b> 45/1 45/2 48/24 57/5 117/11 149/22 155/16 189/14	<b>escalating [1]</b> 155/8	<b>ever [8]</b> 22/10 89/5 92/2 93/8 94/5 97/8 182/8 215/8
<b>effect [6]</b> 75/5 88/8 149/8 181/17 189/22 209/20	<b>emerged [1]</b> 27/12	<b>enquiries [1]</b> 117/4	<b>escalation [2]</b> 144/25 194/1	<b>every [15]</b> 34/25 54/16 64/14 82/7 95/25 100/4 107/17 122/21 144/5 156/17 179/22 201/8 201/21 202/3 203/18
<b>effective [10]</b> 6/4 18/1 45/18 56/20 150/8 159/21 174/11 214/17 214/19 214/22	<b>emergence [4]</b> 15/7 74/15 106/23 148/17	<b>ensuing [2]</b> 204/23 205/10	<b>essence [6]</b> 82/12 120/21 125/7 133/4 135/8 209/17	<b>everybody [5]</b> 66/4 71/11 82/7 83/15 201/9
<b>effectively [6]</b> 36/3 36/4 54/15 118/20 123/1 154/15	<b>emergencies [9]</b> 8/20 43/13 43/23 111/14 122/20 126/11 127/22 129/8 165/11	<b>ensure [4]</b> 8/4 18/10 18/20 39/19	<b>essentially [26]</b> 6/7 6/21 8/6 21/1 25/12 40/2 40/5 40/7 56/9 59/6 70/6 80/25 87/11 87/15 87/18 107/4 119/21 137/21 152/1 164/19 174/7 188/11 198/3 200/4 208/10 212/20	<b>everyone [8]</b> 21/14 50/4 60/23 81/8 133/16 183/11 188/19 207/19
<b>effectiveness [1]</b> 40/21	<b>emergency [8]</b> 45/20 75/20 111/13 115/13 139/25 145/4 163/11 167/7	<b>ensuring [1]</b> 154/14	<b>established [3]</b> 7/14 33/24 214/9	<b>everything [3]</b> 18/19 20/17 23/17
<b>effects [1]</b> 151/6	<b>emerging [7]</b> 9/15 33/17 75/21 78/24 122/9 123/3 146/22	<b>entered [1]</b> 53/7	<b>establishes [2]</b> 138/7 139/9	<b>evidence [48]</b> 3/10 4/4 18/23 23/24 30/7 33/19 41/6 42/9 56/25 60/8 66/21 67/6 68/1 79/23 82/21 89/13 96/23 97/2 101/3 102/19 103/6 104/1 105/2 105/10 105/23 106/1 110/14 110/21 111/5 111/13 120/19 132/8 135/3 140/14 149/7 149/18 150/3 165/3 172/1 172/20 173/5 174/7 189/21 196/8 196/11 205/14 207/13 208/25
<b>efficacy [2]</b> 150/23 177/18	<b>eminence [1]</b> 46/10	<b>entire [2]</b> 52/24 146/20	<b>establishing [3]</b> 212/4 212/5 213/13	<b>evident [3]</b> 18/6 85/7 188/13
<b>efficiency [1]</b> 183/23	<b>eminent [1]</b> 208/14	<b>entirely [8]</b> 8/23 32/1 35/3 63/14 93/14 146/9 164/7 194/12	<b>establishment [2]</b> 119/6 119/7	<b>evidently [1]</b> 123/23
<b>efficient [3]</b> 14/17 16/23 184/1	<b>emphasis [2]</b> 25/5 103/25	<b>entitled [3]</b> 22/4 22/8 211/19	<b>estimate [4]</b> 84/14 84/16 157/19 184/5	<b>exactly [19]</b> 6/24 8/5 24/5 29/16 38/17 56/5 81/25 83/13 98/24 107/20 119/24 137/7 144/24 153/16 153/18 179/7 179/8 194/6 201/22
<b>efficiently [2]</b> 95/10 97/18	<b>emphasise [2]</b> 6/20 135/23	<b>entity [1]</b> 7/10	<b>estimated [7]</b> 82/17 135/23 135/23 181/8 181/9 191/11 209/19	<b>exaggerated [1]</b> 80/16
<b>effort [2]</b> 18/3 79/16	<b>employed [1]</b> 85/19	<b>entrenched [1]</b> 86/24	<b>estimates [4]</b> 134/17 158/9 181/3 181/16	<b>exaggerating [1]</b> 80/17
<b>eg [2]</b> 101/3 105/3	<b>employee [1]</b> 85/15	<b>environment [5]</b> 50/7 87/22 109/7 180/8 185/7	<b>et [3]</b> 28/15 147/10 147/15	<b>examine [1]</b> 150/17
<b>either [27]</b> 6/2 14/18 31/9 31/17 33/3 40/6 41/24 42/21 42/25 48/17 62/20 66/9 81/13 85/18 93/2 93/8 105/19 128/5 129/18 130/14 135/17 136/22 147/5 195/19 195/21 207/17 214/3	<b>empowered [2]</b> 44/15 44/15	<b>environments [1]</b> 95/24	<b>et cetera [3]</b> 28/15 147/10 147/15	<b>examined [1]</b> 182/6
<b>elapse [1]</b> 124/1	<b>enabling [1]</b> 129/23	<b>envisage [1]</b> 151/15	<b>ethnicity [1]</b> 10/24	<b>example [57]</b> 14/14 15/11 15/18 15/21 20/1 20/21 20/22 23/11 24/12 25/5 30/15 32/18 34/13 36/15 36/18 39/2 39/7 46/12 46/19 47/6 47/12 52/23 55/5 55/12 55/25 60/12 62/23 63/7 76/19 77/9
<b>elected [4]</b> 86/15 88/22 91/11 91/14	<b>encountered [1]</b> 97/20	<b>envisaged [3]</b> 35/8 125/13 152/17	<b>etiquette [1]</b> 193/21	
<b>election [1]</b> 96/7	<b>encourage [1]</b> 11/14	<b>epidemic [20]</b> 2/24 9/15 20/1 21/4 25/3 31/16 33/4 104/10 104/15 110/7 133/23 176/25 183/7 194/12 196/6 206/5 210/3 212/4 212/5 214/8	<b>euphemism [1]</b> 97/8	
<b>electorate [1]</b> 96/6	<b>end [28]</b> 10/6 19/20 32/15 40/6 60/23 60/25 89/19 91/21 94/4 104/7 115/17 121/25 124/19 127/8 128/24 135/19 136/12 152/14 157/9 157/13 158/20 158/22 175/23 176/19 193/2 194/14 195/3 198/21	<b>epidemiological [11]</b> 18/7 23/17 30/1 54/24 56/23 74/2 77/17 81/22 151/24 212/18 212/22	<b>Europe [7]</b> 15/20 32/6 44/8 58/3 153/20 175/13 204/24	
<b>electrification [1]</b> 167/1	<b>ended [4]</b> 15/19 40/6 159/11 193/23	<b>epidemiologically [2]</b> 113/2 196/17	<b>European [1]</b> 161/24	
<b>electrified [3]</b> 164/20 166/6 178/23	<b>ends [2]</b> 22/19 135/17	<b>epidemiologist [2]</b> 2/1 110/20	<b>eve [1]</b> 32/13	
<b>element [2]</b> 130/5 138/13	<b>energy [1]</b> 78/17	<b>epidemiologists [2]</b> 28/22 45/7	<b>even [23]</b> 24/16 33/1 34/23 45/20 47/14 60/24 71/9 101/24 103/25 107/10 111/23 124/1 125/22 139/24 150/14 154/2 167/23 171/7 189/9 198/1 202/8 204/19 214/13	
<b>elements [7]</b> 49/8 124/17 130/4 130/4 178/7 201/18 202/17	<b>engage [1]</b> 214/5	<b>epidemiology [4]</b> 2/8 46/6 47/2 212/15	<b>evening [1]</b> 135/2	
<b>elicit [1]</b> 106/4	<b>engaged [3]</b> 68/8 112/3 148/8	<b>episode [1]</b> 78/25	<b>event [5]</b> 82/13 142/16 146/25 161/5 204/14	
<b>eliminated [1]</b> 214/18	<b>engagements [1]</b> 98/12	<b>equal [2]</b> 169/16 169/19	<b>eventuate [3]</b> 29/5	
<b>else [5]</b> 7/12 124/16 127/16 141/16 207/19	<b>engaging [1]</b> 161/23	<b>equally [3]</b> 52/8 165/8 171/17		
<b>Elsewhere [1]</b> 54/10	<b>England [15]</b> 3/4 6/11 6/21 7/1 7/5 13/17 14/2 40/20 40/22 42/20 42/24 48/13 113/9 116/2 145/3	<b>equation [2]</b> 21/21 24/21		
<b>email [17]</b> 25/16 59/5 100/8 100/16 101/8 135/14 136/17 142/13 152/8 154/12 159/4 201/23 204/21 204/23 204/24 205/1 206/2	<b>English [1]</b> 39/7	<b>erosion [1]</b> 119/17		
<b>emailed [4]</b> 108/7	<b>English-based [1]</b> 39/7	<b>error [1]</b> 72/1		

<b>E</b>	120/18 161/17	72/10 72/17 73/23	<b>February [71]</b> 4/16	59/5 178/14 179/11
<b>example... [27]</b> 77/22	<b>explained [1]</b> 29/21	76/16 83/12 85/2	10/3 16/10 19/3 23/14	183/15 192/1 194/18
82/13 83/10 87/10	<b>explaining [3]</b> 31/11	89/20 90/11 90/12	26/24 31/2 33/10	<b>finding [3]</b> 114/22
88/13 88/17 89/7	70/18 79/13	95/22 98/22 99/22	33/13 33/15 33/20	178/8 178/13
90/19 90/20 93/10	<b>explanation [2]</b> 31/14	99/22 106/7 107/12	34/3 40/23 54/12	<b>fine [3]</b> 25/2 84/6
94/18 99/5 105/8	133/12	108/22 109/1 117/25	58/11 74/12 76/15	136/24
119/15 131/20 146/4	<b>explicitly [1]</b> 139/6	118/2 118/15 121/10	78/17 104/8 123/16	<b>finish [3]</b> 154/17
151/6 152/4 159/4	<b>explore [1]</b> 75/9	129/1 132/4 133/8	123/22 126/5 127/9	172/19 173/7
162/15 165/6 165/10	<b>exponential [4]</b>	134/13 138/9 154/13	127/13 128/10 129/5	<b>firm [4]</b> 27/14 93/3
168/24 169/3 188/19	179/15 180/6 199/14	166/3 167/25 171/11	131/10 131/11 131/16	191/25 192/1
189/3 193/20	200/10	177/4 177/6 180/8	132/3 136/12 148/8	<b>firmly [4]</b> 22/25 23/4
<b>examples [7]</b> 10/11	<b>exponentially [2]</b>	183/21 188/8 190/12	148/11 148/11 152/15	168/11 208/13
22/17 87/17 102/1	180/15 195/23	190/24 194/13 199/8	155/21 155/22 157/17	<b>first [55]</b> 4/14 5/7
133/20 147/25 151/25	<b>express [2]</b> 96/18	199/21 202/11 202/19	160/4 161/2 166/21	9/12 9/17 15/9 15/24
<b>excellent [5]</b> 31/18	141/9	209/24 212/9 212/23	171/16 173/12 173/15	19/11 21/9 22/25
80/4 124/25 159/8	<b>expressed [3]</b> 31/4	214/11	173/21 173/23 174/13	23/15 32/4 32/5 32/6
170/8	98/3 205/6	<b>factors [1]</b> 159/23	174/18 175/9 180/23	45/10 53/21 55/9
<b>Excess [2]</b> 122/13	<b>expressing [2]</b> 171/5	<b>facts [6]</b> 87/15 87/18	181/1 181/5 185/17	55/13 55/15 70/4
122/14	204/22	87/18 87/19 87/20	185/19 185/19 188/8	74/20 75/2 90/3 92/5
<b>exciting [1]</b> 19/7	<b>expressly [1]</b> 73/22	109/17	190/11 190/21 190/22	99/17 101/9 101/18
<b>excluded [2]</b> 93/10	<b>extensive [1]</b> 205/14	<b>Faculty [1]</b> 2/14	190/23 191/15 193/2	101/22 104/6 109/22
103/15	<b>extent [12]</b> 25/22	<b>failed [6]</b> 31/11 82/23	193/7 195/3 199/7	123/7 124/1 124/8
<b>exclusively [2]</b> 88/10	57/22 75/17 85/11	167/6 171/19 192/9	199/8 204/8 209/11	128/4 134/8 135/17
91/12	85/21 115/6 127/25	193/4	209/22 210/11 211/7	138/13 144/21 148/24
<b>executive [1]</b> 7/21	154/11 182/16 197/22	<b>failing [2]</b> 20/2 24/18	<b>February 2022 [1]</b>	153/14 160/2 162/3
<b>exercise [4]</b> 77/1	202/9 210/9	<b>failure [12]</b> 14/1	16/10	163/3 182/21 185/20
77/6 91/20 91/20	<b>external [1]</b> 73/8	54/19 55/1 57/1	<b>feed [2]</b> 12/24 14/20	192/10 195/12 199/7
<b>exist [1]</b> 93/4	<b>extraordinarily [7]</b>	165/23 165/24 168/4	<b>feeding [1]</b> 47/19	200/7 200/19 207/1
<b>existed [2]</b> 58/3	17/25 42/24 52/25	168/6 171/13 171/14	<b>feel [3]</b> 51/25 170/25	207/5 207/10 209/6
201/16	71/4 146/5 183/11	204/16 204/18	206/19	209/16 210/22
<b>existence [1]</b> 160/12	214/18	<b>fair [8]</b> 29/7 41/3 41/5	<b>feeling [2]</b> 113/21	<b>firstly [6]</b> 18/13 71/6
<b>existential [4]</b> 170/14	<b>extraordinary [3]</b>	43/6 70/2 112/16	117/7	79/4 79/20 88/3 98/20
171/14 171/17 180/3	71/16 95/25 179/15	117/1 125/10	<b>feels [3]</b> 66/4 110/23	<b>fit [3]</b> 63/13 64/12
<b>existing [3]</b> 81/13	<b>extrapolations [1]</b>	<b>fairly [10]</b> 21/3 31/20	170/25	87/15
122/5 128/5	76/19	55/13 62/21 73/11	<b>fellow [4]</b> 2/13 2/16	<b>five [1]</b> 105/25
<b>exit [5]</b> 212/15	<b>extremely [19]</b> 5/11	84/11 99/16 110/1	85/11 95/22	<b>five days [1]</b> 105/25
213/11 214/16 214/19	14/6 14/24 15/13 19/9	179/3 188/12	<b>felt [9]</b> 11/18 17/5	<b>fixed [4]</b> 45/20 45/23
214/23	26/4 26/6 62/5 67/23	<b>faith [1]</b> 99/1	17/16 38/7 63/13 67/7	160/1 160/1
<b>expanded [1]</b> 50/12	76/16 84/14 90/21	<b>false [1]</b> 20/3	93/24 149/3 170/25	<b>flat [1]</b> 15/3
<b>expect [2]</b> 63/17	115/11 139/13 139/15	<b>families [5]</b> 30/20	<b>Ferguson [17]</b> 76/21	<b>flattening [2]</b> 196/15
144/9	153/23 177/3 208/14	101/4 104/23 105/3	80/1 108/9 108/20	196/19
<b>expected [5]</b> 15/4	214/22	105/9	134/14 134/24 148/9	<b>flaw [1]</b> 172/15
71/2 93/11 95/9 97/17	<b>eye [1]</b> 184/24	<b>family [7]</b> 105/14	157/18 194/15 204/9	<b>flies [1]</b> 213/24
<b>expense [1]</b> 191/20	<b>eyes [1]</b> 50/16	106/10 144/15 144/15	204/12 206/17 208/5	<b>flights [2]</b> 77/2
<b>experience [9]</b> 16/18	<b>F</b>	144/15 146/10 157/15	209/11 209/23 210/13	150/18
20/7 41/19 55/21 66/3	<b>face [8]</b> 37/18 48/4	<b>fanciful [2]</b> 195/21	211/12	<b>flooded [1]</b> 11/9
108/11 112/23 126/12	162/9 166/4 185/10	196/23	<b>Ferguson's [1]</b>	<b>flow [7]</b> 16/3 70/22
148/22	187/8 213/2 213/24	<b>fantasy [1]</b> 96/4	113/23	71/3 71/7 82/5 148/14
<b>experienced [1]</b> 53/1	<b>faced [8]</b> 31/5 31/21	<b>far [12]</b> 34/10 46/10	<b>few [15]</b> 25/1 51/7	208/8
<b>experiences [1]</b>	31/21 38/18 78/23	58/4 76/11 81/11	60/23 65/14 91/15	<b>flowed [1]</b> 154/3
213/24	93/15 95/25 167/2	83/14 83/16 129/2	117/11 119/1 133/22	<b>flows [1]</b> 76/9
<b>expert [6]</b> 12/4 17/20	<b>facilities [3]</b> 119/17	140/20 174/5 212/17	148/8 154/23 154/25	<b>flu [16]</b> 55/11 56/17
18/2 23/2 45/1 119/20	123/5 125/6	215/7	156/6 156/20 158/17	120/1 120/20 120/20
<b>expertise [6]</b> 17/18	<b>facing [3]</b> 9/25 46/25	<b>Farrar [3]</b> 18/24 20/4	179/22	120/21 121/2 121/4
51/8 51/9 51/25	137/16	134/15	<b>few weeks [1]</b>	121/8 121/19 121/21
140/21 140/22	<b>fact [72]</b> 3/14 7/18	<b>fast [5]</b> 71/12 71/13	133/22	125/14 164/1 164/2
<b>experts [12]</b> 13/19	14/5 19/24 23/23	111/14 124/15 134/12	<b>field [4]</b> 17/20 20/8	210/19 213/21
14/3 14/13 15/2 46/19	24/18 27/18 28/5 32/6	<b>fatality [12]</b> 33/16	29/25 29/25	<b>focus [4]</b> 52/19 74/13
46/23 48/8 52/9 73/8	32/17 32/25 34/15	74/14 76/2 77/22	<b>figures [4]</b> 158/25	80/20 185/12
140/7 140/8 140/9	38/22 41/6 44/5 44/12	77/23 157/19 159/2	159/5 174/22 181/2	<b>focused [4]</b> 45/4
<b>explain [9]</b> 31/25	46/16 48/7 55/7 55/15	159/3 159/17 174/15	<b>final [2]</b> 72/9 79/20	75/16 78/22 99/8
33/9 80/6 81/15	55/16 56/15 61/17	181/5 181/8	<b>finally [3]</b> 82/21	<b>focusing [7]</b> 12/17
101/14 101/19 101/20	62/22 62/23 68/18	<b>favour [1]</b> 43/17	86/17 98/5	17/10 23/19 102/16
		<b>feasibility [1]</b> 174/2	<b>find [8]</b> 37/10 58/23	184/17 184/22 196/16

<b>F</b>	198/4 198/18 198/20 201/12	<b>G</b>	98/20 98/21 106/17 106/19 107/2 107/16 117/8 117/9 124/8 127/21 130/7 130/10 131/3 136/22 136/23 138/10 139/13 140/17 140/18 153/18 153/22 158/10 158/22 169/23 170/20 172/1 178/11 179/11 179/15 179/17 180/20 182/18 185/9 186/20 194/4 194/18 195/24 196/4 196/6 196/6 196/9 199/14 213/11 214/19	45/21 46/2 46/12 68/14 78/3 90/4 92/8 100/4 100/15 100/21 104/11 117/5 119/7 127/11 134/6 137/8 142/18 152/5 153/3 156/5 162/25 171/23 189/5 190/17 192/22 193/1 201/9 203/17 212/10 212/24
<b>follow</b> [6] 57/3 86/11 89/5 89/6 91/10 120/11	<b>four nations</b> [7] 35/16 36/2 38/23 47/10 90/7 91/4 198/20	<b>gallows</b> [1] 31/19 <b>game</b> [4] 141/14 175/8 188/20 189/7 <b>gathering</b> [1] 188/3 <b>gatherings</b> [9] 187/20 187/23 188/1 188/25 189/16 189/19 189/20 190/6 190/13	180/20 182/18 185/9 186/20 194/4 194/18 195/24 196/4 196/6 196/6 196/9 199/14 213/11 214/19 <b>gets</b> [1] 169/23 <b>getting</b> [9] 14/21 25/1 47/24 58/24 58/25 109/8 109/9 109/14 114/23	<b>GO-Science</b> [1] 45/12
<b>followed</b> [2] 55/14 174/17	<b>fourth</b> [2] 1/19 12/9 <b>Fowler</b> [1] 9/7 <b>fractions</b> [1] 174/10 <b>frame</b> [1] 108/1 <b>framed</b> [1] 128/18 <b>framing</b> [1] 144/23 <b>France</b> [1] 193/8 <b>frankly</b> [3] 120/4 179/7 211/10	<b>gave</b> [24] 1/9 10/7 10/8 13/8 17/14 17/19 18/20 29/17 31/1 36/9 36/10 36/11 36/22 38/5 38/12 53/1 74/4 97/15 136/18 141/7 143/4 157/18 187/18 188/6	<b>give</b> [35] 1/8 4/4 12/3 14/16 15/5 18/17 24/9 24/10 24/12 24/21 27/11 27/22 28/1 28/2 36/15 36/19 36/21 62/19 68/13 77/14 78/14 82/23 86/17 90/17 91/3 120/4 136/10 162/12 169/19 173/5 191/2 191/23 192/24 203/9 203/11	<b>goalposts</b> [1] 144/18 <b>goals</b> [1] 128/23 <b>goes</b> [8] 22/18 50/4 104/13 104/14 104/15 188/19 205/19 205/23
<b>following</b> [5] 71/22 92/21 161/16 174/20 210/17	<b>frantically</b> [1] 72/3 <b>fraught</b> [1] 158/7 <b>freedom</b> [1] 87/12 <b>frequently</b> [1] 11/25 <b>fresh</b> [1] 146/25 <b>friction</b> [1] 18/25 <b>Friday</b> [1] 132/18 <b>friend</b> [1] 19/6 <b>frivolous</b> [1] 85/22 <b>froing</b> [2] 167/10 168/3	<b>GCSA</b> [2] 86/9 88/3 <b>gear</b> [1] 165/18 <b>general</b> [32] 8/7 13/25 14/1 26/21 36/20 36/25 39/8 44/8 47/18 47/22 58/5 58/20 60/14 60/16 61/22 62/14 76/14 80/2 83/9 103/19 103/20 103/23 104/4 128/4 136/1 163/16 163/17 183/15 189/16 190/9 195/3 207/17	<b>given</b> [40] 9/9 14/25 15/1 18/9 18/23 29/24 50/15 50/24 57/8 66/21 67/22 69/17 82/21 84/12 84/17 93/12 107/2 130/5 130/20 131/14 132/19 136/4 147/25 148/4 165/24 169/22 173/25 175/15 178/9 179/13 185/9 187/6 188/10 190/12 200/13 200/22 201/14 201/18 203/15 208/8	<b>going</b> [108] 7/15 11/8 11/23 13/24 17/7 19/15 20/18 21/2 21/4 22/14 25/4 25/7 25/10 26/5 27/8 27/10 27/17 30/22 31/24 32/10 32/11 32/14 36/18 41/14 42/23 44/1 46/11 54/22 57/17 59/24 69/4 75/15 76/8 76/10 76/25 78/3 80/11 80/18 81/1 83/6 83/8 83/8 85/6 92/8 92/13 92/13 92/14 100/5 104/12 104/25 106/19 106/19 110/22 114/3 117/7 118/6 120/4 120/5 120/10 120/10 121/23 123/8 124/20 125/18 125/19 130/2 131/18 131/25 134/12 136/6 137/1 138/15 138/15 138/22 139/22 140/9 140/17 141/15 146/13 147/14 151/21 153/8 154/7 156/25 168/21 169/11 169/17 170/6 172/19 173/6 175/23 176/19 185/1 189/16 192/22 192/25 195/22 195/24 196/5 198/19 199/13 201/14 201/20 207/18 210/16 211/8 213/1 215/6
<b>follows</b> [2] 91/22 188/10	<b>France</b> [1] 193/8 <b>frankly</b> [3] 120/4 179/7 211/10	<b>General Medical</b> [2] 8/7 39/8	<b>global</b> [2] 137/1 206/5	<b>gone</b> [4] 59/9 128/3 128/12 156/22
<b>foot</b> [1] 104/3	<b>frantically</b> [1] 72/3	<b>General of</b> [1] 163/16	<b>globally</b> [2] 176/14 207/24	<b>good</b> [34] 14/19 19/6 26/10 26/11 30/17 43/3 43/7 44/5 48/21 57/4 57/5 58/20 76/9 79/12 92/2 92/5 92/24 95/15 99/1 117/20 117/21 118/17 131/23 141/3 149/2 158/14 158/15 172/3 187/10 189/21 201/3 201/18
<b>football</b> [2] 189/4 189/5	<b>framed</b> [1] 128/18	<b>generality</b> [1] 173/13	<b>gloss</b> [2] 60/17 125/16	
<b>footing</b> [2] 169/16 169/19	<b>framing</b> [1] 144/23	<b>generally</b> [6] 31/6 64/24 117/2 122/8 151/19 185/13	<b>go</b> [46] 10/18 11/13 21/12 22/14 24/16 25/4 28/12 30/5 30/6 30/14 33/1 33/2 33/7 34/11 42/4 45/12	
<b>fora</b> [1] 16/2	<b>France</b> [1] 193/8	<b>generic</b> [1] 168/25		
<b>force</b> [6] 56/20 82/2 86/5 91/7 129/2 193/25	<b>frankly</b> [3] 120/4 179/7 211/10	<b>generically</b> [1] 29/23		
<b>fore</b> [1] 95/19	<b>frantically</b> [1] 72/3	<b>generous</b> [1] 15/13		
<b>forecasting</b> [1] 79/25	<b>fraught</b> [1] 158/7	<b>genesis</b> [3] 100/16 122/5 196/20		
<b>forecasts</b> [1] 74/8	<b>freedom</b> [1] 87/12	<b>genie</b> [1] 137/13		
<b>Foreign</b> [2] 123/17 161/23	<b>frequently</b> [1] 11/25	<b>Genomics</b> [1] 4/24		
<b>Foreign Secretary</b> [1] 123/17	<b>fresh</b> [1] 146/25	<b>genuine</b> [1] 211/11		
<b>forgive</b> [2] 146/7 204/2	<b>friction</b> [1] 18/25	<b>genuinely</b> [1] 51/25		
<b>form</b> [7] 3/24 16/15 25/13 50/17 80/6 85/21 192/22	<b>Friday</b> [1] 132/18	<b>geographical</b> [7] 101/5 105/2 108/16 115/1 144/16 175/11 175/17		
<b>formal</b> [10] 40/4 40/17 47/19 49/3 68/20 69/22 85/20 99/9 99/13 143/3	<b>friend</b> [1] 19/6	<b>geographically</b> [2] 139/3 175/7		
<b>formality</b> [2] 39/24 98/16	<b>frivolous</b> [1] 85/22	<b>geopolitical</b> [2] 22/12 164/6		
<b>formally</b> [4] 12/18 12/24 42/21 47/23	<b>froing</b> [2] 167/10 168/3	<b>Germany</b> [3] 41/21 157/12 175/12		
<b>formed</b> [1] 50/16	<b>front</b> [4] 29/19 31/10 31/14 38/21	<b>get</b> [68] 15/25 20/2 21/3 21/5 23/15 23/21 25/7 29/18 30/17 32/14 34/8 37/7 57/13 60/1 62/4 62/16 71/11 79/9 82/4 83/14 83/16 83/20 84/19 92/23		
<b>forms</b> [3] 85/20 100/3 182/6	<b>fudge</b> [1] 137/7			
<b>formulate</b> [1] 17/12	<b>full</b> [8] 9/3 20/20 54/14 61/23 67/3 143/7 166/2 193/25			
<b>formulated</b> [2] 128/6 129/16	<b>full-time</b> [1] 9/3			
<b>formulation</b> [2] 124/6 178/6	<b>fullness</b> [1] 159/1			
<b>forth</b> [6] 10/25 12/6 49/9 52/10 125/6 188/17	<b>fully</b> [12] 37/14 61/23 65/7 72/3 80/23 128/6 134/25 142/22 156/14 180/14 196/24 206/18			
<b>fortunately</b> [3] 143/25 153/20 153/22	<b>function</b> [1] 100/3			
<b>forward</b> [6] 28/20 58/18 81/14 161/25 190/16 204/19	<b>functional</b> [1] 12/25			
<b>found</b> [4] 67/7 109/3 158/2 179/12	<b>functionally</b> [1] 8/12			
<b>foundation</b> [2] 27/15 119/9	<b>functions</b> [1] 180/19			
<b>four</b> [13] 35/13 35/16 36/2 38/23 39/3 47/10 90/7 91/4 135/14	<b>fundamental</b> [5] 88/1 128/17 162/13 164/18 182/20			

<b>G</b>	155/4 155/9 155/12 155/25 156/7 156/18 156/23 161/19 163/8 163/15 164/20 164/23 165/3 165/16 165/18 166/6 166/20 168/4 169/12 170/1 171/19 173/21 176/20 177/6 178/18 180/4 180/12 182/3 182/6 182/8 183/14 183/24 184/22 187/7 187/25 188/5 189/17 191/8 191/17 191/18 198/19 199/10 199/16 200/18 200/23 201/5 201/7 201/12 201/23 202/18 202/20 203/24 209/2 209/3	<b>half [3]</b> 134/18 150/7 193/7 <b>half term [1]</b> 193/7 <b>Halpern [1]</b> 196/12 <b>halving [1]</b> 195/19 <b>hand [3]</b> 58/13 124/23 183/8 <b>hands [2]</b> 30/16 193/21 <b>happen [20]</b> 24/2 29/11 29/11 31/9 42/23 59/13 63/17 76/5 83/10 86/18 87/24 87/24 131/6 140/9 147/15 180/15 183/13 185/2 201/15 204/15 <b>happened [16]</b> 31/16 53/19 63/22 67/24 76/23 80/9 92/23 140/13 142/20 150/4 151/8 164/13 192/12 210/19 211/3 212/22 <b>happening [4]</b> 71/19 79/7 127/20 191/24 <b>happens [6]</b> 26/11 33/5 104/16 154/6 161/13 213/23 <b>hard [9]</b> 30/6 38/1 41/10 46/16 84/14 164/5 203/9 203/12 204/1 <b>hard-edged [2]</b> 203/9 204/1 <b>harder [2]</b> 32/14 75/2 <b>hares [1]</b> 91/9 <b>harm [1]</b> 203/23 <b>harmful [2]</b> 21/22 23/12 <b>harmfulness [1]</b> 88/12 <b>Harries [3]</b> 9/6 10/2 37/12 <b>harsh [1]</b> 150/12 <b>has [58]</b> 4/22 29/3 30/3 30/14 33/19 38/19 41/6 50/2 55/6 63/21 66/4 66/21 68/23 74/16 77/25 81/5 81/7 81/18 82/21 86/22 88/18 89/14 94/2 94/4 96/17 97/10 98/23 100/19 103/7 103/15 112/18 115/11 119/20 124/6 128/2 133/24 135/18 138/1 149/7 149/19 150/11 160/21 163/10 164/2 164/4 172/2 175/6 178/14 180/11 182/16 182/16 182/20 184/8 187/1 189/22 190/21 196/8 212/11 <b>have [341]</b>	<b>haven't [3]</b> 144/13 153/20 214/13 <b>having [27]</b> 5/25 11/7 15/19 18/17 35/19 37/17 44/25 45/2 62/7 71/16 71/23 73/3 89/20 101/16 107/6 107/12 114/5 121/3 124/11 176/10 179/18 181/7 190/3 192/6 193/4 208/15 211/2 <b>haystack [1]</b> 107/5 <b>hazard [1]</b> 168/19 <b>hazards [1]</b> 164/9 <b>HCID [1]</b> 125/5 <b>he [33]</b> 1/5 16/21 16/25 17/1 19/4 66/22 67/7 67/16 71/15 71/21 77/1 97/10 99/7 99/12 101/15 102/11 108/10 110/3 110/8 110/8 110/17 110/23 112/18 162/16 162/16 162/17 167/20 172/1 172/2 172/3 174/8 203/16 211/13 <b>he didn't [1]</b> 172/1 <b>he's [2]</b> 110/19 113/24 <b>head [6]</b> 2/22 3/15 6/10 6/12 6/13 124/14 <b>heading [2]</b> 105/24 140/16 <b>health [129]</b> 2/12 2/15 3/16 6/10 6/14 6/21 7/17 7/22 8/14 8/19 8/21 9/19 9/20 11/3 11/18 11/24 12/14 12/18 12/20 13/2 13/23 13/24 14/15 18/7 22/3 22/6 22/9 22/20 22/23 22/24 23/1 23/1 23/5 23/8 23/16 24/4 24/10 24/23 30/20 30/20 32/22 39/11 40/19 40/22 41/16 42/20 42/24 43/1 43/9 46/25 48/13 50/14 52/5 52/9 52/24 53/1 63/10 77/18 87/7 87/11 88/4 88/18 88/24 89/16 89/23 90/9 90/23 91/1 91/2 91/5 92/18 94/17 95/14 97/16 113/9 113/11 115/12 115/14 116/1 116/2 116/9 116/11 119/17 119/23 123/4 123/17 134/18 134/22 135/12 139/25 142/1 143/2 144/8 144/10 145/2 145/3 145/4 145/7 145/24 146/10 146/12 147/21	147/23 147/25 148/3 151/17 151/17 151/24 152/6 152/9 154/6 154/12 158/3 163/9 163/10 163/23 164/17 165/11 167/24 169/3 170/4 170/23 188/23 193/16 197/21 197/23 202/25 206/10 209/9 <b>Health Secretary [1]</b> 123/17 <b>healthcare [9]</b> 101/2 101/10 101/11 101/16 102/8 105/1 105/14 119/9 144/17 <b>healthy [4]</b> 87/4 87/5 87/9 87/22 <b>hear [3]</b> 79/13 94/21 110/4 <b>heard [16]</b> 4/22 23/23 30/3 33/19 42/9 63/14 63/17 81/17 97/9 100/19 102/18 120/19 165/2 195/8 196/8 205/15 <b>hearing [4]</b> 9/5 9/7 178/19 215/14 <b>heart [2]</b> 8/22 166/5 <b>heavily [1]</b> 119/10 <b>heavy [3]</b> 26/16 119/10 158/3 <b>height [1]</b> 34/23 <b>held [3]</b> 3/4 91/25 214/4 <b>help [9]</b> 1/11 6/3 50/18 91/16 93/2 120/4 120/23 143/17 147/2 <b>helped [3]</b> 18/14 75/9 99/12 <b>helpful [9]</b> 62/23 62/24 67/8 69/3 69/7 84/8 87/7 120/8 205/4 <b>helpfully [1]</b> 130/2 <b>helping [1]</b> 6/3 <b>hence [1]</b> 25/5 <b>her [2]</b> 37/12 124/22 <b>Herculean [1]</b> 85/12 <b>herd [1]</b> 197/2 <b>herd immunity [1]</b> 197/2 <b>here [20]</b> 20/15 21/16 21/19 28/10 31/25 32/10 50/25 69/1 137/5 138/14 141/15 153/7 167/15 167/21 186/19 193/4 194/7 194/22 196/3 213/7 <b>here's [4]</b> 37/18 54/2 54/3 150/13 <b>high [13]</b> 54/16 56/6 60/13 61/6 100/7 101/23 125/5 135/6 139/14 139/15 155/8	
	155/4 155/9 155/12 155/25 156/7 156/18 156/23 161/19 163/8 163/15 164/20 164/23 165/3 165/16 165/18 166/6 166/20 168/4 169/12 170/1 171/19 173/21 176/20 177/6 178/18 180/4 180/12 182/3 182/6 182/8 183/14 183/24 184/22 187/7 187/25 188/5 189/17 191/8 191/17 191/18 198/19 199/10 199/16 200/18 200/23 201/5 201/7 201/12 201/23 202/18 202/20 203/24 209/2 209/3	<b>government's [11]</b> 3/24 6/7 23/7 69/7 69/9 70/13 85/5 143/19 174/21 176/2 187/11 <b>governments [2]</b> 42/16 95/22 <b>gradually [2]</b> 105/20 176/17 <b>grasp [3]</b> 129/21 180/6 196/24 <b>grasped [1]</b> 180/14 <b>great [20]</b> 34/5 36/1 36/13 40/25 41/6 42/5 56/21 71/1 78/16 81/7 94/19 95/5 120/19 120/22 137/10 159/13 165/2 184/16 185/7 196/8 <b>greater [6]</b> 23/15 52/17 76/22 88/17 108/18 110/13 <b>greatest [1]</b> 172/13 <b>green [1]</b> 212/6 <b>gross [1]</b> 134/21 <b>ground [1]</b> 122/17 <b>group [14]</b> 5/3 14/15 18/15 40/11 43/13 44/25 51/18 52/6 53/1 54/19 59/17 99/7 186/7 194/18 <b>groupings [1]</b> 15/22 <b>groups [11]</b> 12/5 14/14 15/19 40/9 51/12 51/13 52/5 79/5 79/12 80/17 115/12 <b>growth [2]</b> 179/15 180/6 <b>gut [2]</b> 113/21 117/7	<b>half [3]</b> 134/18 150/7 193/7 <b>half term [1]</b> 193/7 <b>Halpern [1]</b> 196/12 <b>halving [1]</b> 195/19 <b>hand [3]</b> 58/13 124/23 183/8 <b>hands [2]</b> 30/16 193/21 <b>happen [20]</b> 24/2 29/11 29/11 31/9 42/23 59/13 63/17 76/5 83/10 86/18 87/24 87/24 131/6 140/9 147/15 180/15 183/13 185/2 201/15 204/15 <b>happened [16]</b> 31/16 53/19 63/22 67/24 76/23 80/9 92/23 140/13 142/20 150/4 151/8 164/13 192/12 210/19 211/3 212/22 <b>happening [4]</b> 71/19 79/7 127/20 191/24 <b>happens [6]</b> 26/11 33/5 104/16 154/6 161/13 213/23 <b>hard [9]</b> 30/6 38/1 41/10 46/16 84/14 164/5 203/9 203/12 204/1 <b>hard-edged [2]</b> 203/9 204/1 <b>harder [2]</b> 32/14 75/2 <b>hares [1]</b> 91/9 <b>harm [1]</b> 203/23 <b>harmful [2]</b> 21/22 23/12 <b>harmfulness [1]</b> 88/12 <b>Harries [3]</b> 9/6 10/2 37/12 <b>harsh [1]</b> 150/12 <b>has [58]</b> 4/22 29/3 30/3 30/14 33/19 38/19 41/6 50/2 55/6 63/21 66/4 66/21 68/23 74/16 77/25 81/5 81/7 81/18 82/21 86/22 88/18 89/14 94/2 94/4 96/17 97/10 98/23 100/19 103/7 103/15 112/18 115/11 119/20 124/6 128/2 133/24 135/18 138/1 149/7 149/19 150/11 160/21 163/10 164/2 164/4 172/2 175/6 178/14 180/11 182/16 182/16 182/20 184/8 187/1 189/22 190/21 196/8 212/11 <b>have [341]</b>	<b>haven't [3]</b> 144/13 153/20 214/13 <b>having [27]</b> 5/25 11/7 15/19 18/17 35/19 37/17 44/25 45/2 62/7 71/16 71/23 73/3 89/20 101/16 107/6 107/12 114/5 121/3 124/11 176/10 179/18 181/7 190/3 192/6 193/4 208/15 211/2 <b>haystack [1]</b> 107/5 <b>hazard [1]</b> 168/19 <b>hazards [1]</b> 164/9 <b>HCID [1]</b> 125/5 <b>he [33]</b> 1/5 16/21 16/25 17/1 19/4 66/22 67/7 67/16 71/15 71/21 77/1 97/10 99/7 99/12 101/15 102/11 108/10 110/3 110/8 110/8 110/17 110/23 112/18 162/16 162/16 162/17 167/20 172/1 172/2 172/3 174/8 203/16 211/13 <b>he didn't [1]</b> 172/1 <b>he's [2]</b> 110/19 113/24 <b>head [6]</b> 2/22 3/15 6/10 6/12 6/13 124/14 <b>heading [2]</b> 105/24 140/16 <b>health [129]</b> 2/12 2/15 3/16 6/10 6/14 6/21 7/17 7/22 8/14 8/19 8/21 9/19 9/20 11/3 11/18 11/24 12/14 12/18 12/20 13/2 13/23 13/24 14/15 18/7 22/3 22/6 22/9 22/20 22/23 22/24 23/1 23/1 23/5 23/8 23/16 24/4 24/10 24/23 30/20 30/20 32/22 39/11 40/19 40/22 41/16 42/20 42/24 43/1 43/9 46/25 48/13 50/14 52/5 52/9 52/24 53/1 63/10 77/18 87/7 87/11 88/4 88/18 88/24 89/16 89/23 90/9 90/23 91/1 91/2 91/5 92/18 94/17 95/14 97/16 113/9 113/11 115/12 115/14 116/1 116/2 116/9 116/11 119/17 119/23 123/4 123/17 134/18 134/22 135/12 139/25 142/1 143/2 144/8 144/10 145/2 145/3 145/4 145/7 145/24 146/10 146/12 147/21	147/23 147/25 148/3 151/17 151/17 151/24 152/6 152/9 154/6 154/12 158/3 163/9 163/10 163/23 164/17 165/11 167/24 169/3 170/4 170/23 188/23 193/16 197/21 197/23 202/25 206/10 209/9 <b>Health Secretary [1]</b> 123/17 <b>healthcare [9]</b> 101/2 101/10 101/11 101/16 102/8 105/1 105/14 119/9 144/17 <b>healthy [4]</b> 87/4 87/5 87/9 87/22 <b>hear [3]</b> 79/13 94/21 110/4 <b>heard [16]</b> 4/22 23/23 30/3 33/19 42/9 63/14 63/17 81/17 97/9 100/19 102/18 120/19 165/2 195/8 196/8 205/15 <b>hearing [4]</b> 9/5 9/7 178/19 215/14 <b>heart [2]</b> 8/22 166/5 <b>heavily [1]</b> 119/10 <b>heavy [3]</b> 26/16 119/10 158/3 <b>height [1]</b> 34/23 <b>held [3]</b> 3/4 91/25 214/4 <b>help [9]</b> 1/11 6/3 50/18 91/16 93/2 120/4 120/23 143/17 147/2 <b>helped [3]</b> 18/14 75/9 99/12 <b>helpful [9]</b> 62/23 62/24 67/8 69/3 69/7 84/8 87/7 120/8 205/4 <b>helpfully [1]</b> 130/2 <b>helping [1]</b> 6/3 <b>hence [1]</b> 25/5 <b>her [2]</b> 37/12 124/22 <b>Herculean [1]</b> 85/12 <b>herd [1]</b> 197/2 <b>herd immunity [1]</b> 197/2 <b>here [20]</b> 20/15 21/16 21/19 28/10 31/25 32/10 50/25 69/1 137/5 138/14 141/15 153/7 167/15 167/21 186/19 193/4 194/7 194/22 196/3 213/7 <b>here's [4]</b> 37/18 54/2 54/3 150/13 <b>high [13]</b> 54/16 56/6 60/13 61/6 100/7 101/23 125/5 135/6 139/14 139/15 155/8
	<b>H</b>	<b>H1N1 [1]</b> 121/16 <b>had [222]</b> <b>hadn't [3]</b> 96/8 143/5 155/5 <b>hair [1]</b> 114/5			

<b>H</b>	<b>hours [2]</b> 49/17 98/13	1/21 167/11 167/11 173/18 193/6	<b>I do [7]</b> 3/9 30/18 97/11 170/19 177/3 204/25 205/22	71/6 79/4 85/14 90/2 92/22 97/10 103/23 121/1 134/6 139/9 144/3 157/2 158/22 159/19 166/5 166/9 168/8 171/22 171/22 173/18 186/5 191/19 198/3 211/24 213/5
<b>high... [2]</b> 174/9 198/16	<b>house [2]</b> 70/7 202/15	<b>hygiene [7]</b> 2/10 2/12 79/1 80/2 173/23 188/9 188/14	<b>I don't [45]</b> 7/11 23/1 27/23 28/8 28/17 29/14 38/9 42/21 43/7 46/11 47/22 51/19 59/10 59/11 61/18 70/14 72/20 84/10 95/2 95/18 97/13 98/1 109/13 110/16 111/1 111/5 111/21 113/18 116/13 128/13 135/10 164/11 165/19 166/13 168/10 169/6 172/6 172/7 187/1 187/12 189/10 189/21 193/24 202/23 215/7	<b>I meant [1]</b> 101/14 <b>I met [2]</b> 13/21 39/5 <b>I must [1]</b> 134/10 <b>I now [2]</b> 85/25 187/16 <b>I or [2]</b> 23/3 93/19 <b>I pause [2]</b> 68/19 120/14 <b>I personally [1]</b> 122/10 <b>I put [3]</b> 102/4 159/5 171/10 <b>I rather [1]</b> 144/21 <b>I really [2]</b> 94/14 206/19 <b>I recall [2]</b> 109/22 200/7 <b>I received [1]</b> 174/4 <b>I report [1]</b> 7/11 <b>I said [7]</b> 31/24 48/16 92/3 107/9 179/7 192/13 202/12 <b>I saw [3]</b> 19/10 19/13 91/20 <b>I say [9]</b> 14/22 34/14 44/18 139/6 165/18 176/16 186/1 186/24 212/21 <b>I shall [2]</b> 60/2 118/9 <b>I should [1]</b> 31/25 <b>I subsequently [1]</b> 102/12 <b>I summarise [1]</b> 84/11 <b>I suppose [1]</b> 20/3 <b>I suspect [1]</b> 180/16 <b>I talked [2]</b> 171/24 211/5 <b>I then [1]</b> 46/21 <b>I think [339]</b> <b>I thought [20]</b> 11/6 19/10 29/10 29/11 34/18 67/14 71/15 80/4 87/5 93/18 95/13 101/15 113/16 127/16 131/13 131/22 142/25 149/2 201/2 211/7 <b>I together [1]</b> 5/3 <b>I took [4]</b> 9/23 10/1 50/23 110/25 <b>I tried [3]</b> 61/14 81/12 136/17 <b>I understand [1]</b> 172/19 <b>I use [1]</b> 168/24 <b>I used [3]</b> 59/2
<b>high-contact [1]</b> 56/6	<b>housed [1]</b> 143/1	<b>hymn [1]</b> 18/12	<b>I</b>	
<b>high-risk [1]</b> 54/16	<b>households [4]</b> 57/18 58/14 59/22 83/11		<b>I absolutely [1]</b> 206/14	
<b>higher [3]</b> 108/24 144/19 174/23	<b>how [64]</b> 13/6 14/7 16/19 20/9 29/5 29/18 42/6 42/15 43/20 44/23 46/10 46/22 48/9 54/11 71/1 75/20 75/24 75/25 77/4 77/15 77/22 78/8 83/14 83/15 88/9 89/2 95/10 102/17 116/21 119/21 122/12 122/14 125/20 127/7 127/24 128/7 129/2 129/8 129/17 129/24 133/13 140/4 140/5 141/24 146/21 156/6 165/3 167/22 168/17 169/19 169/23 170/20 170/24 172/23 173/8 179/20 182/16 183/10 183/19 184/19 185/5 185/8 185/21 196/10		<b>I actually [4]</b> 29/15 31/24 43/2 201/17 <b>I add [1]</b> 88/15 <b>I agree [6]</b> 50/20 71/20 162/12 192/14 201/21 206/19 <b>I also [1]</b> 52/21 <b>I am [4]</b> 1/14 6/12 31/17 205/3 <b>I and [3]</b> 15/12 32/9 131/9 <b>I apologise [2]</b> 129/6 157/22 <b>I appreciate [1]</b> 74/10 <b>I ask [5]</b> 109/20 114/21 152/13 171/9 185/16 <b>I assign [1]</b> 83/20 <b>I basically [1]</b> 60/18 <b>I believe [1]</b> 16/7 <b>I both [1]</b> 186/9 <b>I briefed [1]</b> 155/1 <b>I can [13]</b> 24/13 27/4 37/25 66/10 96/2 96/2 101/19 101/19 111/21 115/11 133/19 157/2 192/24 <b>I can't [5]</b> 48/23 166/22 174/4 179/7 205/2 <b>I cannot [1]</b> 215/1 <b>I certainly [3]</b> 73/3 111/3 168/13 <b>I chaired [1]</b> 40/11 <b>I completely [5]</b> 61/1 76/10 87/3 127/1 200/25 <b>I consider [5]</b> 59/18 130/3 130/4 141/12 165/19 <b>I could [1]</b> 207/15 <b>I couldn't [2]</b> 44/18 137/2 <b>I did [10]</b> 12/21 13/21 13/24 20/16 90/17 90/19 127/15 145/1 166/22 211/6 <b>I didn't [5]</b> 27/20 98/20 102/11 148/24 205/15 <b>I directly [1]</b> 5/24 <b>I disagree [1]</b> 199/25 <b>I discussed [1]</b> 41/18	
<b>highest [1]</b> 156/3	<b>however [11]</b> 21/25 71/21 73/14 77/1 171/13 179/11 180/13 188/15 205/3 212/11 213/15		<b>I doubt [1]</b> 27/23 <b>I emphasise [1]</b> 135/23 <b>I ever [1]</b> 22/10 <b>I far [1]</b> 81/11 <b>I feel [1]</b> 170/25 <b>I felt [1]</b> 17/16 <b>I found [2]</b> 67/7 179/12 <b>I fully [3]</b> 65/7 72/3 142/22 <b>I gave [2]</b> 1/9 136/18 <b>I give [4]</b> 1/8 36/15 162/12 203/9 <b>I gloss [1]</b> 125/16 <b>I got [2]</b> 2/17 51/12 <b>I had [11]</b> 14/12 17/16 24/24 87/2 107/8 115/17 118/17 118/22 166/23 202/2 214/2 <b>I have [11]</b> 44/2 74/16 85/16 93/24 96/4 107/8 117/6 138/3 208/22 208/23 209/1 <b>I heard [1]</b> 63/17 <b>I hope [5]</b> 37/9 84/11 89/13 116/14 130/2 <b>I implore [1]</b> 197/5 <b>I just [11]</b> 4/4 90/15 133/20 151/2 152/2 152/3 164/25 171/1 177/8 193/15 201/24 <b>I know [6]</b> 63/15 70/18 114/3 151/25 173/4 202/13 <b>I looked [1]</b> 120/1 <b>I made [1]</b> 78/10 <b>I make [1]</b> 58/23 <b>I may [6]</b> 54/10 97/8 166/19 172/13 202/5 213/5 <b>I mean [33]</b> 5/22 35/13 38/24 47/3 48/16 61/18 70/1 70/2	
<b>highlight [1]</b> 113/6	<b>humans [1]</b> 195/17			
<b>highly [3]</b> 20/8 178/12 183/13	<b>humour [1]</b> 31/19			
<b>hill [1]</b> 25/13	<b>hundreds [6]</b> 1/20			
<b>him [5]</b> 97/7 99/11 110/21 111/2 111/3				
<b>himself [3]</b> 67/11 67/12 110/4				
<b>hindsight [10]</b> 21/8 52/14 98/15 110/12 110/12 111/19 150/11 188/22 189/15 190/7				
<b>his [22]</b> 12/16 18/24 20/4 20/5 25/20 66/24 66/25 76/23 80/5 99/8 109/20 110/9 110/14 110/18 111/1 111/13 172/1 172/2 178/9 194/15 204/5 209/23				
<b>historical [1]</b> 55/21				
<b>history [2]</b> 54/21 214/1				
<b>hit [2]</b> 123/8 198/22				
<b>hive [1]</b> 186/1				
<b>HMG [2]</b> 146/16 146/18				
<b>HMG's [4]</b> 143/15 145/23 151/15 152/16				
<b>hold [8]</b> 2/5 2/7 89/9 195/20 199/1 202/8 212/16 212/19				
<b>holidays [1]</b> 10/24				
<b>home [6]</b> 54/14 57/2 58/15 83/15 86/4 194/1				
<b>honest [5]</b> 74/17 95/16 121/11 127/11 197/13				
<b>honorary [1]</b> 2/15				
<b>hoof [1]</b> 200/10				
<b>hope [5]</b> 37/9 84/11 89/13 116/14 130/2				
<b>hopeful [1]</b> 175/15				
<b>horizon [1]</b> 115/9				
<b>hospital [4]</b> 2/5 76/8 77/3 80/11				
<b>hospitalisation [9]</b> 74/14 75/24 77/5 77/17 79/2 102/21 108/14 114/24 159/3				
<b>hospitalised [2]</b> 4/23 75/25				
<b>hospitals [2]</b> 2/4 125/5				
<b>hour [2]</b> 32/8 69/24				

<p><b>I</b></p> <p><b>I used... [2]</b> 144/22 179/8</p> <p><b>I want [11]</b> 3/16 25/22 26/22 115/5 116/18 130/25 131/24 162/14 162/24 166/14 181/22</p> <p><b>I wanted [6]</b> 101/23 136/20 137/14 148/21 149/1 178/1</p> <p><b>I was [44]</b> 6/1 8/3 10/5 13/7 17/17 20/18 20/25 21/18 22/7 27/5 32/2 33/8 34/5 38/24 43/4 43/6 48/18 51/24 55/2 55/5 63/16 64/19 85/14 85/15 89/14 89/14 124/13 130/6 133/16 136/16 136/18 145/11 151/14 157/24 159/7 178/3 180/22 203/20 205/13 206/7 208/13 208/19 211/4 211/6</p> <p><b>I wasn't [4]</b> 67/13 99/18 163/5 167/13</p> <p><b>I went [1]</b> 98/22</p> <p><b>I were [4]</b> 134/25 149/20 179/9 186/20</p> <p><b>I when [1]</b> 92/22</p> <p><b>I will [5]</b> 29/8 31/10 107/2 203/11 215/2</p> <p><b>I won't [1]</b> 90/4</p> <p><b>I wonder [1]</b> 178/23</p> <p><b>I would [32]</b> 10/5 14/11 16/25 17/22 20/16 28/8 33/7 36/1 43/8 63/17 66/2 71/14 71/22 73/15 77/20 110/16 114/14 116/8 124/18 126/11 127/11 127/12 141/13 163/13 167/24 168/20 179/10 181/18 187/13 190/1 202/24 208/12</p> <p><b>I wouldn't [2]</b> 180/16 180/17</p> <p><b>I wrote [2]</b> 127/13 136/8</p> <p><b>I'd [13]</b> 1/24 11/5 32/18 43/22 50/25 73/16 95/20 110/20 113/6 148/25 202/3 203/19 208/6</p> <p><b>I'll [8]</b> 56/22 60/1 60/17 68/13 101/14 119/7 153/2 172/25</p> <p><b>I'm [110]</b> 1/9 11/22 19/7 21/7 21/16 22/14 30/22 31/4 31/24 34/18 37/21 39/17 41/14 42/8 43/25</p>	<p>49/12 51/16 51/16 52/1 52/2 59/4 61/1 65/8 70/18 74/16 75/15 76/25 76/25 78/3 83/6 83/8 83/8 85/6 95/16 98/25 99/1 100/5 103/20 106/6 106/20 112/9 113/19 114/2 114/3 114/15 116/8 116/12 116/14 117/6 118/6 121/11 121/24 124/20 124/23 125/18 125/19 127/10 128/19 128/21 129/7 130/2 130/19 130/25 131/1 139/22 140/13 141/13 142/10 146/8 150/10 151/12 151/21 153/8 153/19 154/1 154/3 155/13 157/7 163/25 164/20 165/21 167/21 170/19 171/4 171/8 172/7 172/19 172/20 172/22 178/17 179/24 181/18 181/19 182/19 183/2 183/3 184/13 184/14 189/12 190/17 194/6 194/7 196/2 196/2 196/25 197/13 201/20 206/15 213/6 215/8</p> <p><b>I'm afraid [2]</b> 153/8 172/19</p> <p><b>I've [16]</b> 21/9 27/4 29/6 29/8 63/20 70/17 73/22 85/16 97/8 112/5 129/11 130/5 147/25 171/3 173/7 203/13</p> <p><b>ie [1]</b> 132/25</p> <p><b>ieberg [1]</b> 102/21</p> <p><b>ICL [4]</b> 78/25 79/25 174/13 209/17</p> <p><b>ICU [1]</b> 125/6</p> <p><b>idea [13]</b> 21/11 56/9 73/16 117/18 120/8 134/4 138/21 155/4 191/24 194/1 195/20 213/23 214/21</p> <p><b>ideal [4]</b> 49/20 168/15 172/12 185/4</p> <p><b>ideally [1]</b> 87/24</p> <p><b>ideas [2]</b> 18/15 99/11</p> <p><b>identical [2]</b> 29/17 39/17</p> <p><b>identification [1]</b> 178/7</p> <p><b>identified [8]</b> 105/5 105/6 106/8 106/12 108/17 137/17 157/22 209/17</p> <p><b>identify [5]</b> 44/24 112/13 135/13 145/17 204/18</p>	<p><b>ie [5]</b> 108/11 130/14 146/18 151/11 176/24</p> <p><b>ie sustained [1]</b> 108/11</p> <p><b>if [200]</b> 10/18 11/13 12/9 16/24 17/1 17/19 23/21 24/13 24/13 24/16 24/18 26/8 27/1 27/8 27/11 27/15 29/22 30/10 31/2 32/11 44/19 49/14 49/14 50/5 54/10 54/22 55/10 56/16 56/18 56/25 57/14 59/10 59/13 61/25 62/20 63/13 63/18 63/23 64/20 66/7 67/16 67/18 68/6 68/7 69/7 69/22 71/17 72/22 74/16 75/4 76/17 76/23 76/24 78/9 78/9 81/9 81/11 82/15 83/10 88/17 89/10 90/8 92/8 95/16 95/21 96/2 96/2 96/6 96/7 97/8 97/8 100/15 100/21 101/19 101/19 101/21 101/24 101/24 110/20 113/22 114/4 115/5 115/8 117/5 117/5 117/5 119/6 120/10 121/11 121/23 122/18 124/9 125/18 127/10 128/8 133/19 133/23 133/24 136/3 137/8 137/20 138/2 138/4 138/15 139/1 139/1 139/4 139/9 140/18 141/2 143/22 144/8 145/15 145/19 148/23 149/3 149/20 154/6 154/17 156/22 157/2 157/4 158/13 159/4 162/21 165/21 165/23 166/2 166/19 166/23 166/24 168/24 169/10 171/7 172/13 174/19 174/25 175/3 175/25 176/3 176/7 176/8 176/22 178/14 178/15 178/20 179/9 180/15 181/4 183/21 184/22 185/6 186/1 187/18 188/18 188/19 189/9 189/18 190/13 190/16 190/16 191/20 193/6 194/19 195/22 196/25 197/13 197/25 199/1 200/3 200/6 202/2 202/5 202/8 202/11 203/11 203/18 204/11 204/20 205/11 206/7 206/10 206/20 206/22 207/3 207/10</p>	<p>207/16 207/23 210/4 212/10 212/16 212/24 213/10 213/23 214/11 214/13 214/14 214/17 214/18 215/4</p> <p><b>ignorance [1]</b> 44/7</p> <p><b>ignored [3]</b> 87/18 93/9 113/5</p> <p><b>illegitimate [1]</b> 87/4</p> <p><b>illusion [2]</b> 138/17 138/22</p> <p><b>illusions [1]</b> 118/22</p> <p><b>illustrate [1]</b> 133/20</p> <p><b>imagination [2]</b> 54/19 55/1</p> <p><b>imaginatively [1]</b> 57/7</p> <p><b>immediacy [3]</b> 185/3 187/6 187/8</p> <p><b>immediate [1]</b> 65/24</p> <p><b>immune [1]</b> 175/4</p> <p><b>immunity [2]</b> 197/2 214/12</p> <p><b>impact [15]</b> 21/4 25/21 48/9 74/7 76/2 77/18 78/21 81/24 114/24 137/1 169/12 169/17 193/19 199/1 209/12</p> <p><b>impacted [1]</b> 25/25</p> <p><b>impacts [4]</b> 20/17 20/23 24/6 78/12</p> <p><b>Imperial [4]</b> 33/14 108/10 133/8 209/15</p> <p><b>Imperial College [3]</b> 33/14 133/8 209/15</p> <p><b>Imperial College's [1]</b> 108/10</p> <p><b>implication [3]</b> 88/18 116/8 207/2</p> <p><b>implications [10]</b> 24/23 86/14 89/16 130/14 147/7 147/8 147/8 147/9 206/25 207/4</p> <p><b>implied [1]</b> 191/21</p> <p><b>implies [5]</b> 29/10 103/5 108/2 142/9 195/11</p> <p><b>implore [1]</b> 197/5</p> <p><b>imply [1]</b> 195/24</p> <p><b>implying [3]</b> 53/6 101/5 206/12</p> <p><b>importance [7]</b> 7/3 11/24 36/14 105/6 129/7 169/4 204/19</p> <p><b>important [63]</b> 4/3 4/11 4/17 5/6 5/11 6/20 16/13 17/15 24/20 26/8 28/18 31/23 34/21 35/5 36/10 36/12 45/19 47/14 60/21 61/3 62/4 63/19 75/5 79/6 79/17</p>	<p>90/6 92/25 96/12 96/14 101/22 102/10 109/7 111/16 115/24 116/19 116/24 118/1 119/5 121/9 122/11 129/14 129/15 132/1 132/2 140/11 149/21 151/22 152/3 154/5 160/23 162/25 163/6 168/6 172/23 174/17 178/2 178/3 180/19 182/15 196/3 200/20 203/20 214/7</p> <p><b>importantly [3]</b> 3/3 17/2 70/8</p> <p><b>importation [1]</b> 147/11</p> <p><b>importations [4]</b> 138/11 138/11 138/12 150/4</p> <p><b>impose [4]</b> 30/22 86/4 89/7 89/8</p> <p><b>imposed [1]</b> 213/19</p> <p><b>imposing [2]</b> 1/10 90/1</p> <p><b>impossible [1]</b> 150/25</p> <p><b>impracticable [1]</b> 150/24</p> <p><b>impression [3]</b> 64/3 64/5 189/23</p> <p><b>impressive [2]</b> 8/25 158/19</p> <p><b>improbable [6]</b> 107/22 182/8 183/25 185/1 211/10 211/22</p> <p><b>improbably [1]</b> 184/23</p> <p><b>improvement [1]</b> 8/21</p> <p><b>Imran [2]</b> 25/20 161/6</p> <p><b>Imran Shafi [2]</b> 25/20 161/6</p> <p><b>inaccurate [1]</b> 92/21</p> <p><b>inadequate [1]</b> 68/4</p> <p><b>inadvertently [1]</b> 71/17</p> <p><b>inappropriate [3]</b> 28/18 79/23 93/11</p> <p><b>incapable [1]</b> 42/11</p> <p><b>incidents [1]</b> 169/9</p> <p><b>include [2]</b> 48/5 56/3</p> <p><b>includes [1]</b> 6/16</p> <p><b>including [22]</b> 4/20 11/16 13/24 23/21 43/24 47/20 55/25 58/14 70/8 95/13 99/4 133/25 159/23 161/10 161/11 164/17 169/12 184/4 194/8 196/23 208/14 209/2</p> <p><b>incoherent [1]</b> 190/9</p> <p><b>inconvenient [1]</b> 87/20</p>
---	---	--	--	---

<b>I</b>	75/24 76/1 77/5	211/18	34/15	<b>invariably [3]</b> 63/7
<b>incorrect [5]</b> 21/13	144/17 159/2 160/20	<b>INQ000174700 [1]</b>	<b>internalise [1]</b> 92/12	63/9 63/10
29/15 70/10 141/16	164/1 175/2 181/5	132/6	<b>internalised [1]</b>	<b>invented [1]</b> 41/3
148/24	188/11	<b>INQ000203936 [1]</b>	91/23	<b>inventions [1]</b> 212/3
<b>increasing [1]</b> 189/6	<b>infections [5]</b> 8/20	143/9	<b>internally [1]</b> 32/4	<b>investment [2]</b> 41/16
<b>increasingly [4]</b> 9/23	33/16 108/17 174/15	<b>INQ000236382 [1]</b>	<b>international [17]</b>	41/24
33/2 34/10 138/4	188/16	204/10	2/12 2/21 7/3 14/20	<b>invitation [1]</b> 97/12
<b>incredibly [1]</b> 113/25	<b>infectious [4]</b> 2/2 2/3	<b>INQ000248853 [1]</b>	14/23 16/11 16/17	<b>invited [2]</b> 177/4
<b>incubation [3]</b>	119/13 119/14	10/9	53/23 98/4 139/25	191/1
135/25 159/17 159/20	<b>inference [1]</b> 192/8	<b>INQ000251645 [1]</b>	140/3 140/6 140/14	<b>inviting [1]</b> 50/10
<b>incumbent [1]</b> 58/17	<b>infiltrate [1]</b> 184/25	12/9	141/5 141/6 163/11	<b>involve [2]</b> 91/7
<b>indeed [26]</b> 7/12	<b>infinite [3]</b> 47/4 48/17	<b>INQ000274050 [1]</b>	207/22	92/14
27/11 33/11 47/21	50/11	31/3	<b>internationally [4]</b>	<b>involved [5]</b> 27/13
53/22 54/16 58/3	<b>infinitely [1]</b> 50/1	<b>inquiry [28]</b> 1/7 1/16	13/20 14/21 44/19	38/25 39/9 109/15
63/11 66/21 81/18	<b>inflammatory [1]</b>	3/6 4/22 8/9 30/3 30/7	207/21	162/8
85/22 103/13 104/13	5/14	31/11 33/19 37/10	<b>interpret [3]</b> 75/1	<b>irrelevant [1]</b> 198/7
112/7 136/9 142/15	<b>influence [2]</b> 213/16	37/15 37/16 41/7 68/1	81/10 180/17	<b>irrespective [3]</b> 55/8
146/13 149/5 153/5	214/5	72/6 79/23 82/22	<b>interpretation [2]</b>	92/15 149/24
156/8 165/14 167/14	<b>influenza [1]</b> 181/25	96/16 100/19 114/5	109/19 215/5	<b>is [663]</b>
174/7 179/6 211/7	<b>inform [2]</b> 75/19	119/20 149/7 165/2	<b>interpreted [2]</b> 75/14	<b>is significant [1]</b>
215/11	75/23	168/1 171/6 196/8	128/18	30/18
<b>indefinitely [1]</b>	<b>informal [5]</b> 40/3	210/9 216/5	<b>interprets [1]</b> 166/16	<b>isn't [10]</b> 6/20 63/16
133/19	47/19 49/3 85/20	<b>Inquiry's [2]</b> 100/3	<b>interrelationship [1]</b>	88/2 137/7 137/10
<b>indemnity [1]</b> 85/22	208/20	111/9	42/7	137/17 164/7 170/24
<b>independence [1]</b>	<b>informally [2]</b> 42/22	<b>Insights [1]</b> 196/13	<b>interrogate [1]</b>	173/24 183/22
7/13	99/5	<b>insist [3]</b> 83/17 93/24	202/14	<b>isolate [1]</b> 41/8
<b>independent [2]</b> 7/7	<b>information [30]</b> 14/8	193/25	<b>interrupt [2]</b> 22/14	<b>isolated [1]</b> 174/11
8/12	14/17 14/21 15/10	<b>insisted [1]</b> 93/22	97/8	<b>isolation [7]</b> 56/4
<b>INDEX [1]</b> 215/17	15/23 15/25 16/3	<b>insisting [1]</b> 83/23	<b>interrupting [1]</b>	56/4 56/5 174/3 178/8
<b>India [1]</b> 15/7	16/14 17/8 33/25	<b>insofar [3]</b> 136/6	194/3	178/13 193/22
<b>indicate [4]</b> 108/19	40/15 64/10 71/18	160/10 214/8	<b>intervals [3]</b> 113/24	<b>issue [40]</b> 26/22
108/24 110/15 134/18	72/2 78/14 100/1	<b>insoluble [1]</b> 166/13	159/10 159/11	36/13 41/10 46/14
<b>indication [3]</b> 15/5	100/19 107/5 109/2	<b>instance [1]</b> 162/3	<b>intervening [1]</b> 72/22	75/17 83/3 84/17
130/6 171/1	109/12 114/22 117/12	<b>instead [2]</b> 110/11	<b>intervention [8]</b>	88/11 89/10 96/20
<b>indirect [10]</b> 10/22	132/13 132/18 159/15	188/20	21/23 22/5 23/13	102/16 102/17 103/21
14/18 15/15 23/10	159/18 166/7 177/19	<b>instinct [2]</b> 111/16	23/19 24/2 57/7 87/11	111/1 112/17 116/17
23/12 23/18 23/19	180/23 205/25	111/17	193/17	122/18 126/23 129/20
27/2 88/7 130/15	<b>informed [1]</b> 14/6	<b>instinctive [1]</b> 110/18	<b>interventions [9]</b>	134/17 142/23 146/5
<b>indirectly [1]</b> 23/9	<b>infrastructure [1]</b>	<b>Institute [1]</b> 3/16	21/25 49/10 49/11	151/16 151/24 160/16
<b>individual [11]</b> 7/4	41/17	<b>institutes [1]</b> 50/13	206/3 209/13 209/25	160/18 162/1 162/3
7/10 19/12 28/21	<b>infringe [1]</b> 7/13	<b>institutionally [1]</b>	211/19 213/17 214/6	162/13 162/25 172/16
69/16 96/19 97/13	<b>Inherent [1]</b> 23/6	42/10	<b>into [48]</b> 12/24 19/2	180/10 180/11 187/22
124/3 127/19 131/22	<b>initial [1]</b> 209/12	<b>instructed [1]</b> 59/12	22/18 22/22 30/17	194/13 203/3 204/4
165/24	<b>initially [4]</b> 9/15	<b>integrated [1]</b> 74/22	34/7 34/8 35/4 42/5	207/6 207/7 207/22
<b>individually [1]</b> 68/20	20/21 92/22 193/15	<b>integration [1]</b> 44/9	44/1 44/10 46/12	<b>issued [1]</b> 104/19
<b>individuals [8]</b> 30/19	<b>inordinate [1]</b> 95/7	<b>intellectually [1]</b>	46/12 47/20 47/20	<b>issues [24]</b> 18/8
57/18 131/22 160/8	<b>inputs [1]</b> 48/22	126/3	47/24 59/11 78/3	21/25 36/11 39/2 42/6
162/14 164/15 170/11	<b>INQ000047484 [1]</b>	<b>intended [1]</b> 57/14	80/11 82/15 82/16	47/1 53/8 58/17 62/6
208/24	100/15	<b>intending [1]</b> 95/2	86/1 88/17 90/4 92/24	71/4 72/18 72/23 73/2
<b>indoors [1]</b> 188/12	<b>INQ000047544 [1]</b>	<b>intensely [1]</b> 22/2	104/9 106/19 115/4	73/2 92/1 97/16
<b>industrial [2]</b> 41/23	132/15	<b>intensive [2]</b> 48/12	116/7 116/23 130/3	130/11 130/12 130/13
42/1	<b>INQ000047585 [1]</b>	193/22	130/10 136/11 137/8	148/14 151/17 182/15
<b>inevitable [3]</b> 82/7	135/13	<b>interaction [3]</b> 14/12	138/8 139/13 142/13	187/17 197/6
94/13 176/11	<b>INQ000051925 [1]</b>	36/8 59/22	142/18 167/20 170/6	<b>it [599]</b>
<b>inevitably [8]</b> 15/9	160/5	<b>interactions [3]</b>	170/21 172/4 192/22	<b>it's [145]</b> 5/14 6/20
19/19 21/17 80/9 99/2	<b>INQ000056138 [1]</b>	15/15 57/18 83/10	193/1 194/5 205/17	7/5 8/5 11/13 11/23
134/5 146/2 146/13	174/19	<b>interest [6]</b> 39/22	208/8 211/9	16/13 17/15 18/6
<b>infected [5]</b> 75/25	<b>INQ000056227 [1]</b>	100/13 100/25 103/25	<b>intrinsic [2]</b> 91/5	24/17 25/2 26/11
76/1 77/5 134/20	190/13	169/4 170/11	159/19	26/22 28/1 28/18
181/7	<b>INQ000057508 [1]</b>	<b>interesting [3]</b> 67/7	<b>intrinsically [1]</b>	30/16 30/21 31/23
<b>infection [18]</b> 46/24	197/17	98/23 153/24	179/17	32/12 32/14 38/3
47/8 48/11 49/8 52/10	<b>INQ000146558 [1]</b>	<b>interim [2]</b> 2/22	<b>introduce [1]</b> 193/15	39/22 43/17 45/19
74/7 74/13 74/14	161/5	43/25	<b>introduction [1]</b>	47/14 47/24 49/21
	<b>INQ000151558 [1]</b>	<b>internal [2]</b> 23/24	210/11	50/6 51/6 52/14 59/6

**I**  
**it's...** [114] 60/7 62/4  
 68/18 69/18 70/2 72/6  
 72/15 73/7 74/3 75/5  
 77/8 79/6 79/10 80/15  
 81/9 81/9 85/7 85/23  
 96/3 96/10 96/14 98/1  
 102/14 103/15 104/3  
 104/16 104/21 104/22  
 104/24 105/21 107/21  
 114/9 114/25 118/1  
 123/14 124/5 124/25  
 126/18 129/14 130/21  
 131/18 132/4 132/18  
 133/21 136/24 138/15  
 139/1 139/2 140/11  
 140/19 141/4 142/11  
 144/8 146/17 147/14  
 149/21 150/10 151/7  
 152/2 152/3 154/20  
 155/9 165/5 166/16  
 168/3 168/4 169/9  
 170/17 171/22 172/5  
 174/19 177/3 179/20  
 179/21 181/19 182/3  
 182/7 182/12 183/9  
 184/10 185/1 185/1  
 185/16 186/1 186/5  
 186/16 186/18 187/2  
 188/21 189/14 190/13  
 193/4 194/23 195/22  
 196/1 196/3 197/25  
 198/3 198/4 198/9  
 198/20 200/5 202/14  
 206/3 206/20 207/23  
 209/8 209/8 211/19  
 213/8 213/9 213/9  
 214/11 215/11  
**Italy** [2] 15/18 193/7  
**iterations** [2] 197/19  
 199/18  
**iterative** [1] 69/1  
**its** [33] 3/18 6/16  
 40/22 43/17 45/6  
 47/16 48/5 49/7 69/24  
 70/25 75/22 83/4  
 105/19 114/23 119/15  
 130/24 151/7 151/11  
 166/16 171/7 173/24  
 175/3 176/4 177/17  
 177/23 178/21 182/6  
 184/24 191/11 194/24  
 198/21 200/19 205/13  
**itself** [11] 28/6 50/16  
 69/10 73/5 79/10  
 122/18 138/7 143/6  
 183/25 201/13 213/13

**J**  
**January** [65] 4/13  
 9/18 10/6 16/8 19/2  
 23/14 26/24 28/7  
 39/24 40/23 40/24

42/13 54/12 74/3  
 76/15 77/9 89/21  
 100/1 100/8 103/2  
 103/21 104/7 104/18  
 104/19 105/11 106/9  
 107/10 108/6 108/9  
 108/13 109/24 111/8  
 111/22 114/19 115/10  
 118/17 121/24 121/25  
 122/2 123/11 124/19  
 128/10 132/2 132/5  
 132/19 132/20 133/3  
 133/3 133/9 134/13  
 135/2 135/12 136/12  
 143/9 145/1 150/22  
 151/13 152/14 153/12  
 153/13 153/14 157/9  
 157/13 158/21 194/14  
**January 2020** [4]  
 16/8 42/13 118/17  
 122/2  
**January 2021** [1]  
 89/21  
**January/the** [1]  
 152/14  
**Japan** [5] 108/7  
 139/18 148/7 157/11  
 175/10  
**JCVI** [1] 47/13  
**Jenny** [2] 9/6 37/12  
**Jenny Harries** [1] 9/6  
**Jeremy** [5] 18/24  
 19/6 20/4 134/15  
 134/25  
**Jeremy Farrar** [3]  
 18/24 20/4 134/15  
**job** [22] 22/10 22/13  
 48/17 53/13 53/24  
 53/25 64/11 73/20  
 80/5 91/5 92/23 95/15  
 96/3 96/10 96/12  
 113/10 130/8 131/23  
 142/12 170/18 198/2  
 209/8  
**John** [1] 204/12  
**Johnson** [2] 96/7  
 97/6  
**joint** [1] 40/7  
**Jonathan** [12] 9/4  
 100/9 101/8 102/7  
 104/18 104/22 108/6  
 109/21 110/17 111/17  
 115/17 148/5  
**Jonathan Van-Tam**  
**[3]** 9/4 100/9 108/6  
**Jonathan's** [1]  
 113/21  
**judge** [1] 93/8  
**judgement** [16]  
 51/17 52/12 53/15  
 62/6 65/17 93/15  
 112/12 112/12 114/7  
 114/9 114/11 116/4  
 118/5 118/5 118/6

148/19  
**judgements** [5]  
 49/20 49/20 76/3  
 117/13 149/18  
**judgment** [3] 114/8  
 116/12 116/13  
**July** [1] 16/8  
**July 2020** [1] 16/8  
**just** [136] 3/16 4/4  
 9/12 12/2 12/17 17/10  
 17/13 20/20 23/23  
 24/25 30/14 30/21  
 30/23 31/2 36/24 37/4  
 38/24 40/3 40/11  
 40/14 41/25 44/22  
 45/7 47/12 52/2 53/5  
 53/17 56/1 56/25 58/8  
 58/9 59/6 62/23 70/18  
 71/22 73/15 76/4  
 76/25 77/21 79/5  
 83/19 84/8 88/15  
 90/15 92/10 99/1 99/8  
 99/10 101/7 101/21  
 103/19 104/6 104/12  
 105/22 109/6 109/10  
 110/23 112/14 112/18  
 113/6 113/25 114/4  
 114/17 115/16 119/1  
 120/11 120/16 120/18  
 121/13 121/16 121/17  
 125/16 127/4 129/8  
 130/7 130/8 130/8  
 131/25 133/19 133/20  
 139/22 140/13 142/12  
 142/24 144/8 146/13  
 146/14 147/20 147/25  
 149/16 150/24 151/2  
 152/2 152/3 153/19  
 153/21 154/1 154/3  
 154/6 154/17 156/8  
 159/4 160/16 164/25  
 171/1 171/8 173/4  
 176/24 176/25 177/8  
 177/10 179/17 179/20  
 181/18 181/19 183/14  
 184/14 184/17 185/2  
 190/13 191/23 192/14  
 192/21 193/15 194/7  
 195/25 198/23 200/6  
 200/10 201/24 204/21  
 207/6 211/9 211/16  
 212/9 212/25  
**justification** [1]  
 56/24  
**justified** [1] 80/3

**K**  
**keen** [3] 8/3 48/19  
 48/19  
**keep** [6] 1/10 4/6  
 14/5 98/9 100/6 162/7  
**keeping** [3] 58/14  
 99/17 154/14  
**Keith** [7] 1/3 5/21

60/6 112/16 118/14  
 173/7 204/6  
**Keith's** [1] 64/1  
**key** [9] 40/17 58/25  
 62/4 62/24 122/20  
 137/25 138/1 143/23  
 162/8  
**killed** [1] 55/15  
**kills** [1] 106/24  
**kind** [32] 14/11 32/12  
 40/2 47/7 53/3 58/8  
 65/16 82/6 96/3 120/9  
 121/20 122/15 124/12  
 127/14 129/7 130/13  
 140/19 142/13 142/14  
 142/15 153/9 157/4  
 166/11 168/24 169/2  
 169/14 170/13 173/4  
 182/23 187/3 200/9  
 208/20  
**kinds** [2] 91/3 169/6  
**Kingdom** [34] 6/7  
 6/23 14/2 25/16 33/23  
 35/7 35/16 41/9 77/11  
 89/24 109/24 118/22  
 123/8 134/19 136/7  
 141/25 143/14 143/19  
 152/10 152/12 157/12  
 167/3 175/12 176/8  
 176/11 177/1 192/7  
 195/4 203/8 204/14  
 205/11 206/25 207/4  
 209/6  
**kitchen** [1] 59/2  
**knew** [10] 68/24  
 141/21 141/23 153/13  
 153/13 160/15 177/19  
 199/17 199/23 200/18  
**know** [100] 3/10 4/1  
 4/1 24/8 26/8 26/9  
 27/20 28/12 28/18  
 29/16 33/7 35/18  
 40/16 43/2 50/7 53/5  
 55/18 59/9 59/13  
 59/20 62/17 63/15  
 64/13 64/17 65/12  
 67/15 69/3 70/18  
 71/14 71/20 73/13  
 73/14 81/4 84/18 92/4  
 93/23 95/24 102/19  
 102/22 104/6 107/18  
 110/25 111/4 111/24  
 112/6 112/11 114/3  
 115/5 122/12 123/14  
 123/20 124/23 124/23  
 127/20 128/24 139/23  
 140/3 140/11 140/18  
 141/1 142/11 148/23  
 150/10 150/16 151/25  
 153/25 155/9 156/9  
 157/1 158/15 158/18  
 162/19 164/12 167/22  
 172/6 172/7 172/21  
 172/23 173/4 173/4

179/8 179/9 180/13  
 183/7 184/10 186/24  
 193/5 193/20 197/18  
 197/24 200/8 200/25  
 201/25 202/13 206/9  
 207/23 208/19 212/15  
 213/19 213/20  
**knowing** [2] 25/24  
 90/5  
**knowledge** [5] 9/17  
 53/18 197/13 200/19  
 201/25  
**known** [8] 5/10 13/4  
 21/22 33/14 56/8  
 67/11 175/10 175/16  
**knows** [1] 184/23  
**Korea** [6] 41/15  
 41/17 41/18 139/18  
 157/11 175/11

**L**  
**laboratories** [1]  
 42/10  
**laboratory** [1] 42/7  
**laborious** [1] 66/6  
**lack** [7] 61/8 98/16  
 98/16 122/22 129/20  
 177/18 197/12  
**lacked** [1] 129/4  
**ladder** [1] 193/17  
**Lady** [5] 1/4 96/24  
 172/24 173/10 215/9  
**laid** [4] 26/10 78/1  
 125/20 202/14  
**Lancaster** [1] 94/18  
**Lancet** [1] 157/12  
**land** [1] 25/24  
**language** [1] 31/5  
**large** [36] 11/20 18/2  
 34/7 39/23 44/12 45/2  
 45/3 45/14 47/18  
 55/23 63/5 63/11  
 66/20 73/12 76/17  
 79/15 80/7 80/23  
 90/25 112/2 113/4  
 113/9 114/6 119/10  
 120/7 122/19 126/10  
 147/16 178/11 179/16  
 179/21 189/3 205/16  
 210/18 212/5 214/8  
**largely** [5] 70/21  
 119/13 150/7 166/15  
 202/17  
**larger** [2] 50/1 51/4  
**largest** [1] 3/20  
**last** [12] 54/10 55/11  
 120/16 127/23 135/1  
 148/25 181/5 181/12  
 187/3 206/4 212/12  
 213/24  
**late** [11] 4/13 10/3  
 21/5 21/8 25/19 28/7  
 76/6 102/4 129/9  
 129/22 200/6



<b>L</b>	38/4 51/11 51/16 52/8 52/11 53/11 73/13 87/1 87/14 88/20 90/16 91/1 99/21 <b>legitimately [2]</b> 39/15 52/7 <b>length [2]</b> 123/25 160/25 <b>lent [1]</b> 8/25 <b>less [16]</b> 11/16 30/21 45/15 72/3 78/22 85/15 87/5 99/18 101/18 104/12 105/21 136/24 149/8 176/15 181/13 186/4 <b>lessons [2]</b> 54/22 54/24 <b>let [9]</b> 22/17 24/12 56/18 77/8 88/16 105/16 114/7 163/16 168/14 <b>let's [9]</b> 21/19 55/5 94/21 114/17 114/20 119/6 148/2 167/25 212/18 <b>letter [6]</b> 40/7 161/5 163/20 166/20 171/1 171/2 <b>level [20]</b> 39/4 39/18 53/18 90/4 90/12 100/7 107/15 113/20 117/13 145/17 155/9 156/3 157/21 168/20 169/22 170/14 180/11 185/9 195/5 198/17 <b>level 5 [1]</b> 90/4 <b>levelled [1]</b> 77/23 <b>levels [8]</b> 14/11 39/12 41/12 60/11 70/10 144/19 144/25 207/17 <b>lever [1]</b> 156/17 <b>liability [1]</b> 85/13 <b>liaise [1]</b> 14/2 <b>lie [1]</b> 25/24 <b>lies [1]</b> 70/19 <b>life [11]</b> 26/16 27/8 27/16 54/15 57/17 87/20 92/15 116/24 117/3 169/14 194/4 <b>lifted [2]</b> 212/5 214/9 <b>light [4]</b> 33/25 143/20 149/19 203/10 <b>like [27]</b> 1/24 8/21 36/1 50/25 56/4 56/16 66/25 71/15 71/22 72/22 77/7 89/10 110/23 113/6 122/12 138/3 139/5 156/19 159/20 159/21 163/13 182/13 193/23 197/9 204/14 208/14 213/14 <b>likelihood [3]</b> 139/14 139/15 204/22	<b>likely [27]</b> 27/13 43/16 74/6 75/5 76/2 76/5 77/4 79/3 81/23 82/25 105/19 105/20 105/22 114/25 115/1 136/19 157/21 160/9 175/23 176/15 176/18 183/10 183/19 185/13 185/14 191/11 209/19 <b>limit [4]</b> 49/18 50/3 89/3 173/8 <b>limited [7]</b> 103/6 104/20 105/8 108/15 113/22 133/5 137/1 <b>line [5]</b> 7/9 168/11 202/19 205/2 212/6 <b>link [1]</b> 88/23 <b>links [2]</b> 14/18 14/20 <b>list [1]</b> 171/24 <b>listen [1]</b> 67/17 <b>listened [2]</b> 63/6 67/9 <b>listening [3]</b> 27/24 27/24 179/9 <b>literal [1]</b> 215/5 <b>literature [1]</b> 178/11 <b>little [10]</b> 4/5 22/14 51/6 73/15 127/11 131/3 142/6 155/6 162/12 197/13 <b>living [2]</b> 20/25 22/21 <b>Liz [1]</b> 96/9 <b>LLM [1]</b> 2/9 <b>local [2]</b> 10/16 204/23 <b>lockdown [13]</b> 20/20 54/14 58/10 58/19 59/23 88/13 89/8 89/21 90/1 128/4 130/12 187/18 187/19 <b>lockdown 3 [1]</b> 89/21 <b>lockdowns [3]</b> 56/24 86/4 195/2 <b>locking [1]</b> 56/9 <b>lodged [2]</b> 79/10 180/11 <b>logic [1]</b> 213/7 <b>logical [6]</b> 55/10 195/14 195/14 207/2 214/21 215/7 <b>logically [1]</b> 190/8 <b>London [8]</b> 2/8 2/12 33/15 79/1 80/1 173/22 188/9 188/14 <b>London's [1]</b> 209/15 <b>lone [2]</b> 62/10 62/13 <b>loneliness [1]</b> 22/19 <b>long [20]</b> 7/14 20/7 34/13 41/10 62/1 92/8 92/14 105/15 119/19 119/22 125/1 127/12 132/25 134/1 134/5 171/24 192/24 208/2 212/11 214/15 <b>longer [6]</b> 25/5 51/19	65/25 66/7 66/8 170/4 <b>look [31]</b> 3/17 12/1 17/7 35/3 43/12 55/10 58/10 58/13 61/1 76/18 80/16 84/5 85/25 109/13 113/22 124/9 131/25 140/4 140/12 148/2 156/25 158/13 159/4 174/18 174/19 175/25 187/16 190/14 201/19 204/11 206/7 <b>looked [8]</b> 44/19 59/15 77/2 107/14 120/1 121/3 138/3 188/15 <b>looking [10]</b> 5/17 10/7 44/22 49/7 69/20 104/4 117/16 143/22 163/2 172/12 <b>looks [1]</b> 136/24 <b>looming [1]</b> 173/17 <b>looping [1]</b> 131/3 <b>Lord [1]</b> 167/17 <b>Lord Sedwill [1]</b> 167/17 <b>lose [2]</b> 185/6 212/17 <b>loss [7]</b> 26/16 27/8 27/16 57/17 92/15 169/14 207/9 <b>lost [6]</b> 175/6 177/12 193/14 199/24 199/25 207/8 <b>lost weeks [2]</b> 199/24 199/25 <b>lot [38]</b> 15/15 16/14 18/14 25/4 32/10 39/1 39/2 44/3 45/12 46/16 54/6 55/15 55/21 57/11 76/7 76/7 76/8 77/20 78/4 78/14 79/4 79/9 79/13 99/3 99/19 107/13 119/15 124/3 130/15 136/17 138/18 142/19 147/6 152/23 164/25 196/22 200/14 214/20 <b>lots [7]</b> 69/5 74/22 97/11 110/22 128/18 128/19 197/8 <b>low [4]</b> 60/13 61/6 121/14 186/10 <b>lowering [1]</b> 199/1 <b>lowest [2]</b> 185/9 193/18	108/9 114/14 117/16 141/10 148/10 150/2 150/9 150/15 152/23 157/14 165/21 168/9 172/10 173/18 175/5 198/11 198/14 202/15 202/23 <b>magnitude [5]</b> 1/22 95/10 167/3 167/8 168/5 <b>main [1]</b> 19/9 <b>mainly [3]</b> 7/2 150/5 202/16 <b>maintain [2]</b> 149/15 161/18 <b>maintenance [1]</b> 151/23 <b>major [24]</b> 8/19 20/1 42/5 54/16 87/22 98/3 98/3 104/10 104/14 115/15 118/24 119/14 119/14 119/15 123/9 133/23 135/18 142/23 180/11 189/22 209/19 210/21 212/4 213/25 <b>majority [7]</b> 7/5 34/5 94/19 158/25 178/15 185/8 186/2 <b>make [45]</b> 6/3 22/7 23/16 24/13 35/21 37/5 47/4 49/19 51/17 53/11 58/7 58/23 60/17 61/25 66/7 67/14 69/12 83/13 86/17 88/8 89/12 91/12 91/17 97/12 110/24 112/17 114/12 130/24 137/5 138/6 153/9 163/13 166/17 177/10 178/17 181/24 182/4 186/4 192/14 198/17 201/11 211/16 212/23 213/10 214/25 <b>makers [3]</b> 68/5 94/15 94/25 <b>makes [5]</b> 13/6 195/13 195/14 214/24 214/24 <b>making [27]</b> 12/24 21/20 26/1 37/5 40/14 59/21 76/12 76/18 86/1 90/8 96/21 98/5 99/1 99/12 99/15 103/8 111/14 112/11 117/12 128/21 129/13 163/25 165/7 165/11 167/21 177/11 189/8 <b>man [1]</b> 63/21 <b>manage [1]</b> 212/18 <b>manageable [1]</b> 50/3 <b>managed [1]</b> 212/16 <b>management [1]</b> 120/6 <b>manager [1]</b> 7/9
----------	--	--	--	---

<b>M</b>	<b>matters [13]</b> 7/17 8/15 22/4 22/6 37/5 37/14 46/23 86/21 117/20 129/19 159/16 197/21 197/23	151/16 157/2 158/20 158/22 159/19 166/5 166/9 168/8 171/22 171/22 173/18 179/4 180/10 184/5 184/6 186/5 191/19 193/12 198/3 211/6 211/24 213/5	61/2 63/16 64/14 77/9 99/9 99/13 103/2 103/21 123/15 131/24 132/4 132/5 132/12 143/9 144/3 148/12 150/22 151/13 151/20 155/20 160/4 161/3 161/3 161/6 161/7 163/22 166/21 170/24 173/11 174/18 174/20 176/21 185/18 185/19 186/12 186/14 190/11 190/23 191/14	<b>mid-March [3]</b> 33/8 74/6 127/13 <b>mid-point [3]</b> 53/22 54/1 54/2 <b>middle [8]</b> 46/17 57/13 132/24 136/19 137/3 137/7 171/15 185/17 <b>might [39]</b> 23/2 23/10 37/23 40/6 48/9 48/10 50/5 50/20 54/13 54/18 62/7 67/8 68/11 78/20 88/8 89/12 93/16 102/1 106/4 114/22 116/25 123/6 125/8 126/24 128/11 131/2 136/11 146/5 151/12 152/5 156/5 161/20 166/1 171/13 178/22 184/20 188/16 194/11 210/3 <b>MIGs [1]</b> 12/12 <b>mild [1]</b> 144/5 <b>milder [1]</b> 56/16 <b>mildly [1]</b> 160/8 <b>millstone [1]</b> 93/1 <b>mind [12]</b> 68/23 79/11 106/24 113/2 115/6 130/24 131/8 135/6 145/25 152/14 177/22 180/7 <b>mindful [5]</b> 177/17 187/25 190/20 191/9 191/13 <b>mine [3]</b> 73/21 210/14 211/16 <b>minimal [5]</b> 21/4 30/12 151/6 158/6 204/18 <b>minimalist [1]</b> 109/12 <b>minister [27]</b> 6/15 12/16 18/21 25/19 28/2 63/18 64/9 66/16 67/16 74/5 94/16 95/11 95/17 96/5 97/1 97/22 98/19 99/4 99/7 123/16 131/10 131/12 143/5 155/1 161/7 161/16 162/20 <b>ministerial [5]</b> 10/14 62/18 98/21 130/16 155/21 <b>ministers [50]</b> 6/15 18/22 19/15 19/22 21/21 26/15 27/13 35/22 35/23 47/17 50/24 51/2 51/2 54/1 54/9 57/14 59/13 61/16 62/2 62/17 64/2 64/5 64/7 64/9 64/14 67/8 68/6 68/15 73/24 74/5 76/13 88/22 89/14 90/7 90/11 90/13 91/10 91/25
<b>managerial [1]</b> 6/12 <b>mandatory [4]</b> 54/14 57/2 58/10 89/8 <b>mantra [1]</b> 92/20 <b>many [49]</b> 5/5 11/9 13/21 14/19 15/21 19/14 32/10 38/25 44/5 48/22 49/2 49/20 51/11 57/16 58/22 60/22 60/24 62/17 63/24 63/24 69/2 74/19 74/25 75/24 75/25 77/4 86/23 88/9 91/9 92/10 95/23 98/2 98/21 119/11 119/16 122/11 125/4 126/5 134/19 140/3 147/22 147/24 148/1 150/11 159/14 179/13 189/10 194/8 211/5 <b>March [37]</b> 4/10 4/17 10/4 23/22 23/25 24/1 25/18 25/19 26/24 28/7 33/8 57/14 74/3 74/6 76/6 76/15 81/20 83/25 126/6 126/17 127/13 128/16 128/25 140/2 185/20 186/6 186/12 186/12 188/8 188/9 193/3 197/16 197/18 199/7 207/8 211/7 211/20 <b>March 2020 [1]</b> 4/10 <b>marginally [1]</b> 111/23 <b>market [1]</b> 73/6 <b>market-sensitive [1]</b> 73/6 <b>mass [9]</b> 187/20 187/23 188/1 188/3 188/24 189/16 189/18 190/6 190/13 <b>massive [19]</b> 153/3 154/13 154/13 154/20 154/21 154/22 155/15 156/1 156/14 162/11 166/3 166/7 167/4 168/5 171/15 173/17 180/3 187/8 191/15 <b>massively [1]</b> 122/10 <b>masters [1]</b> 2/8 <b>match [2]</b> 189/4 189/5 <b>material [9]</b> 29/1 120/22 135/5 156/4 157/9 167/12 189/22 202/1 203/25 <b>materially [1]</b> 214/7 <b>matter [15]</b> 6/22 24/3 25/1 39/22 58/5 72/15 88/10 96/24 98/1 117/10 117/22 118/23 173/20 206/20 207/10	<b>maverick [1]</b> 163/7 <b>maximalist [1]</b> 59/10 <b>maximum [2]</b> 49/16 182/13 <b>may [51]</b> 1/8 4/4 32/15 46/21 51/20 54/10 68/13 82/13 82/14 82/15 82/15 85/12 86/7 95/3 97/8 98/16 103/6 110/5 110/10 113/1 125/1 127/12 130/19 132/20 147/13 159/15 161/19 166/19 171/9 172/13 175/2 176/6 177/8 177/9 180/4 184/24 184/24 185/2 188/22 188/23 202/5 203/9 204/16 210/6 210/7 210/8 212/17 213/5 214/18 214/19 214/25 <b>maybe [10]</b> 35/14 51/1 57/10 134/20 135/2 138/23 163/3 190/17 200/21 210/7 <b>MBA [1]</b> 2/9 <b>me [48]</b> 5/23 6/3 9/21 19/17 22/24 24/7 24/12 52/22 53/1 58/23 62/17 63/20 67/17 68/13 71/21 77/7 77/8 84/8 87/22 87/23 90/17 93/24 101/19 110/24 111/7 114/4 121/22 141/17 142/12 146/7 154/17 157/6 165/16 165/21 166/23 167/12 168/14 170/17 182/23 191/25 194/8 195/21 203/22 203/23 203/25 204/2 204/3 211/10 <b>mealy [1]</b> 168/14 <b>mealy-mouthed [1]</b> 168/14 <b>mean [66]</b> 5/22 6/1 18/13 26/13 30/18 30/19 34/19 35/13 38/24 39/14 47/3 48/16 51/8 54/25 56/1 61/18 61/18 68/19 70/1 70/2 71/6 72/20 79/4 81/6 85/14 90/2 92/22 97/9 97/10 100/12 100/24 103/23 108/4 112/24 115/16 121/1 133/18 134/6 139/9 144/3 145/22 145/23 146/15 147/14	51/16 157/2 158/20 158/22 159/19 166/5 166/9 168/8 171/22 171/22 173/18 179/4 180/10 184/5 184/6 186/5 191/19 193/12 198/3 211/6 211/24 213/5 <b>meaning [1]</b> 101/9 <b>means [5]</b> 10/8 115/18 134/6 154/14 193/3 <b>meant [9]</b> 19/19 66/19 71/17 75/12 76/9 101/14 106/20 106/20 138/25 <b>measured [1]</b> 148/17 <b>measures [26]</b> 48/10 78/20 78/21 82/3 115/8 136/11 138/19 142/3 145/24 146/2 146/4 147/6 148/6 148/13 149/7 149/8 150/24 151/4 151/18 152/11 152/13 177/20 209/16 209/18 212/21 214/9 <b>meat [1]</b> 124/12 <b>mechanics [1]</b> 9/12 <b>mechanism [11]</b> 43/18 44/14 47/13 49/1 53/3 53/7 63/2 63/22 67/5 71/23 142/17 <b>mechanisms [4]</b> 49/3 53/3 56/8 62/15 <b>media [4]</b> 53/12 62/14 79/13 85/4 <b>medical [54]</b> 2/5 2/9 2/15 3/3 3/8 3/21 3/22 3/23 3/25 6/6 6/6 6/8 7/1 7/14 7/25 8/1 8/5 8/7 8/10 8/11 8/11 9/9 10/19 10/21 12/5 13/20 14/8 24/18 25/9 25/13 26/10 32/2 33/10 34/8 34/23 37/1 37/3 38/21 39/8 47/21 50/22 112/23 119/12 153/5 162/18 170/17 174/21 176/2 177/4 178/20 180/19 199/5 200/21 204/2 <b>medicine [12]</b> 2/4 2/10 2/13 16/14 79/1 80/2 117/18 117/22 173/23 183/15 188/10 188/15 <b>meet [9]</b> 8/1 12/18 13/19 13/22 66/10 106/14 118/24 121/10 121/18 <b>meeting [43]</b> 13/25 25/19 25/21 49/18	61/2 63/16 64/14 77/9 99/9 99/13 103/2 103/21 123/15 131/24 132/4 132/5 132/12 143/9 144/3 148/12 150/22 151/13 151/20 155/20 160/4 161/3 161/3 161/6 161/7 163/22 166/21 170/24 173/11 174/18 174/20 176/21 185/18 185/19 186/12 186/14 190/11 190/23 191/14 <b>meetings [40]</b> 12/7 12/11 12/13 12/13 12/15 13/8 14/12 14/14 16/7 16/8 16/11 16/12 16/16 16/23 25/17 39/23 40/1 43/5 45/10 62/19 68/17 68/20 71/3 71/5 93/10 93/18 98/10 98/11 98/14 98/22 99/16 100/5 132/1 145/6 155/20 155/21 163/8 173/14 173/21 185/17 <b>meets [3]</b> 144/4 144/5 144/6 <b>member [1]</b> 17/17 <b>members [11]</b> 36/21 45/8 46/4 50/13 54/25 59/8 67/1 68/20 69/16 85/6 180/4 <b>membership [6]</b> 45/6 48/5 48/17 50/11 50/12 51/22 <b>memory [8]</b> 32/4 98/24 106/17 140/2 173/24 180/13 207/14 210/21 <b>mental [1]</b> 30/20 <b>mentioned [2]</b> 66/12 181/21 <b>merely [1]</b> 28/5 <b>merits [1]</b> 149/6 <b>MERS [3]</b> 41/19 102/1 138/11 <b>message [2]</b> 188/24 189/15 <b>messages [2]</b> 10/16 167/16 <b>messaging [1]</b> 36/7 <b>met [14]</b> 12/22 13/21 35/6 36/5 39/5 40/2 52/23 106/14 107/1 113/3 145/15 154/2 155/1 163/9 <b>metre [1]</b> 10/23 <b>MI5 [2]</b> 163/16 169/5 <b>mid [9]</b> 33/8 33/10 53/22 54/1 54/2 58/11 74/6 127/13 127/13 <b>mid-February [3]</b> 33/10 58/11 127/13	

<b>M</b>	82/8 82/12 82/14 83/6 83/9 83/17 87/19 119/9 121/20	61/5 64/7 64/9 64/11 65/8 71/10 72/5 73/15 74/25 79/14 80/19 80/22 81/14 82/6 83/11 84/6 84/24 95/17 105/8 105/22 108/5 109/9 109/9 111/19 115/19 119/5 119/11 121/3 128/9 137/1 153/17 156/5 156/8 168/1 168/25 175/22 176/15 176/18 177/11 179/18 185/8 187/13 187/13 194/2 194/3 194/3 194/3 195/17 198/1 199/23 200/8 203/19 206/18 210/2 210/11 213/17 214/6	<b>Mr Keith's [1]</b> 64/1 <b>MRC [1]</b> 4/15 <b>Ms [1]</b> 96/9 <b>Ms Liz Truss [1]</b> 96/9 <b>much [44]</b> 10/1 16/22 18/3 25/5 27/13 40/14 42/1 44/20 51/3 51/19 56/16 61/4 72/5 74/11 74/11 75/2 77/19 81/8 81/14 85/15 95/18 108/18 117/8 117/9 119/5 119/12 121/22 131/12 136/25 148/16 150/15 158/17 162/10 162/25 173/8 176/15 182/16 185/8 200/7 202/23 203/19 207/23 208/16 215/11 <b>multilateral [2]</b> 16/2 16/12 <b>multiple [18]</b> 14/22 15/19 20/3 39/12 51/4 79/16 95/21 107/16 155/19 157/25 157/25 174/4 174/5 197/19 201/7 209/18 211/5 211/15 <b>multiples [1]</b> 134/7 <b>multitude [3]</b> 12/15 42/9 71/2 <b>must [22]</b> 18/8 20/10 41/10 42/11 72/16 76/21 76/23 85/9 85/9 89/6 89/7 89/8 89/9 89/17 89/18 93/4 97/19 125/2 134/10 156/2 199/5 211/21 <b>my [184]</b> 1/4 5/22 7/6 11/9 15/12 17/24 18/1 18/5 19/8 19/10 19/11 19/22 20/16 21/7 21/20 22/10 22/13 22/25 24/22 25/2 25/6 26/2 26/2 26/6 26/14 27/13 27/22 28/12 32/7 32/12 32/24 34/1 34/5 34/6 34/9 39/11 42/23 42/23 44/10 50/9 55/16 56/14 59/6 60/19 61/12 63/21 65/22 66/3 67/6 67/24 70/12 71/21 73/10 73/17 73/22 77/21 80/5 81/11 83/7 85/14 85/24 87/18 89/5 90/13 90/16 90/22 91/2 94/13 94/15 94/19 94/23 95/1 96/3 96/4 96/20 96/24 97/14 98/24 99/16 99/20 100/24 102/11 103/10 103/23 105/4 107/3 110/5 112/12 112/12 112/20 113/10	113/15 116/12 116/12 117/24 118/5 118/5 118/6 120/5 121/3 121/10 121/19 121/25 122/11 122/16 122/23 124/14 124/23 124/25 125/19 126/2 126/12 127/10 127/17 128/14 128/25 136/22 140/17 142/12 142/12 144/21 148/25 149/3 149/3 152/7 152/25 154/23 156/5 158/10 159/7 162/22 164/4 164/7 164/16 166/9 166/10 169/6 170/3 170/12 170/24 170/25 171/7 172/6 172/16 172/24 173/10 180/13 180/22 182/20 184/4 184/5 192/1 194/17 194/22 195/11 195/18 196/22 196/24 197/4 197/12 198/10 198/16 201/24 201/25 202/16 203/18 203/20 203/25 204/3 205/24 206/7 208/5 208/16 209/8 210/17 210/18 210/24 211/2 211/13 211/16 213/23 213/25 213/25 215/9 <b>my Lady [5]</b> 1/4 96/24 172/24 173/10 215/9 <b>myself [2]</b> 11/16 17/19
<b>ministers... [12]</b> 92/20 93/21 94/3 95/6 96/14 99/3 123/18 128/23 129/14 129/21 143/4 164/13 <b>ministers' [1]</b> 68/9 <b>minor [2]</b> 58/8 60/17 <b>minuses [1]</b> 44/18 <b>minute [5]</b> 40/6 40/7 64/13 64/15 68/21 <b>minuted [3]</b> 40/1 99/14 208/18 <b>minutes [30]</b> 17/2 17/21 58/13 60/9 60/11 60/16 62/1 63/13 63/15 63/20 64/2 64/3 64/4 64/24 65/13 65/15 65/15 65/24 66/3 66/5 66/24 67/2 69/19 70/11 70/16 98/21 98/24 98/25 99/15 99/19 <b>minutes in [1]</b> 99/15 <b>misleading [3]</b> 195/11 213/9 214/8 <b>misremember [2]</b> 210/14 210/15 <b>misremembering [1]</b> 211/12 <b>misrepresented [1]</b> 66/4 <b>missing [2]</b> 20/1 156/4 <b>misunderstand [1]</b> 158/24 <b>misunderstanding</b> <b>[5]</b> 65/11 183/16 186/23 210/25 211/12 <b>misunderstandings</b> <b>[1]</b> 53/9 <b>misunderstands [1]</b> 30/8 <b>misunderstood [2]</b> 71/18 124/7 <b>mitigate [8]</b> 124/7 128/18 137/12 178/5 186/3 198/9 205/8 211/24 <b>mitigated [1]</b> 195/12 <b>mitigates [1]</b> 201/13 <b>mitigating [1]</b> 196/20 <b>mitigation [4]</b> 65/9 66/12 129/19 192/18 <b>mitigations [2]</b> 82/14 82/16 <b>mixed [1]</b> 95/18 <b>mobilisation [3]</b> 46/24 48/12 49/9 <b>model [21]</b> 18/1 59/10 74/18 77/7 78/5 78/10 78/13 78/14 78/18 80/12 81/1 81/2	<b>model-derived [1]</b> 78/5 <b>modelled [2]</b> 55/25 77/24 <b>modellers [10]</b> 45/8 48/6 50/14 74/17 75/6 77/10 77/13 80/8 205/15 206/16 <b>modelling [42]</b> 46/7 47/2 55/17 55/18 55/20 74/1 74/2 74/12 75/7 75/18 75/23 76/23 77/1 77/6 77/16 77/19 77/25 78/18 79/5 79/8 79/9 79/11 79/16 79/20 79/22 79/25 80/16 80/17 81/5 82/22 83/7 84/23 121/17 155/23 184/4 195/10 205/13 205/24 206/2 206/15 213/6 214/1 <b>models [24]</b> 74/9 74/19 75/3 75/7 75/8 75/9 75/16 77/21 78/6 78/11 80/6 80/9 80/18 80/20 82/7 82/11 82/12 82/21 83/12 205/16 208/6 208/22 210/24 211/1 <b>moderate [2]</b> 55/14 137/4 <b>Module [1]</b> 165/3 <b>Module 1 [1]</b> 165/3 <b>moment [11]</b> 3/17 12/17 17/10 42/4 75/16 126/16 137/3 172/15 184/16 191/9 200/24 <b>momentous [4]</b> 86/3 92/19 96/22 130/20 <b>money [3]</b> 31/15 32/19 33/4 <b>monitor [1]</b> 110/11 <b>month [3]</b> 104/17 107/17 123/23 <b>monthly [1]</b> 142/15 <b>months [8]</b> 9/13 27/20 53/21 74/21 92/10 134/7 191/12 211/9 <b>morbid [2]</b> 122/12 182/15 <b>morbidity [1]</b> 157/22 <b>more [83]</b> 3/23 5/5 11/5 11/5 15/15 16/22 18/16 19/7 20/6 20/12 27/13 29/4 30/17 32/5 34/24 39/6 42/2 44/22 45/2 47/18 52/3 52/5 52/9 52/9 55/15 57/9	<b>mortality [20]</b> 5/9 5/15 10/22 23/9 23/18 23/23 88/9 88/11 101/14 101/24 118/25 121/5 121/13 134/21 135/24 136/4 157/22 158/2 158/4 183/7 <b>most [27]</b> 2/19 3/3 4/1 15/25 17/2 36/12 38/10 40/9 40/10 44/8 45/18 55/3 55/3 64/7 67/16 74/17 99/6 99/8 130/6 132/1 132/2 140/16 175/22 180/14 184/1 187/12 201/17 <b>mouthed [1]</b> 168/14 <b>move [11]</b> 65/14 90/3 90/14 112/21 120/16 142/23 157/6 157/8 179/20 193/21 203/21 <b>moved [8]</b> 88/17 101/15 102/11 124/15 158/17 159/6 165/17 175/22 <b>movement [2]</b> 153/23 183/23 <b>moving [7]</b> 34/10 40/19 71/12 114/9 114/10 124/18 157/7 <b>Mr [16]</b> 1/3 5/21 60/6 64/1 66/21 67/6 67/11 67/12 96/7 96/7 97/6 112/16 118/14 172/4 173/7 204/6 <b>Mr Corbyn [1]</b> 96/7 <b>Mr Cummings [4]</b> 66/21 67/11 67/12 172/4 <b>Mr Cummings' [1]</b> 67/6 <b>Mr Johnson [2]</b> 96/7 97/6 <b>Mr Keith [7]</b> 1/3 5/21 60/6 112/16 118/14 173/7 204/6	<b>name [1]</b> 201/24 <b>narcissism [1]</b> 20/14 <b>narrative [2]</b> 37/15 37/15 <b>narratives [1]</b> 177/15 <b>narrow [8]</b> 26/16 44/22 54/4 56/16 68/13 68/14 106/3 110/24 <b>narrowed [1]</b> 159/11 <b>narrower [1]</b> 77/20 <b>narrowly [2]</b> 168/2 168/25 <b>nation [1]</b> 118/23 <b>national [16]</b> 3/15 10/16 53/22 87/23 154/25 161/10 161/11 164/3 165/13 166/2 166/12 166/15 167/23 169/7 169/21 169/22 <b>national/local [1]</b> 10/16 <b>nationally [2]</b> 126/24 127/8 <b>nations [19]</b> 6/23 7/4 35/7 35/10 35/16 36/2	

<b>N</b>	150/5 175/3 <b>Neil [1]</b> 206/23 <b>neither [2]</b> 93/23 167/15 <b>NERVTAG [3]</b> 103/2 103/3 187/21 <b>nettle [1]</b> 129/21 <b>network [1]</b> 44/13 <b>never [13]</b> 31/16 33/5 63/22 77/16 84/18 88/13 89/5 112/5 138/7 138/15 151/19 153/25 185/1 <b>nevertheless [4]</b> 26/18 133/13 133/14 172/11 <b>new [7]</b> 15/21 37/12 104/21 126/1 158/16 164/1 164/3 <b>New Zealand [1]</b> 15/21 <b>news [2]</b> 9/15 163/12 <b>newspapers [2]</b> 58/2 155/3 <b>next [12]</b> 19/16 37/17 128/1 133/22 139/6 153/1 154/23 154/25 156/6 156/20 163/22 209/23 <b>next week [1]</b> 153/1 <b>NHS [20]</b> 2/2 2/4 8/2 23/11 37/13 40/12 42/7 48/13 57/14 66/14 74/7 76/2 81/24 119/10 119/11 119/16 125/5 126/20 146/11 146/17 <b>NHS trusts [2]</b> 125/5 126/20 <b>nicely [1]</b> 78/2 <b>night [1]</b> 135/1 <b>NIHR [8]</b> 3/18 3/19 3/20 4/8 4/10 5/2 5/18 124/15 <b>no [91]</b> 22/10 29/8 30/12 30/16 36/9 51/24 52/14 58/12 65/5 69/19 70/18 70/18 72/13 84/1 87/8 87/16 91/16 91/24 92/5 94/10 94/10 94/12 96/16 97/15 100/3 103/4 103/20 106/6 115/18 116/15 116/17 117/6 118/22 123/6 125/4 125/7 127/7 128/21 131/19 135/5 137/14 138/9 139/16 141/15 146/8 147/19 149/13 149/18 150/9 150/9 155/7 155/12 157/3 157/3 157/3 158/9 158/22 158/24 158/24 158/24	159/24 160/21 168/12 170/4 170/11 180/16 180/18 182/2 182/8 192/13 192/13 192/14 195/13 195/14 197/20 199/25 200/12 200/14 201/17 201/19 202/2 203/6 203/15 205/13 206/12 207/15 209/8 212/15 213/5 213/20 214/20 <b>no one [2]</b> 155/7 155/12 <b>No10 [2]</b> 162/7 186/6 <b>nobody [4]</b> 65/15 166/5 172/12 183/13 <b>nomenclature [1]</b> 132/14 <b>non [7]</b> 21/24 49/10 109/7 207/3 208/1 209/13 209/25 <b>non-pharmaceutical [4]</b> 21/24 49/10 209/13 209/25 <b>non-trivial [1]</b> 109/7 <b>none [3]</b> 126/21 152/22 159/5 <b>nor [4]</b> 22/10 94/18 109/16 167/15 <b>normal [2]</b> 8/24 194/4 <b>normality [2]</b> 189/23 189/24 <b>normally [1]</b> 144/9 <b>normative [2]</b> 139/23 141/6 <b>not [331]</b> <b>not a [1]</b> 73/20 <b>notable [1]</b> 74/4 <b>note [3]</b> 31/3 154/5 186/13 <b>noted [4]</b> 44/24 103/3 160/5 209/1 <b>notes [2]</b> 25/20 98/9 <b>nothing [9]</b> 34/11 90/8 120/8 127/20 139/14 178/2 182/9 200/5 203/19 <b>notice [1]</b> 41/25 <b>noting [1]</b> 125/12 <b>notion [8]</b> 30/3 54/13 54/18 57/1 58/19 180/5 196/13 210/4 <b>novel [3]</b> 108/14 109/25 174/2 <b>November [2]</b> 1/1 215/15 <b>Novichok [1]</b> 3/1 <b>now [48]</b> 21/7 27/19 27/21 28/4 35/3 43/12 45/25 57/24 78/13 79/9 85/25 89/3 97/8 99/25 106/1 106/2 107/8 109/8 110/10	112/2 113/12 115/14 115/24 116/13 120/3 123/14 134/23 145/14 150/2 156/20 157/2 163/5 163/6 163/10 163/13 170/5 170/8 172/18 175/16 176/17 179/18 187/16 188/21 193/5 207/20 207/25 213/18 214/17 <b>nowhere [1]</b> 155/22 <b>NPIs [3]</b> 25/8 55/24 159/24 <b>nuanced [1]</b> 18/8 <b>nub [1]</b> 82/11 <b>number [78]</b> 2/16 4/19 7/2 12/7 13/19 16/7 23/9 23/10 27/17 36/12 39/23 42/3 44/12 44/23 46/18 46/21 48/6 48/8 49/18 55/23 63/8 66/23 67/2 70/8 73/12 77/2 77/3 77/24 80/11 80/11 80/24 81/23 82/3 82/17 88/11 90/25 95/5 98/7 102/14 108/10 108/16 112/2 113/15 114/21 120/7 122/14 133/8 135/13 136/8 141/14 142/14 142/18 143/3 147/16 151/17 159/5 159/16 159/21 159/23 161/8 164/13 164/14 169/2 170/2 171/18 173/14 173/16 174/10 181/6 182/13 184/8 185/5 186/22 196/1 196/9 197/2 197/3 207/14 <b>number 1 [1]</b> 108/10 <b>Number 10 [17]</b> 63/8 66/23 67/2 70/8 95/5 98/7 113/15 135/13 136/8 141/14 142/14 142/18 143/3 159/5 169/2 170/2 171/18 <b>number 3 [1]</b> 133/8 <b>numbers [32]</b> 47/5 47/18 52/21 63/5 74/6 74/24 76/16 76/17 76/19 76/21 76/22 77/24 80/8 82/12 114/6 119/11 122/19 153/19 153/24 158/13 158/17 158/23 159/7 179/16 179/16 179/21 179/22 186/22 189/3 205/16 207/15 208/8 <b>numerous [1]</b> 185/19 <b>nurses [1]</b> 40/13	<b>obligation [1]</b> 23/8 <b>observe [2]</b> 97/4 166/19 <b>observed [1]</b> 18/25 <b>observers [3]</b> 63/6 63/25 65/11 <b>obvious [20]</b> 11/13 30/15 39/22 43/17 50/15 74/15 77/8 86/3 102/14 104/21 104/22 108/6 108/17 109/14 109/16 111/21 112/8 131/15 157/10 189/14 <b>obviously [30]</b> 26/19 29/21 31/18 35/7 35/13 35/14 35/24 45/25 48/14 61/25 94/10 95/5 98/6 110/3 114/21 116/17 120/19 122/24 124/14 125/2 126/20 137/8 155/18 169/13 170/2 173/19 178/6 188/21 204/15 204/17 <b>occasion [2]</b> 16/3 72/20 <b>Occasionally [1]</b> 16/25 <b>occasions [6]</b> 60/23 62/13 117/17 117/24 173/16 197/3 <b>occur [8]</b> 26/14 29/13 63/18 82/13 85/8 93/4 123/13 127/4 <b>occurred [6]</b> 55/9 63/23 81/19 162/22 192/16 196/23 <b>occurring [4]</b> 105/9 105/10 110/2 181/14 <b>October [1]</b> 3/4 <b>off [11]</b> 43/1 45/21 55/5 104/8 119/6 120/11 153/19 168/20 184/24 186/1 193/20 <b>office [17]</b> 2/23 10/19 10/20 11/16 63/9 66/23 67/1 70/5 70/6 70/7 113/10 161/23 169/2 170/3 170/9 170/12 172/22 <b>Officer [19]</b> 3/4 3/8 6/6 6/6 7/14 8/11 10/20 50/22 112/24 162/19 170/18 174/21 176/2 177/4 178/20 180/19 199/5 200/22 204/2 <b>officers [4]</b> 8/10 10/21 37/2 37/3 <b>offices [1]</b> 172/3 <b>official [2]</b> 142/20 179/14 <b>officially [1]</b> 7/9 <b>officials [7]</b> 6/17
----------	---	---	--	---

<b>O</b>	<b>ones [20]</b> 78/11 78/12 86/15 107/11 107/21 107/22 109/4 119/5 124/18 130/16 135/15 143/22 144/22 145/1 145/10 157/5 160/2 164/8 197/3 210/21 <b>ongoing [1]</b> 134/4 <b>only [44]</b> 16/16 16/16 22/8 23/23 24/14 25/6 27/4 44/20 45/22 47/15 47/23 48/3 48/19 48/24 49/1 51/2 51/2 51/21 64/25 66/9 79/17 79/18 81/12 82/8 86/15 88/3 92/20 102/21 105/7 108/16 109/10 133/12 135/15 152/11 161/13 169/24 174/4 175/10 196/5 200/17 204/3 204/4 206/9 213/23 <b>onward [3]</b> 71/25 205/9 206/6 <b>onwards [5]</b> 26/6 39/24 76/6 115/10 123/11 <b>open [7]</b> 63/15 67/10 85/13 87/1 156/18 188/25 190/6 <b>opened [1]</b> 68/12 <b>opening [1]</b> 10/13 <b>openly [2]</b> 87/13 155/25 <b>operate [3]</b> 169/25 170/1 206/10 <b>operated [3]</b> 34/4 68/4 95/12 <b>operating [1]</b> 143/6 <b>operation [2]</b> 24/14 24/16 <b>operational [1]</b> 39/16 <b>operationally [1]</b> 41/1 <b>operations [1]</b> 127/22 <b>opine [1]</b> 186/6 <b>opining [1]</b> 89/10 <b>opinion [26]</b> 11/7 13/2 17/5 17/19 36/25 36/25 37/13 38/5 60/15 60/15 61/24 62/9 62/12 62/16 62/20 66/24 67/4 71/8 87/18 89/6 92/21 144/13 149/1 149/3 149/4 171/5 <b>opinions [7]</b> 35/19 53/12 60/15 61/10 61/17 62/10 69/5 <b>opportunity [5]</b> 68/5 153/2 165/17 203/16 203/23	<b>opposed [12]</b> 22/2 23/18 46/25 74/9 82/25 84/13 113/9 143/18 160/11 165/6 192/19 194/12 <b>opposing [1]</b> 80/21 <b>opposite [1]</b> 135/19 <b>opposition [2]</b> 96/6 155/3 <b>optimism [1]</b> 184/25 <b>optimistic [2]</b> 120/12 174/6 <b>option [4]</b> 57/6 62/11 91/16 92/9 <b>options [6]</b> 26/15 26/20 27/18 75/10 92/6 92/6 <b>or [248]</b> <b>oral [1]</b> 172/1 <b>ordained [1]</b> 83/1 <b>order [8]</b> 51/22 54/14 57/2 91/9 142/21 180/2 181/7 181/8 <b>ordered [1]</b> 123/18 <b>orders [1]</b> 86/4 <b>ordinary [5]</b> 8/18 8/24 43/10 155/10 177/5 <b>ordination [1]</b> 9/21 <b>organisation [8]</b> 13/23 13/24 14/15 100/18 134/18 139/23 163/10 203/1 <b>organisations [1]</b> 4/15 <b>organise [1]</b> 14/15 <b>original [1]</b> 15/14 <b>originally [1]</b> 181/9 <b>oscillation [3]</b> 97/3 97/24 98/18 <b>other [114]</b> 2/16 5/5 6/17 6/23 8/20 11/14 12/15 14/3 14/4 14/7 15/18 16/3 16/9 17/18 18/22 20/20 25/9 27/2 27/3 31/8 31/9 32/15 32/20 32/22 35/7 35/10 36/1 36/7 37/7 37/8 39/16 40/1 42/3 42/15 42/16 43/20 44/4 45/9 45/13 46/5 47/19 47/20 49/2 49/22 49/24 50/20 53/4 55/7 58/13 61/11 62/20 64/15 65/10 66/13 66/14 80/17 83/25 90/15 91/4 91/13 94/8 94/10 94/12 95/19 95/21 95/23 95/23 98/2 102/19 107/11 107/14 107/16 109/17 110/22 116/22 117/22 118/23 122/6 128/3 134/19	138/19 142/8 148/16 148/21 151/1 151/17 151/22 152/13 152/15 154/9 154/10 158/24 159/8 159/23 162/19 164/16 167/25 169/2 173/20 184/2 187/17 188/17 189/10 191/20 194/22 195/9 197/3 197/5 201/2 208/3 208/12 208/16 208/19 211/15 <b>other's [1]</b> 37/22 <b>others [26]</b> 23/3 24/7 29/4 37/23 38/25 40/13 41/15 45/24 46/1 57/16 64/11 64/20 68/25 79/14 100/9 124/5 131/9 148/1 149/1 150/3 159/14 164/14 171/4 171/16 191/25 210/14 <b>otherwise [4]</b> 17/25 60/1 78/14 97/22 <b>ought [1]</b> 72/25 <b>ounce [1]</b> 215/2 <b>our [37]</b> 2/19 4/5 15/9 15/16 18/19 24/7 36/23 37/11 37/13 38/5 44/3 44/12 49/22 52/6 54/8 61/16 64/11 64/12 68/15 90/8 90/12 90/14 92/23 93/1 95/22 104/3 150/5 150/16 154/15 156/23 161/17 170/5 191/25 192/1 199/4 208/9 213/24 <b>ourselves [1]</b> 40/24 <b>out [80]</b> 13/17 15/3 18/20 20/9 24/15 25/2 26/10 26/25 29/2 31/8 32/9 50/8 55/6 59/3 62/5 65/21 75/4 77/2 77/3 77/5 78/2 78/7 80/5 99/10 99/11 102/20 107/21 108/12 108/15 108/21 109/5 109/9 116/21 119/20 124/10 125/20 126/18 128/6 129/9 134/3 135/21 135/22 137/13 137/20 139/3 139/22 140/13 146/11 150/2 154/11 154/12 154/24 155/16 156/6 160/7 160/11 171/16 171/18 171/23 178/19 192/15 194/18 195/6 196/1 199/12 199/15 199/22 200/13 200/19 201/1 201/22 201/25 202/9 202/10 202/14 202/24 203/24 206/22 208/15	209/16 <b>outbreak [15]</b> 77/12 103/25 104/9 104/13 105/16 107/14 108/18 120/23 133/12 135/18 175/18 175/19 176/25 180/24 180/25 <b>outbreaks [4]</b> 107/3 107/16 118/20 174/3 <b>outcome [13]</b> 89/7 90/9 111/8 111/11 111/23 126/8 164/21 172/9 182/8 184/6 184/6 184/23 208/1 <b>outcomes [5]</b> 78/19 84/23 89/11 92/2 92/17 <b>outdoor [2]</b> 188/11 189/9 <b>outlier [2]</b> 53/12 61/17 <b>outline [2]</b> 119/1 204/21 <b>outplaying [1]</b> 212/23 <b>output [3]</b> 17/3 131/16 195/10 <b>outputs [2]</b> 81/5 87/19 <b>outrage [1]</b> 165/5 <b>outs [1]</b> 98/10 <b>outside [6]</b> 109/3 109/4 139/18 143/23 175/7 176/13 <b>outstanding [2]</b> 45/15 162/16 <b>outwith [3]</b> 68/20 68/21 116/11 <b>over [43]</b> 10/15 10/18 12/12 22/22 25/3 25/12 32/3 34/23 38/1 41/24 53/21 55/10 55/11 56/7 58/1 58/25 74/2 74/18 99/21 104/16 109/10 119/18 119/21 119/22 123/23 127/24 131/18 134/7 137/14 141/14 151/11 154/23 154/25 155/3 158/13 159/22 163/11 174/24 175/8 189/4 190/4 196/6 212/17 <b>overall [8]</b> 5/17 5/22 5/25 6/3 33/15 33/18 147/12 174/15 <b>overarching [4]</b> 17/10 124/4 192/10 196/9 <b>overcalling [1]</b> 20/2 <b>overcomplicate [1]</b> 195/17 <b>overnight [1]</b> 198/20 <b>overreact [1]</b> 26/22 <b>overreacting [2]</b>
----------	--	--	--	--

<p><b>O</b></p> <p><b>overreacting... [2]</b> 25/21 26/25</p> <p><b>overreaction [7]</b> 25/18 28/6 28/10 29/3 29/9 32/17 33/6</p> <p><b>overseas [1]</b> 14/3</p> <p><b>overstate [1]</b> 19/4</p> <p><b>overstated [1]</b> 188/22</p> <p><b>Overview [1]</b> 211/19</p> <p><b>overwhelmed [2]</b> 57/15 134/21</p> <p><b>overwhelming [1]</b> 106/1</p> <p><b>own [22]</b> 14/5 17/24 19/8 19/24 51/22 63/21 66/4 70/22 85/14 106/7 106/8 113/10 137/9 140/21 140/21 151/11 155/14 194/24 203/3 203/7 203/14 208/22</p> <p><b>ownership [1]</b> 189/12</p> <p><b>Oxford [2]</b> 2/7 4/21</p> <p><b>Oxford-AstraZeneca [1]</b> 4/21</p> <p><b>oxygen [2]</b> 5/13 5/16</p>	<p><b>pan [2]</b> 20/9 120/20</p> <p><b>pandemic [97]</b> 1/23 3/11 3/13 4/10 4/12 4/18 5/20 8/22 9/1 9/4 9/13 11/3 12/19 13/1 13/10 13/12 13/18 14/5 14/6 21/6 31/7 34/14 34/24 37/16 37/18 39/16 42/17 42/19 44/2 45/13 48/5 48/9 49/6 50/18 53/19 53/21 56/16 56/17 71/12 74/20 84/1 85/10 99/17 104/11 104/15 105/16 105/20 106/5 110/6 110/22 111/2 118/18 118/24 120/1 120/9 120/9 121/4 121/13 121/16 121/19 122/16 123/3 123/12 127/3 137/2 137/9 138/8 138/15 138/21 139/1 140/1 140/1 140/19 141/11 141/15 141/18 158/5 162/21 162/22 164/1 164/2 175/24 176/19 176/24 179/19 181/25 183/6 192/10 193/11 198/6 203/2 204/23 205/10 207/25 208/3 212/13 214/12</p> <p><b>pandemics [15]</b> 29/25 30/4 54/23 55/4 55/12 55/22 55/23 121/21 168/1 182/7 185/11 210/19 211/3 213/21 213/25</p> <p><b>panicking [1]</b> 111/25</p> <p><b>paper [6]</b> 64/10 123/22 173/22 174/1 174/1 188/8</p> <p><b>paper-based [1]</b> 64/10</p> <p><b>papers [2]</b> 16/15 174/5</p> <p><b>paragraph [21]</b> 12/10 118/16 123/10 132/6 143/10 143/13 151/14 152/8 155/5 155/13 160/6 161/12 161/13 162/10 166/5 166/25 190/25 198/25 205/7 206/3 206/4</p> <p><b>paragraph 17 [1]</b> 190/25</p> <p><b>paragraph 19 [1]</b> 160/6</p> <p><b>paragraph 28 [2]</b> 143/13 151/14</p> <p><b>Paragraph 3.9 [1]</b> 198/25</p> <p><b>paragraph 6.2 [1]</b> 12/10</p>	<p><b>paragraph 7 [1]</b> 132/6</p> <p><b>paragraph 7.39 [1]</b> 118/16</p> <p><b>paragraph 7.43 [1]</b> 123/10</p> <p><b>paragraph 9 [1]</b> 143/10</p> <p><b>paragraph appears [1]</b> 206/4</p> <p><b>parallel [2]</b> 79/8 191/24</p> <p><b>paraphrasing [2]</b> 34/18 59/5</p> <p><b>Parliament [2]</b> 87/25 93/7</p> <p><b>parliamentarians [1]</b> 155/2</p> <p><b>part [37]</b> 7/24 12/25 14/2 16/17 19/10 20/5 22/10 32/8 40/19 43/6 53/15 56/24 58/10 61/7 61/8 61/9 64/17 82/24 91/13 100/3 112/14 113/13 115/15 119/14 119/15 120/16 122/6 126/10 129/14 145/5 155/25 165/24 168/3 192/25 194/7 202/1 210/18</p> <p><b>participants [1]</b> 68/16</p> <p><b>participated [1]</b> 16/10</p> <p><b>particular [30]</b> 14/13 14/13 44/23 46/2 46/5 48/25 51/3 51/9 53/19 62/10 68/3 83/25 84/17 89/6 103/25 110/17 114/12 120/4 120/23 121/11 123/2 123/3 123/3 125/4 126/21 131/18 141/9 155/13 180/10 208/21</p> <p><b>particularly [21]</b> 4/15 13/10 15/6 19/13 41/13 49/15 74/3 77/24 83/18 84/23 95/14 97/14 102/8 102/15 130/22 131/9 134/16 145/3 166/23 182/7 205/25</p> <p><b>partly [2]</b> 55/9 55/10</p> <p><b>parts [7]</b> 9/17 53/2 63/12 116/24 119/16 126/21 127/6</p> <p><b>party [2]</b> 134/23 156/8</p> <p><b>pass [4]</b> 82/18 160/3 160/22 163/3</p> <p><b>passed [2]</b> 16/14 181/2</p> <p><b>passing [1]</b> 14/17</p> <p><b>past [2]</b> 54/23 108/11</p>	<p><b>path [8]</b> 13/10 24/2 27/16 84/4 111/7 114/13 129/2 137/3</p> <p><b>patient [1]</b> 28/1</p> <p><b>patients [2]</b> 4/23 5/12</p> <p><b>Patrick [52]</b> 1/9 3/11 5/3 16/20 16/24 17/9 17/11 18/11 18/24 19/2 19/9 19/18 20/4 20/6 20/12 29/3 29/16 44/2 45/12 45/24 48/19 50/23 51/13 53/4 61/14 62/16 63/19 65/1 70/20 71/1 71/15 71/21 72/19 74/16 80/4 88/14 89/15 92/22 93/9 93/19 98/14 102/15 123/17 128/2 135/1 171/25 171/25 182/22 186/8 186/13 186/20 209/12</p> <p><b>Patrick Vallance [1]</b> 135/1</p> <p><b>Patrick's [2]</b> 18/4 70/12</p> <p><b>pause [6]</b> 56/1 56/22 68/19 76/25 118/9 120/14</p> <p><b>pay [3]</b> 36/1 71/15 183/14</p> <p><b>paying [1]</b> 189/13</p> <p><b>PCR [1]</b> 40/25</p> <p><b>peak [7]</b> 11/15 177/12 191/11 192/21 196/15 199/1 199/3</p> <p><b>peaks [1]</b> 74/7</p> <p><b>peers [1]</b> 13/20</p> <p><b>pejorative [1]</b> 72/21</p> <p><b>people [138]</b> 4/1 8/6 8/8 11/14 11/16 12/3 14/15 14/19 15/10 17/19 21/18 24/25 28/13 28/16 29/11 29/19 30/15 32/13 34/24 40/12 40/14 44/8 45/16 45/20 46/8 49/19 49/22 49/24 50/3 50/8 50/20 51/7 52/22 55/3 55/15 60/25 61/9 62/15 63/3 63/23 65/10 65/15 65/25 69/5 71/23 73/7 75/24 75/25 76/7 76/7 76/8 77/3 77/4 79/12 80/11 80/12 80/15 80/21 80/24 83/23 87/12 87/15 87/17 88/9 88/17 90/21 90/25 91/23 92/12 93/6 93/19 94/8 94/10 96/3 96/11 97/11 99/21 102/8 102/9 105/18 108/1 109/5</p>	<p>109/9 112/2 113/10 121/12 126/12 127/21 128/19 134/19 137/8 137/14 138/20 140/16 142/19 148/21 149/23 150/11 157/25 163/18 169/1 169/24 170/9 171/24 171/25 174/24 175/22 179/13 179/17 179/19 180/14 181/6 182/23 183/17 184/4 184/9 184/9 184/12 185/5 185/8 186/20 186/24 189/3 192/18 193/25 194/8 195/16 196/24 197/6 197/9 202/8 202/14 204/18 205/18 208/13 208/18 211/5 212/24</p> <p><b>people's [3]</b> 194/4 197/5 208/21</p> <p><b>perceived [1]</b> 13/7</p> <p><b>perception [1]</b> 75/15</p> <p><b>perfectly [12]</b> 39/15 47/5 52/7 67/15 83/17 128/15 141/12 160/14 169/9 184/8 200/15 214/21</p> <p><b>perhaps [18]</b> 18/25 20/6 20/7 27/2 42/10 48/3 57/6 62/1 65/3 69/17 98/17 120/16 155/14 155/14 155/17 174/18 183/23 187/21</p> <p><b>period [19]</b> 3/5 12/19 23/25 25/11 25/14 41/24 90/22 104/17 112/5 119/19 119/22 134/2 135/25 149/20 159/17 159/20 180/13 191/12 214/15</p> <p><b>peripheral [1]</b> 175/18</p> <p><b>permanent [5]</b> 6/17 7/11 7/12 12/20 145/7</p> <p><b>persistent [1]</b> 187/9</p> <p><b>person [30]</b> 13/7 16/23 42/8 45/23 67/13 71/20 91/1 99/18 101/3 101/3 102/6 102/6 102/16 102/16 105/3 105/3 105/13 105/13 106/2 106/2 132/8 132/8 134/4 134/4 135/4 135/4 153/15 164/11 167/20 206/11</p> <p><b>person's [2]</b> 36/25 62/25</p> <p><b>personal [2]</b> 89/6 169/6</p> <p><b>personalise [1]</b> 96/13</p> <p><b>personally [6]</b> 24/17 81/11 109/13 122/10</p>
---	---	---	--	---

<b>P</b>	<b>planners [2]</b> 129/23 184/10	112/11 113/15 113/17 115/11 115/15 115/23 116/3 119/8 119/11 120/1 120/6 121/6 125/17 128/21 128/24 131/5 131/8 131/13 133/17 133/21 135/16 137/4 138/5 139/21 139/22 139/24 141/1 141/5 141/14 142/5 142/11 142/22 144/1 145/8 146/1 146/16 147/19 150/21 153/9 153/18 156/9 158/25 159/9 160/13 160/15 163/6 163/13 163/25 164/18 165/11 165/21 165/25 166/9 167/19 167/21 168/7 172/10 173/11 173/16 175/5 177/8 177/10 178/17 180/9 181/12 181/20 182/4 187/5 189/7 192/5 192/12 196/3 198/5 198/22 200/1 200/21 201/22 202/10 202/18 202/20 202/21 202/24 202/25 203/21 204/3 204/15 205/18 206/8 206/14 207/12 207/22 208/1 208/5 208/12 212/13 212/20 213/1 213/2 213/10 213/10 214/15 214/24 214/25	96/18 130/4 130/10 130/20 142/20 148/15 152/2 152/5 153/23 180/8 180/12 188/1 209/8 <b>politically [3]</b> 90/6 149/15 209/5 <b>politician [1]</b> 86/16 <b>politicians [4]</b> 58/2 93/15 97/13 131/2 <b>politicised [1]</b> 86/23 <b>politics [1]</b> 179/13 <b>poorly [1]</b> 141/25 <b>population [5]</b> 77/23 82/24 101/25 119/12 183/15 <b>port [1]</b> 148/3 <b>ports [1]</b> 94/1 <b>posed [1]</b> 109/24 <b>position [53]</b> 7/7 17/12 17/22 18/4 18/4 18/5 18/21 19/4 21/15 25/24 27/6 27/6 27/14 28/5 28/20 29/22 51/23 53/25 59/12 60/10 60/18 69/9 69/9 69/11 69/12 78/16 80/25 81/2 84/11 85/14 87/21 89/23 93/22 94/24 99/4 104/3 114/3 116/19 117/1 128/11 128/12 137/15 140/20 141/10 155/25 159/12 171/7 171/8 175/22 180/21 187/20 202/18 214/1 <b>positions [4]</b> 40/8 70/13 86/24 97/2 <b>positive [1]</b> 61/19 <b>positively [1]</b> 103/15 <b>possibility [9]</b> 54/18 57/2 57/4 57/8 57/25 58/2 136/20 162/20 163/18 <b>possible [22]</b> 4/12 35/23 57/7 58/19 65/22 67/14 73/8 74/7 81/12 83/17 91/9 100/7 107/6 128/7 128/14 131/5 142/7 175/2 185/9 194/19 194/20 204/17 <b>possibly [2]</b> 71/2 107/25 <b>post [2]</b> 3/5 9/3 <b>potential [10]</b> 65/7 69/12 120/24 144/7 164/4 164/23 169/22 209/12 210/10 212/3 <b>potentially [12]</b> 9/25 24/16 67/21 69/2 70/19 109/23 113/6 117/14 123/8 138/23 144/2 214/13	<b>poverty [2]</b> 88/18 88/24 <b>power [1]</b> 179/15 <b>powers [1]</b> 200/22 <b>Powis [1]</b> 37/12 <b>PPE [2]</b> 39/3 47/6 <b>practical [18]</b> 3/22 7/5 22/17 30/11 48/20 48/21 115/8 128/21 129/8 136/11 149/11 152/13 154/14 177/20 193/13 198/6 198/23 202/23 <b>practically [5]</b> 124/19 126/3 142/7 146/22 148/12 <b>practice [16]</b> 5/4 18/10 26/11 26/12 38/3 48/18 77/15 84/19 111/15 113/2 146/23 147/1 150/9 151/15 152/18 152/20 <b>practitioners [2]</b> 50/15 52/9 <b>pre [1]</b> 68/17 <b>pre-work [1]</b> 68/17 <b>precautionary [12]</b> 30/5 30/8 30/10 30/22 30/24 103/13 108/21 111/12 132/5 155/18 155/19 190/4 <b>precedent [1]</b> 111/15 <b>precipitately [1]</b> 114/11 <b>precisely [1]</b> 195/18 <b>predecessors [1]</b> 142/13 <b>predicated [3]</b> 140/20 152/7 182/1 <b>predict [1]</b> 204/16 <b>predictions [5]</b> 75/10 75/12 75/13 75/14 78/11 <b>prefer [1]</b> 157/2 <b>preferable [1]</b> 76/11 <b>preferably [1]</b> 51/10 <b>preference [1]</b> 74/17 <b>preferred [1]</b> 81/11 <b>preliminarily [1]</b> 115/4 <b>preliminary [1]</b> 115/2 <b>premise [1]</b> 171/12 <b>premised [1]</b> 64/1 <b>preparations [3]</b> 123/11 126/7 127/2 <b>prepare [2]</b> 31/12 213/4 <b>prepared [2]</b> 92/9 156/2 <b>Preparedness [1]</b> 123/23 <b>present [3]</b> 16/24 66/15 93/11 <b>presentation [5]</b> 31/1
----------	--------------------------------------	---	---	--

<b>P</b>	143/5 155/1 161/7 161/16 162/20 <b>prime ministerial [2]</b> 10/14 155/21 <b>Princess [3]</b> 78/25 180/24 180/25 <b>principal [10]</b> 6/8 8/18 16/21 57/16 71/12 72/7 76/12 94/15 98/8 115/13 <b>principally [4]</b> 39/6 40/15 124/8 129/1 <b>principle [16]</b> 23/4 29/21 29/22 30/5 30/8 30/10 30/22 30/24 56/25 58/6 58/24 108/21 111/12 181/14 182/10 190/4 <b>principles [1]</b> 10/23 <b>printing [1]</b> 198/22 <b>prior [2]</b> 107/8 179/19 <b>priority [3]</b> 137/18 138/24 152/9 <b>private [5]</b> 95/14 98/8 98/9 162/15 162/16 <b>privilege [2]</b> 44/3 197/4 <b>privy [1]</b> 65/1 <b>probability [16]</b> 9/22 33/22 34/10 104/9 104/10 104/12 104/14 104/14 105/21 139/20 176/16 183/24 184/17 186/7 186/10 186/14 <b>probable [1]</b> 185/21 <b>probably [38]</b> 10/5 21/18 34/17 40/9 42/4 47/3 56/19 61/12 70/1 77/19 84/6 84/19 101/16 108/4 131/7 131/18 131/21 135/2 135/15 144/23 148/5 149/24 150/13 150/14 150/17 152/23 155/5 156/22 159/19 165/17 166/17 181/15 187/14 188/7 189/6 197/4 208/6 208/7 <b>problem [38]</b> 22/20 22/21 22/23 22/24 69/1 74/19 74/20 81/25 116/5 120/10 122/22 122/24 129/3 129/4 131/1 136/6 136/25 137/4 153/7 154/6 154/7 154/21 156/13 165/19 165/20 165/22 166/13 170/4 170/5 170/5 182/22 184/2 187/7 189/20 200/4 201/4 202/6 212/25 <b>problematic [1]</b>	210/16 <b>problems [17]</b> 19/13 21/5 23/20 24/24 45/22 69/2 75/11 83/24 98/2 119/4 119/5 128/25 156/17 169/8 182/20 186/19 200/9 <b>process [31]</b> 12/25 17/7 18/14 23/6 39/25 61/20 66/6 66/8 67/25 68/21 69/22 70/22 89/22 93/21 98/23 99/13 104/16 111/10 112/23 115/25 129/10 143/3 148/16 156/18 183/9 186/5 186/18 198/20 208/16 208/17 208/21 <b>processes [1]</b> 96/21 <b>produce [3]</b> 123/21 128/10 191/16 <b>produced [12]</b> 1/21 60/9 72/11 123/21 124/2 128/8 132/12 132/21 173/19 173/22 174/8 174/9 <b>product [1]</b> 19/20 <b>production [1]</b> 209/24 <b>profession [10]</b> 6/11 7/25 8/5 24/20 32/2 33/10 34/8 34/23 37/1 47/21 <b>professional [7]</b> 1/25 6/10 6/12 37/13 39/10 114/6 114/8 <b>professionally [2]</b> 7/7 42/24 <b>professions [1]</b> 56/6 <b>professor [94]</b> 1/4 1/6 1/13 1/15 2/11 9/4 9/6 9/19 10/2 10/2 10/11 31/5 31/19 35/3 46/21 48/2 50/10 51/20 56/22 60/7 65/18 66/12 74/4 75/17 76/21 80/1 84/10 96/16 100/4 100/8 108/9 108/20 109/20 110/4 111/12 113/23 114/18 116/15 117/25 118/15 124/20 125/1 129/12 130/19 132/11 134/10 134/16 134/24 141/7 146/7 146/20 148/9 148/9 150/21 152/19 155/7 156/4 157/7 157/18 161/4 162/9 164/25 166/24 173/25 174/8 178/9 179/24 181/16 183/3 185/16 187/5 190/20 192/5 192/25	194/15 198/12 200/16 201/6 203/10 203/13 204/9 204/12 204/12 205/21 206/17 207/5 208/5 209/1 209/11 209/23 210/13 211/12 213/12 216/3 <b>Professor Costello</b> <b>[1]</b> 111/12 <b>Professor Dame [1]</b> 9/6 <b>Professor Edmunds</b> <b>[4]</b> 148/9 174/8 178/9 181/16 <b>Professor Ferguson</b> <b>[15]</b> 76/21 80/1 108/9 108/20 134/24 148/9 157/18 194/15 204/9 204/12 206/17 208/5 209/11 209/23 210/13 <b>Professor</b> <b>Ferguson's [1]</b> 113/23 <b>Professor Harries [1]</b> 10/2 <b>Professor John</b> <b>Edmunds [1]</b> 204/12 <b>Professor Sir [4]</b> 1/4 1/13 9/4 100/8 <b>Professor Van-Tam</b> <b>[2]</b> 9/19 10/2 <b>Professor</b> <b>Woolhouse [1]</b> 134/16 <b>Professors [1]</b> 134/14 <b>proffered [1]</b> 94/7 <b>profitable [1]</b> 185/24 <b>profound [2]</b> 86/14 150/19 <b>profoundly [1]</b> 30/9 <b>projections [1]</b> 81/14 <b>ProMED [1]</b> 100/18 <b>prominence [1]</b> 79/10 <b>prominent [4]</b> 9/23 29/2 40/10 79/11 <b>promoting [1]</b> 13/16 <b>promulgate [2]</b> 48/18 48/18 <b>proper [4]</b> 38/20 45/1 45/4 155/24 <b>properly [3]</b> 61/9 72/13 106/5 <b>proportionate [1]</b> 162/7 <b>proportions [1]</b> 83/19 <b>proposal [1]</b> 161/24 <b>propose [1]</b> 78/8 <b>proposition [6]</b> 51/21 52/14 58/21 59/18 61/13 187/6	<b>pros [1]</b> 38/8 <b>protection [3]</b> 8/19 9/20 43/1 <b>protests [1]</b> 60/1 <b>proved [1]</b> 159/1 <b>provide [7]</b> 5/12 6/14 8/14 16/1 53/13 60/11 72/1 <b>provided [6]</b> 1/17 4/19 4/25 16/6 100/19 197/19 <b>provider [1]</b> 58/16 <b>province [1]</b> 175/1 <b>provision [2]</b> 10/24 43/18 <b>provisional [1]</b> 149/3 <b>proxy [1]</b> 41/15 <b>pub [3]</b> 188/19 189/5 189/7 <b>public [110]</b> 2/11 2/14 3/12 6/10 6/14 7/16 8/14 11/3 11/18 11/23 13/2 18/7 22/3 22/6 22/9 22/20 22/23 22/24 23/1 23/1 23/5 23/8 23/16 24/3 24/9 24/23 32/19 36/13 36/14 36/20 37/6 39/1 39/11 40/19 40/21 41/14 41/16 41/24 42/20 42/23 43/1 43/9 46/25 46/25 47/22 48/13 50/14 52/5 52/9 52/24 53/1 62/14 64/20 75/15 76/14 79/11 79/22 80/24 81/5 82/11 85/3 87/11 87/25 88/3 88/18 88/24 89/16 89/23 90/9 90/18 90/23 91/1 91/2 91/5 92/17 97/16 99/11 113/9 115/12 116/1 119/17 119/23 123/4 139/25 142/1 145/3 146/11 151/17 151/17 151/23 151/24 152/5 161/18 163/10 165/10 188/23 189/17 190/9 193/16 197/1 197/8 197/21 197/23 205/4 205/17 206/8 206/10 206/13 207/17 209/9 <b>public-facing [1]</b> 46/25 <b>publication [4]</b> 199/6 199/23 201/20 202/20 <b>publications [1]</b> 14/18 <b>published [11]</b> 134/17 153/14 174/22 197/18 199/10 199/12 200/6 200/12 200/17 202/11 202/25
----------	---	--	--	---



**P**  
**publishing [1]** 201/3  
**pull [1]** 193/13  
**pulled [1]** 156/17  
**pulling [1]** 157/24  
**purely [1]** 39/10  
**purposes [7]** 2/19  
 7/5 30/12 125/14  
 182/12 193/14 198/6  
**push [6]** 91/24  
 167/19 190/2 196/1  
 203/11 211/9  
**push-back [1]** 91/24  
**pushed [3]** 22/22  
 186/20 186/21  
**pushing [2]** 199/2  
 210/3  
**put [30]** 11/5 18/21  
 19/10 25/5 28/17  
 28/20 31/23 35/4  
 58/18 59/11 59/19  
 82/15 82/16 83/4 84/8  
 88/20 94/21 96/5  
 102/4 104/2 115/3  
 136/11 159/5 169/16  
 171/10 180/17 197/24  
 197/25 201/24 205/16  
**putting [8]** 21/16  
 30/2 34/6 34/7 103/24  
 148/13 165/25 212/6

**Q**  
**quad [1]** 12/13  
**qualifications [1]**  
 1/24  
**quarantine [2]**  
 149/24 150/8  
**quarantines [3]** 56/2  
 56/5 149/14  
**quarters [2]** 38/19  
 188/17  
**question [41]** 11/11  
 11/21 22/18 34/1 43/9  
 50/10 54/10 57/20  
 57/21 57/22 59/16  
 59/20 64/1 74/11  
 83/13 84/12 96/20  
 103/10 105/4 106/4  
 112/1 112/20 113/6  
 117/25 118/7 147/21  
 152/7 153/6 153/24  
 154/17 168/8 169/20  
 169/20 171/10 171/11  
 177/9 183/19 188/6  
 194/20 203/13 213/2  
**question's [1]** 49/13  
**questions [14]** 1/7  
 22/12 22/23 24/8 42/8  
 48/25 50/24 51/3  
 51/16 67/21 101/7  
 124/25 182/13 216/5  
**queues [1]** 188/17  
**quick [2]** 6/4 179/23

**quickly [6]** 75/20  
 132/1 170/21 179/16  
 179/20 199/15  
**quite [83]** 4/13 6/1  
 9/20 11/25 18/10 30/4  
 30/8 36/3 38/1 46/8  
 46/15 46/18 51/11  
 51/14 54/4 54/6 54/6  
 56/17 57/11 59/18  
 66/6 67/13 73/5 73/5  
 78/1 78/2 78/4 79/23  
 82/4 83/22 87/9 87/13  
 87/24 95/20 97/10  
 97/11 98/25 102/3  
 103/24 109/7 109/12  
 110/18 110/24 110/25  
 112/4 113/22 113/24  
 115/24 117/12 119/19  
 124/15 126/5 128/14  
 129/9 133/21 136/17  
 140/6 145/2 146/9  
 154/4 155/8 158/11  
 158/18 160/17 160/23  
 163/24 164/18 172/14  
 179/2 179/23 180/12  
 181/20 182/14 184/15  
 189/9 190/9 192/4  
 193/22 196/3 196/22  
 197/1 198/16 211/10  
**quote [2]** 182/25  
 183/5

**R**  
**R number [1]** 159/21  
**R0 [1]** 159/22  
**radical [2]** 59/18 84/7  
**raised [2]** 110/8  
 110/13  
**raising [2]** 194/13  
 202/6  
**ramifications [2]**  
 18/6 209/5  
**ramping [1]** 107/23  
**range [10]** 11/18 46/8  
 61/15 61/23 62/9 65/3  
 67/3 69/23 71/7 158/9  
**ranging [1]** 71/24  
**rapid [1]** 111/14  
**rapidly [4]** 27/2 77/25  
 138/6 165/9  
**rare [3]** 142/11  
 142/16 177/3  
**rarely [1]** 144/4  
**rate [16]** 33/16 33/18  
 66/24 76/2 77/6 77/23  
 77/23 108/15 134/21  
 157/19 159/2 159/3  
 159/3 174/15 181/6  
 181/8  
**rates [10]** 74/14  
 74/14 75/24 77/17  
 77/18 79/2 79/3  
 114/24 158/4 159/18  
**rather [37]** 7/4 17/23

21/16 26/1 33/9 43/15  
 50/4 56/19 69/22  
 84/21 92/10 104/5  
 105/22 105/24 122/12  
 127/13 129/4 132/22  
 144/17 144/21 150/20  
 157/5 168/22 168/25  
 174/8 176/15 184/6  
 186/8 188/23 189/6  
 190/7 196/14 196/16  
 196/23 197/4 197/7  
 214/25  
**rating [1]** 60/12  
**re [9]** 10/13 35/19  
 131/2 149/20 150/17  
 189/25 212/5 213/13  
 214/9  
**re-established [1]**  
 214/9  
**re-establishing [2]**  
 212/5 213/13  
**re-examine [1]**  
 150/17  
**re-opening [1]** 10/13  
**re-run [2]** 149/20  
 189/25  
**re-stress [1]** 35/19  
**reach [2]** 38/2 97/21  
**reached [2]** 37/23  
 203/7  
**reaching [2]** 97/1  
 142/3  
**react [1]** 28/24  
**reacted [1]** 25/25  
**reaction [2]** 85/7  
 166/2  
**read [11]** 62/2 62/3  
 64/2 64/3 64/4 65/15  
 65/15 98/10 155/5  
 159/7 177/24  
**read-outs [1]** 98/10  
**reading [6]** 50/8  
 61/10 67/6 98/23  
 178/19 197/4  
**ready [4]** 31/17 34/9  
 123/12 127/3  
**real [6]** 39/21 125/7  
 136/6 149/11 156/3  
 185/13  
**realise [3]** 79/6 129/1  
 138/20  
**realised [1]** 93/1  
**realistic [5]** 14/25  
 33/22 61/12 178/14  
 214/23  
**reality [13]** 47/25  
 48/2 55/4 56/14 65/16  
 102/25 152/24 169/24  
 174/23 196/7 198/24  
 200/11 213/8  
**really [56]** 11/2 11/11  
 23/25 26/6 38/4 42/8  
 43/9 47/16 51/2 55/16  
 58/5 59/1 59/6 61/12

61/12 61/14 71/14  
 84/1 90/15 94/14  
 95/18 99/10 103/24  
 108/3 117/12 119/19  
 121/12 121/18 124/15  
 124/18 126/5 127/15  
 128/22 138/25 146/8  
 147/4 147/21 153/5  
 163/14 172/22 178/6  
 178/12 179/11 179/23  
 182/14 187/3 189/13  
 191/21 193/22 193/24  
 206/19 207/25 208/5  
 212/22 213/7 214/24  
**realms [1]** 22/25  
**reason [22]** 43/7  
 55/17 92/4 102/4  
 107/6 114/2 114/3  
 114/20 128/21 131/20  
 136/8 141/3 144/3  
 145/13 152/1 163/25  
 165/16 166/14 195/9  
 202/5 204/17 208/10  
**reasonable [40]**  
 34/19 56/11 113/20  
 135/20 141/1 141/4  
 152/2 160/2 162/22  
 162/23 163/2 169/10  
 181/21 181/24 182/1  
 182/5 182/10 182/11  
 182/17 182/24 182/25  
 183/5 183/20 183/22  
 184/6 184/18 184/19  
 185/6 185/17 185/22  
 186/3 186/9 186/14  
 187/9 188/6 191/3  
 191/4 191/19 200/15  
 211/15  
**reasonably [10]** 15/4  
 47/5 56/18 86/17  
 102/7 143/1 154/24  
 190/9 198/5 198/15  
**reasons [14]** 21/10  
 42/3 55/10 66/22  
 73/13 76/12 79/10  
 99/21 130/18 150/25  
 178/9 210/15 211/13  
 212/18  
**recalibrated [1]**  
 68/11  
**recall [17]** 37/20  
 37/25 39/25 42/21  
 46/4 109/22 111/1  
 111/3 148/4 166/22  
 173/25 174/4 200/7  
 204/24 205/14 209/17  
 213/20  
**receipt [1]** 49/2  
**received [7]** 78/3  
 100/1 141/7 149/7  
 174/4 177/20 180/23  
**receiving [1]** 5/13  
**recent [2]** 58/1  
 133/20

**recognise [6]** 20/9  
 34/21 45/19 103/14  
 180/1 180/18  
**recognised [4]** 45/11  
 88/23 132/13 179/25  
**recognising [2]**  
 92/25 139/7  
**recognition [1]** 179/2  
**recoiling [1]** 213/14  
**recollection [2]**  
 71/25 110/9  
**recollections [1]**  
 70/22  
**recommendations [1]** 148/3  
**recommended [2]**  
 48/11 213/18  
**record [8]** 40/17  
 64/18 64/20 70/11  
 70/12 98/2 99/17  
 117/10  
**record-keeping [1]**  
 99/17  
**recorded [7]** 61/20  
 64/24 69/17 70/16  
 72/25 98/13 98/15  
**recording [2]** 61/10  
 69/23  
**records [1]** 186/14  
**RECOVERY [1]** 5/7  
**RECOVERY Trial [1]**  
 5/7  
**redraft [1]** 203/18  
**redrafting [1]** 201/8  
**reduce [9]** 23/8 23/18  
 27/16 57/16 57/18  
 59/22 147/11 187/15  
 195/25  
**reduced [2]** 5/8  
 83/10  
**reduction [1]** 5/15  
**refer [6]** 19/24 20/5  
 34/2 85/2 205/7 206/2  
**reference [19]** 3/14  
 33/4 54/25 56/1 73/23  
 104/20 116/22 127/4  
 132/7 132/10 143/11  
 145/23 161/19 165/7  
 167/16 199/3 205/11  
 206/12 211/20  
**references [3]** 25/16  
 69/19 205/1  
**referred [20]** 21/22  
 28/4 72/9 73/22 88/19  
 97/18 100/10 101/9  
 111/11 116/16 126/15  
 131/25 133/9 138/24  
 161/4 173/13 174/12  
 174/14 197/15 209/2  
**referring [5]** 25/18  
 119/3 129/13 155/13  
 206/5  
**refers [2]** 199/4  
 209/23

<b>R</b>	141/8	51/15 52/6	92/1	122/11 124/14 166/16
<b>reflect [14]</b> 17/3	<b>relaying [1]</b> 28/5	<b>reproduction [3]</b>	<b>responsible [3]</b>	187/1 187/2
17/23 19/12 31/20	<b>release [3]</b> 212/13	135/24 159/16 196/9	13/15 124/13 130/6	<b>roles [3]</b> 6/1 8/17
51/22 60/10 61/15	212/21 215/4	<b>request [2]</b> 90/14	<b>rest [4]</b> 43/2 76/11	17/16
63/12 67/3 68/15	<b>relevancy [2]</b> 4/8	148/10	173/15 203/4	<b>roll [1]</b> 171/16
68/16 68/25 69/23	207/7	<b>requests [3]</b> 11/9	<b>rested [1]</b> 76/3	<b>room [5]</b> 18/9 64/25
70/24	<b>relevant [7]</b> 11/19	11/20 68/2	<b>restrict [1]</b> 89/10	65/10 66/20 164/14
<b>reflected [12]</b> 19/21	30/13 46/19 56/15	<b>require [12]</b> 58/7	<b>restriction [1]</b> 149/12	<b>rose [1]</b> 9/23
41/10 49/7 54/8 60/16	63/18 101/18 177/9	105/6 111/14 130/10	<b>restrictions [2]</b>	<b>round [8]</b> 49/24 50/4
62/11 62/21 65/24	<b>relevantly [1]</b> 2/19	130/13 143/15 145/19	161/22 162/2	93/1 108/25 109/1
67/25 72/17 196/11	<b>reliable [1]</b> 82/6	146/2 146/13 146/14	<b>result [1]</b> 114/5	180/14 198/19 201/9
197/20	<b>reliance [2]</b> 74/2	147/6 162/6	<b>resulting [1]</b> 88/12	<b>route [4]</b> 48/24 49/5
<b>reflecting [1]</b> 131/7	74/11	<b>required [13]</b> 11/21	<b>retrofitting [1]</b>	53/8 89/7
<b>reflection [6]</b> 65/4	<b>reliant [1]</b> 64/8	12/12 28/23 70/20	127/17	<b>routes [2]</b> 14/22 51/5
160/12 162/10 176/7	<b>relied [3]</b> 15/16 64/5	70/23 75/18 75/23	<b>retrospect [3]</b> 65/22	<b>routine [1]</b> 15/19
176/9 178/24	82/22	105/7 124/1 143/20	114/14 189/11	<b>row [1]</b> 67/13
<b>reflective [3]</b> 149/21	<b>remain [4]</b> 3/8 175/19	144/19 185/3 191/16	<b>retrospectively [1]</b>	<b>royal [5]</b> 2/14 8/2 8/7
152/16 212/7	188/25 190/6	<b>requires [2]</b> 7/25	156/21	31/1 39/4
<b>reflects [2]</b> 164/5	<b>remained [4]</b> 35/23	35/8	<b>return [4]</b> 60/2 79/21	<b>Royal College [2]</b>
177/5	35/25 133/18 174/25	<b>research [20]</b> 3/16	118/9 172/25	2/14 31/1
<b>refuse [1]</b> 90/14	<b>remaining [1]</b> 75/16	3/21 3/22 3/24 3/25	<b>Reuters [1]</b> 104/19	<b>rule [5]</b> 60/16 61/22
<b>regard [1]</b> 141/9	<b>remains [1]</b> 166/3	4/11 4/15 4/25 5/24	<b>reverse [1]</b> 27/14	108/21 160/10 195/6
<b>regional [3]</b> 13/11	<b>remarkably [1]</b>	25/6 32/19 50/13	<b>reversed [2]</b> 68/12	<b>ruled [2]</b> 108/12
91/4 176/24	199/15	79/15 124/7 124/14	127/23	160/7
<b>regions [2]</b> 114/25	<b>remember [3]</b> 52/21	130/7 137/12 178/5	<b>revert [1]</b> 161/24	<b>rules [1]</b> 86/6
175/11	179/7 210/17	198/9 205/8	<b>rider [1]</b> 143/24	<b>run [7]</b> 1/20 65/13
<b>Register [3]</b> 164/3	<b>remembering [10]</b>	<b>resolve [1]</b> 22/1	<b>right [42]</b> 2/17 3/1 3/2	125/21 149/20 180/15
165/13 167/24	11/15 49/15 73/4	<b>resource [1]</b> 78/17	7/20 9/11 9/18 12/3	189/25 200/22
<b>regret [2]</b> 144/21	76/15 92/23 109/3	<b>resourced [1]</b> 39/8	13/13 24/17 43/11	<b>runner [1]</b> 151/19
200/12	109/10 174/5 180/7	<b>resources [1]</b> 34/8	65/6 77/8 79/19 81/25	<b>running [2]</b> 4/16 21/6
<b>regular [1]</b> 35/9	207/12	<b>respect [5]</b> 2/25	82/20 85/1 87/10	<b>rush [1]</b> 126/5
<b>regularly [5]</b> 35/6	<b>remind [1]</b> 40/24	106/23 112/10 172/13	87/14 89/1 92/3 99/24	
39/5 51/14 52/23	<b>remit [1]</b> 47/25	208/23	102/13 105/24 113/17	<b>S</b>
52/23	<b>remotely [1]</b> 4/6	<b>respiratory [2]</b> 120/9	118/9 125/24 131/11	<b>sadly [4]</b> 74/24 80/12
<b>reinforces [1]</b> 84/21	<b>remove [1]</b> 136/20	213/25	140/24 144/24 145/12	163/5 163/18
<b>reiterate [1]</b> 208/12	<b>repeat [3]</b> 27/4 48/23	<b>respond [14]</b> 4/18	151/7 156/7 156/9	<b>safer [1]</b> 188/12
<b>reject [1]</b> 29/8	118/6	5/19 42/17 77/15	156/25 158/12 181/11	<b>SAGE [201]</b> 2/24
<b>rejected [1]</b> 29/8	<b>repeated [1]</b> 190/12	97/17 116/25 118/18	187/23 204/7 207/18	2/25 3/10 16/19 16/21
<b>related [1]</b> 4/12	<b>repeatedly [11]</b> 13/22	127/8 128/8 129/17	208/6 208/18 209/10	17/3 17/8 17/11 17/13
<b>relating [1]</b> 97/2	72/9 84/16 153/8	129/24 141/25 182/3	<b>rightly [10]</b> 9/20	17/16 17/17 17/23
<b>relation [14]</b> 4/25	166/19 172/11 187/22	206/18	44/15 80/7 87/24	18/1 18/4 18/13 18/17
9/14 13/17 17/12	188/2 188/6 199/16	<b>responded [4]</b> 9/15	98/21 110/19 111/4	18/18 19/11 19/20
60/12 75/21 81/22	209/1	11/21 13/1 165/9	113/24 115/25 169/5	19/21 19/21 21/14
81/24 82/11 86/5	<b>replicated [1]</b> 53/3	<b>responding [5]</b> 14/4	<b>rippling [1]</b> 109/8	24/7 26/2 26/3 26/3
103/10 128/4 182/7	<b>report [16]</b> 7/9 7/11	14/7 42/15 118/20	<b>rise [1]</b> 200/10	27/6 27/6 27/7 28/5
200/19	33/14 37/11 100/17	166/11	<b>risk [21]</b> 10/13 21/2	28/6 28/9 28/13 43/12
<b>relationship [1]</b>	100/18 100/22 104/19	<b>responds [1]</b> 146/22	21/4 29/2 36/19 54/16	43/16 44/6 44/14
17/11	104/22 108/10 133/8	<b>response [34]</b> 1/23	100/13 101/1 117/13	44/17 44/23 45/6
<b>relative [4]</b> 84/2	133/8 174/8 174/9	3/12 4/12 6/3 9/18	132/20 135/17 147/11	45/10 45/19 45/23
107/16 164/16 189/9	174/13 209/22	11/3 23/7 29/23 58/7	164/3 165/6 165/13	46/15 47/9 47/13
<b>relatively [22]</b> 56/15	<b>Report 4 [1]</b> 33/14	58/19 70/24 77/14	167/24 183/18 189/6	47/16 47/22 48/2
71/24 75/1 78/4 78/22	<b>reported [10]</b> 25/20	110/9 111/18 112/14	206/8 210/6 211/8	48/23 48/24 49/4 49/7
99/23 104/10 106/9	33/20 76/22 133/9	113/20 130/23 144/8	<b>risk/benefit [1]</b> 36/19	49/10 49/16 49/17
109/18 112/22 124/11	161/6 162/19 174/20	144/8 145/4 145/5	<b>risks [9]</b> 19/25 25/18	50/2 50/6 50/15 51/2
129/22 139/7 140/14	174/24 179/3 181/16	145/10 146/15 146/17	26/25 38/12 89/12	51/7 51/9 51/15 52/22
148/11 149/5 158/17	<b>reporting [2]</b> 159/8	146/17 146/18 146/18	165/10 189/8 195/7	53/2 53/6 53/13 53/16
172/22 186/10 205/18	176/20	158/19 162/7 163/20	212/4	53/24 53/25 54/25
210/1 213/12	<b>reports [2]</b> 79/1	167/9 168/16 193/9	<b>roadmap [1]</b> 10/15	55/2 57/6 57/10 57/12
<b>relaxes [1]</b> 183/12	107/2	209/24	<b>role [26]</b> 1/23 3/12	58/7 58/10 58/17
<b>relay [5]</b> 70/20 71/3	<b>representative [3]</b>	<b>responses [2]</b> 30/1	4/9 6/5 6/25 7/13 9/24	58/18 59/7 59/15 60/7
71/6 71/7 71/25	45/3 50/8 91/14	39/15	10/1 10/3 10/5 17/17	60/8 62/18 62/24
<b>relayed [5]</b> 69/15	<b>representatives [2]</b>	<b>responsibilities [2]</b>	19/11 19/11 24/7	64/16 64/24 65/4
71/17 72/18 89/2	16/9 91/11	7/6 91/19	24/18 37/12 88/2 89/4	66/13 66/15 66/23
	<b>represented [3]</b> 37/1	<b>responsibility [1]</b>	97/14 97/16 111/16	66/24 67/2 67/9 67/12

S				
<p><b>SAGE... [106]</b> 67/17 67/25 68/2 68/5 68/10 68/16 68/20 69/3 69/3 69/8 69/12 69/16 69/25 70/4 70/6 70/10 70/16 70/23 70/24 72/9 72/10 72/14 72/17 72/24 73/2 74/3 77/9 77/14 78/23 82/23 85/6 85/11 86/2 86/8 88/2 88/14 89/3 89/4 91/13 93/9 94/7 97/15 102/15 103/12 106/18 109/14 112/5 112/6 112/21 112/22 112/25 112/25 131/24 132/4 132/5 132/17 132/23 140/22 141/8 142/17 143/6 143/9 143/13 143/14 143/17 144/3 144/4 144/6 144/11 145/6 145/8 145/22 145/25 146/23 150/22 151/13 151/15 151/20 152/17 153/10 154/9 155/5 155/18 155/19 155/20 155/24 160/4 160/5 160/10 163/8 173/14 173/19 185/19 187/20 187/22 188/2 188/6 188/14 189/12 197/24 198/1 199/17 206/24 208/15 209/22 211/6</p>	<p>150/18 162/23 164/12 169/4 186/25 193/14 212/19 <b>SARS [5]</b> 41/1 102/1 133/24 138/3 138/11 <b>SARS-CoV-2 [1]</b> 41/1 <b>sat [1]</b> 115/9 <b>saw [10]</b> 19/10 19/13 35/15 63/12 91/19 91/20 102/12 116/19 121/23 122/8 <b>say [108]</b> 4/7 10/5 11/25 14/11 14/22 20/16 22/10 24/5 24/14 27/20 30/21 31/4 31/25 32/1 34/12 34/14 40/20 43/15 44/18 50/2 51/7 52/3 52/4 52/12 53/18 54/1 54/17 56/19 57/24 61/1 63/15 63/16 63/20 63/21 68/23 69/3 69/6 69/7 69/9 71/20 73/13 78/18 83/2 83/9 84/5 89/17 96/4 100/23 103/14 105/14 114/18 117/6 118/16 122/2 124/4 124/18 126/7 126/11 127/2 127/12 129/24 132/24 138/3 139/6 140/4 140/12 142/16 145/1 155/25 156/21 158/20 163/16 165/18 167/24 170/8 170/22 172/11 172/12 172/13 176/16 177/16 178/4 178/25 180/4 180/24 181/6 182/2 182/16 182/24 183/10 186/1 186/24 188/2 190/4 201/9 201/24 203/16 203/16 203/21 204/11 205/7 206/12 206/19 208/22 211/5 212/18 212/21 213/11 <b>say: [2]</b> 37/13 78/8 <b>say: how [1]</b> 78/8 <b>say: this [1]</b> 37/13 <b>saying [62]</b> 11/22 29/16 31/7 31/15 32/9 32/24 37/14 43/5 51/14 51/17 51/24 52/2 52/6 61/6 65/8 75/4 76/21 80/15 80/17 83/15 83/19 105/15 106/6 106/18 108/20 111/2 111/25 113/19 114/2 114/15 116/8 116/12 131/1 134/25 137/21 138/8 138/9 140/8 140/10 141/13 142/10 146/8 150/10 153/19 154/1</p>	<p>154/3 160/11 163/5 163/7 164/21 169/15 169/21 170/4 177/20 181/18 181/19 182/19 184/14 184/14 194/6 194/7 201/21 <b>says [9]</b> 50/5 109/21 110/8 123/10 134/24 143/13 176/1 198/25 206/17 <b>scale [4]</b> 41/2 41/13 135/17 169/8 <b>scaled [2]</b> 41/8 42/11 <b>scaled-up [1]</b> 41/8 <b>scenario [32]</b> 76/4 78/6 78/23 79/25 135/20 136/15 162/24 176/14 181/22 181/25 182/2 182/5 182/11 182/17 182/24 182/25 183/5 183/20 183/22 184/18 184/19 185/6 185/13 185/18 185/22 186/3 186/10 186/15 187/10 191/3 191/4 205/9 <b>scenarios [9]</b> 74/9 75/4 135/15 141/18 205/2 205/4 205/12 205/13 214/20 <b>schedules [1]</b> 38/14 <b>school [7]</b> 2/12 56/5 79/1 80/1 173/23 188/9 188/14 <b>schooling [1]</b> 20/22 <b>schools [4]</b> 10/24 36/18 190/5 193/23 <b>science [24]</b> 2/23 3/23 11/19 15/17 15/17 25/13 32/9 44/10 45/12 46/6 47/15 47/15 47/24 53/7 53/14 53/23 73/16 92/21 92/23 92/25 94/6 94/21 94/23 180/5 <b>sciences [4]</b> 2/7 2/15 47/5 47/10 <b>scientific [39]</b> 2/20 2/22 12/5 13/2 13/20 14/8 18/2 37/20 40/23 43/13 43/19 43/21 43/22 43/24 44/13 44/16 45/24 47/19 48/4 48/22 49/2 49/5 50/17 57/21 57/22 58/16 62/9 70/11 72/10 72/11 72/18 73/2 79/7 85/5 93/8 112/15 154/9 163/9 208/17 <b>scientifically [2]</b> 46/16 149/12 <b>scientist [2]</b> 11/7</p>	<p>11/12 <b>scientists [13]</b> 15/13 15/19 45/8 45/15 47/5 48/7 51/14 54/20 59/17 71/24 85/11 85/18 159/13 <b>scientists' [1]</b> 159/8 <b>scope [1]</b> 23/4 <b>Scottish [1]</b> 39/6 <b>Scottish-based [1]</b> 39/6 <b>screen [1]</b> 10/10 <b>screening [2]</b> 149/9 150/18 <b>script [1]</b> 50/9 <b>scroll [2]</b> 190/16 206/22 <b>season [2]</b> 199/2 210/7 <b>second [11]</b> 60/21 92/7 93/14 134/9 135/19 161/12 163/6 195/8 195/13 210/6 210/20 <b>seconded [1]</b> 85/18 <b>secondly [3]</b> 55/23 69/18 88/6 <b>secretariat [8]</b> 122/7 123/20 136/14 170/10 191/2 191/6 211/19 214/7 <b>secretaries [3]</b> 95/15 98/8 98/9 <b>secretary [20]</b> 6/16 6/17 7/11 7/12 12/14 12/19 12/20 13/9 94/16 123/17 123/17 145/7 161/8 161/22 162/15 162/17 163/23 170/18 170/23 199/8 <b>sectarian [1]</b> 51/22 <b>sections [1]</b> 85/4 <b>sectors [1]</b> 10/14 <b>security [11]</b> 154/25 161/10 161/11 166/2 166/12 166/15 169/1 169/3 169/8 169/21 169/23 <b>Sedwill [1]</b> 167/17 <b>see [49]</b> 10/11 10/18 12/10 13/14 20/9 20/11 26/16 29/5 44/18 49/4 57/10 66/10 71/19 76/10 81/11 91/16 92/9 98/20 98/21 99/19 100/16 100/21 110/16 111/5 111/18 111/21 114/7 114/17 114/20 115/16 116/20 117/1 121/23 137/2 137/18 140/5 140/12 141/8 143/12 154/23 157/4 166/20 174/20 175/25</p>	<p>184/3 184/16 190/14 191/25 215/1 <b>seedings [1]</b> 193/7 <b>seeing [4]</b> 92/10 117/10 153/3 189/16 <b>seek [1]</b> 200/16 <b>seeking [3]</b> 96/17 178/17 196/17 <b>seem [2]</b> 127/12 203/25 <b>seeded [2]</b> 121/22 193/8 <b>seemingly [1]</b> 156/14 <b>seems [2]</b> 87/23 165/16 <b>seen [15]</b> 8/4 20/10 47/22 50/6 56/17 135/14 164/8 166/24 167/9 169/7 179/18 196/11 207/5 209/6 213/5 <b>seized [1]</b> 170/13 <b>self [10]</b> 18/6 56/4 56/5 85/7 106/8 108/11 123/23 133/11 149/24 188/13 <b>self-evident [3]</b> 18/6 85/7 188/13 <b>self-evidently [1]</b> 123/23 <b>self-identified [1]</b> 106/8 <b>self-isolation [2]</b> 56/4 56/5 <b>self-quarantine [1]</b> 149/24 <b>self-sustaining [2]</b> 108/11 133/11 <b>sell [1]</b> 19/7 <b>send [1]</b> 71/12 <b>sending [2]</b> 13/16 189/15 <b>senior [10]</b> 6/17 8/6 8/8 8/11 15/13 37/7 40/10 67/16 99/3 142/19 <b>sense [78]</b> 17/15 17/25 27/4 29/10 29/16 30/19 32/8 32/24 36/24 41/12 42/4 43/10 47/4 52/2 53/25 55/20 58/9 61/18 61/19 62/22 64/9 72/1 72/21 73/20 73/20 77/20 83/6 83/9 84/5 86/25 93/20 96/13 97/12 99/16 99/20 102/5 102/10 104/2 105/19 106/3 107/18 111/24 113/5 134/7 138/1 138/13 140/25 141/4 146/8 149/17 158/19 164/5 166/9 168/25 169/16</p>

<b>S</b>	<b>seven [1]</b> 106/17	130/17 142/10 147/4	158/20 159/6 190/22	182/22 186/20 209/12
<b>sense...</b> [23] 178/3	<b>seven days [1]</b> 106/17	149/22 150/12 150/13	<b>singing [1]</b> 18/11	<b>Sir Patrick Vallance [7]</b> 3/11 5/3 16/20
182/21 183/18 184/24	<b>several [9]</b> 15/1	150/17 152/21 152/25	<b>single [8]</b> 45/20	18/24 29/3 186/8
188/5 189/1 189/8	37/25 43/23 70/10	153/6 155/12 162/16	100/4 122/21 158/9	186/13
190/8 192/3 193/18	78/2 84/4 113/10	164/10 168/10 169/7	200/17 201/8 201/21	<b>Sir Patrick's [2]</b> 18/4
195/14 195/14 195/16	152/22 197/3	170/3 177/24 184/14	202/3	70/12
201/13 201/16 205/13	<b>severe [2]</b> 143/24	184/15 186/2 188/3	<b>sink [1]</b> 59/2	<b>sit [1]</b> 7/21
207/24 208/15 211/11	213/12	192/17 201/15 203/15	<b>Sir [81]</b> 1/4 1/6 1/8	<b>sitting [5]</b> 18/1 18/2
212/9 213/8 215/3	<b>Shafi [2]</b> 25/20 161/6	206/13 206/14 208/9	1/9 1/13 3/11 4/4 5/3	31/14 43/4 178/18
215/4	60/2 84/9 118/9 118/9	213/20	9/4 16/20 16/24 17/9	<b>situation [26]</b> 8/24
<b>senses [1]</b> 127/18	145/9	<b>shouldn't [3]</b> 32/16	17/11 18/4 18/11	25/7 27/21 43/4 62/25
<b>sensible [14]</b> 61/7	<b>shape [1]</b> 44/21	81/6 154/1	18/24 19/2 19/6 19/9	65/14 67/23 76/14
61/13 67/15 67/18	<b>share [3]</b> 40/15 62/14	<b>shout [2]</b> 154/10	19/18 20/4 20/6 20/12	86/19 90/15 91/22
67/18 74/17 101/17	186/25	154/12	28/4 29/3 29/16 44/2	92/11 96/13 102/4
128/16 141/12 160/14	<b>shared [3]</b> 35/15	<b>shouting [1]</b> 171/18	45/12 45/24 48/19	104/8 110/10 115/19
184/9 191/22 201/13	39/19 59/7	<b>show [2]</b> 80/18	50/23 51/13 53/4	138/3 139/13 151/9
205/16	<b>sharing [1]</b> 15/23	113/22	61/14 62/16 63/19	151/11 162/18 172/7
<b>sensitive [1]</b> 73/6	<b>she [1]</b> 67/17	<b>showed [2]</b> 81/3	64/1 65/1 70/12 70/20	189/3 207/16 215/1
<b>sensitivity [2]</b> 117/19	<b>sheet [1]</b> 18/12	174/9	71/1 71/15 71/21	<b>situations [3]</b> 56/14
117/19	<b>shelf [1]</b> 120/11	<b>shows [4]</b> 42/13	72/19 74/16 80/4	65/16 90/2
<b>sent [4]</b> 108/25 109/1	<b>shielding [2]</b> 20/22	112/21 113/23 114/20	88/14 89/15 92/22	<b>six [2]</b> 86/6 128/1
157/24 209/11	22/18	<b>shut [1]</b> 188/19	93/9 98/14 100/8	<b>six weeks [1]</b> 128/1
<b>sentence [2]</b> 139/6	<b>shifted [2]</b> 144/18	<b>side [7]</b> 23/15 31/8	101/8 102/7 102/15	<b>size [1]</b> 133/12
212/7	176/17	31/9 46/25 71/4	104/18 104/22 109/21	<b>slide [1]</b> 214/24
<b>sentences [1]</b> 119/1	<b>shifting [2]</b> 105/20	107/14 130/7	110/17 111/17 112/16	<b>slight [4]</b> 6/24 66/2
<b>separate [3]</b> 35/4	176/17	<b>sides [6]</b> 21/21 24/10	113/21 115/17 118/8	73/6 88/15
75/3 192/15	<b>ship [1]</b> 181/1	24/21 29/13 35/1	123/17 128/2 148/5	<b>slightly [12]</b> 5/21
<b>separated [2]</b> 8/17	<b>shirk [1]</b> 91/18	80/13	167/17 167/18 171/25	13/6 19/19 24/12
58/14	<b>shock [1]</b> 147/14	<b>sign [2]</b> 38/7 107/19	171/25 172/20 173/4	35/17 41/21 71/8
<b>separately [2]</b> 47/9	<b>shoes [1]</b> 178/18	<b>signal [2]</b> 36/14	182/22 186/8 186/13	129/6 152/4 178/17
102/5	<b>shoot [1]</b> 91/9	189/24	186/20 203/15 203/17	195/11 203/9
<b>sequencing [1]</b> 5/1	<b>shores [2]</b> 142/4	<b>signalled [1]</b> 189/16	209/12 216/3	<b>slippery [1]</b> 187/3
<b>series [1]</b> 119/22	154/15	<b>significance [1]</b> 167/7	<b>Sir Chris [8]</b> 1/8 4/4	<b>slow [20]</b> 4/5 66/5
<b>serious [7]</b> 28/19	<b>short [16]</b> 41/25	<b>significant [32]</b> 2/16	28/4 64/1 112/16	77/12 124/20 124/24
29/12 111/1 117/13	43/25 44/10 58/12	3/12 5/15 9/13 9/22	118/8 173/4 203/15	134/10 137/12 139/4
122/24 140/7 144/7	60/4 74/8 76/4 80/6	19/12 27/3 30/18	<b>Sir Chris Wormald [1]</b> 167/18	176/4 177/17 177/23
<b>seriously [19]</b> 106/16	81/13 112/4 118/12	32/21 35/9 37/20	<b>Sir Christopher Wormald [1]</b> 167/17	178/1 178/4 178/21
106/21 106/25 107/23	140/1 142/20 161/15	37/24 41/16 45/1 48/6	<b>Sir Jeremy [1]</b> 19/6	183/1 183/3 195/23
108/5 109/22 112/3	171/22 173/2	48/8 55/11 92/14	<b>Sir Jonathan [5]</b>	198/12 201/6 205/21
112/7 112/18 112/19	<b>short-form [1]</b> 80/6	97/20 102/9 110/6	101/8 102/7 104/22	<b>slowed [1]</b> 125/22
112/25 113/13 113/18	<b>short-term [3]</b> 74/8	118/25 133/2 145/10	110/17 115/17	<b>slower [3]</b> 22/15
141/20 145/2 145/19	76/4 81/13	147/13 148/13 162/2	<b>Sir Jonathan Van-Tam [3]</b> 104/18	130/17 162/25
147/5 163/15 185/5	<b>shorter [1]</b> 62/4	166/17 172/14 179/2	109/21 148/5	<b>slowly [1]</b> 114/10
<b>seriousness [2]</b>	<b>shortly [2]</b> 139/19	180/1 181/10	<b>Sir Jonathan Van-Tam's [1]</b>	<b>small [25]</b> 7/2 19/9
145/17 180/20	150/23	<b>significantly [8]</b> 5/8	111/17	20/15 20/15 42/9
<b>servant [1]</b> 27/24	<b>should [81]</b> 5/5 11/11	35/11 57/17 59/22	<b>Sir Jonathan Van-Tam's [1]</b>	44/25 45/11 76/16
<b>servants [1]</b> 95/13	20/14 22/8 24/2 24/9	82/5 178/16 182/3	111/17	78/1 99/7 104/10
<b>service [2]</b> 26/12	26/12 26/13 28/24	195/25	<b>Sir Jonathan's [1]</b>	104/11 107/14 108/16
32/23	28/25 29/10 29/11	<b>signs [2]</b> 139/16	113/21	117/23 118/20 153/20
<b>services [1]</b> 77/18	29/12 29/14 30/25	141/22	<b>Sir Patrick [43]</b> 1/9	153/23 163/24 172/22
<b>set [17]</b> 24/5 33/9	31/25 44/11 47/22	<b>silver [1]</b> 13/4	16/24 17/9 17/11	179/16 179/21 185/4
33/12 43/20 45/21	49/23 49/25 50/11	<b>similar [5]</b> 91/3 98/2	18/11 19/2 19/9 19/18	189/9 208/8
49/23 53/8 65/24	52/8 52/17 53/6 56/12	159/12 164/2 170/13	20/4 20/6 20/12 29/16	<b>smaller [2]</b> 119/12
65/25 93/16 95/19	59/9 61/4 73/18 73/19	<b>similarities [1]</b>	44/2 45/12 45/24	169/9
118/23 126/17 135/22	77/15 84/17 85/24	133/25	48/19 50/23 51/13	<b>so [313]</b>
143/5 150/8 178/19	87/24 100/12 100/25	<b>similarly [1]</b> 8/14	53/4 61/14 62/16	<b>So I [1]</b> 66/8
<b>sets [3]</b> 51/3 65/23	103/8 107/20 108/3	<b>simple [1]</b> 78/5	63/19 65/1 70/20 71/1	<b>so-called [1]</b> 173/12
96/9	108/4 108/12 108/25	<b>simply [10]</b> 11/22	71/15 71/21 72/19	<b>social [17]</b> 7/22
<b>setting [3]</b> 104/24	109/14 110/13 111/6	50/4 50/8 51/17 58/8	74/16 80/4 88/14	10/23 12/15 12/18
105/8 209/16	111/19 111/21 111/25	68/18 83/15 115/18	89/15 92/22 93/9	22/11 46/20 49/11
<b>settings [2]</b> 105/14	112/1 116/11 125/21	138/5 203/4	98/14 102/15 123/17	54/17 85/4 113/12
105/15	128/7 129/17 129/24	<b>since [8]</b> 7/17 107/9	128/2 171/25 171/25	115/14 145/5 145/8
<b>settled [1]</b> 159/9		109/10 116/8 158/18		153/4 163/23 194/4

S				
<p><b>social...</b> [1] 212/2</p> <p><b>social care</b> [1] 46/20</p> <p><b>social media</b> [1] 85/4</p> <p><b>societal</b> [6] 23/12 72/14 72/23 73/1 88/12 154/7</p> <p><b>societally</b> [1] 21/24</p> <p><b>society</b> [4] 24/6 56/10 86/14 169/18</p> <p><b>sole</b> [5] 48/3 53/7 199/9 199/22 207/6</p> <p><b>solely</b> [1] 96/20</p> <p><b>solutions</b> [2] 31/17 65/13</p> <p><b>solvable</b> [1] 85/24</p> <p><b>solved</b> [1] 158/11</p> <p><b>sombrero</b> [3] 192/21 195/6 196/19</p> <p><b>some</b> [131] 1/25 5/2 5/2 6/5 10/11 14/1 15/5 15/15 16/6 19/12 20/17 21/9 21/11 22/17 24/25 25/10 28/10 28/16 30/7 31/10 31/23 34/15 34/18 35/5 37/2 38/19 38/19 39/6 39/9 40/3 40/12 41/24 42/6 42/9 44/11 44/17 44/22 46/9 51/1 51/17 51/20 53/9 54/3 54/4 55/7 57/22 60/11 60/22 62/24 63/3 64/9 66/17 66/17 67/8 69/14 72/1 74/1 75/8 75/9 75/11 78/1 79/11 79/24 80/15 82/21 83/12 85/4 85/17 85/21 89/2 91/16 92/6 92/7 92/12 92/16 94/20 95/19 99/25 103/6 105/13 105/17 110/18 116/3 116/12 117/12 121/1 121/9 122/11 124/5 124/9 124/11 125/19 126/2 126/19 127/18 127/25 130/2 132/1 132/2 133/7 133/24 134/14 139/21 147/22 147/25 157/4 159/19 160/1 160/24 163/6 167/10 177/13 184/4 187/16 190/21 192/18 195/8 195/10 195/10 197/6 197/11 197/12 201/16 202/8 202/17 204/8 208/13 210/13 213/1 213/10 214/15</p> <p><b>somebody</b> [2] 64/4 167/5</p> <p><b>somehow</b> [2] 21/12 195/20</p>	<p><b>someone</b> [9] 22/18 22/21 24/14 63/8 63/9 63/10 93/25 142/12 160/21</p> <p><b>something</b> [39] 4/24 22/1 30/11 38/1 40/10 44/6 56/10 56/12 59/14 65/13 69/13 85/18 87/23 90/5 102/2 107/9 112/8 112/9 129/11 144/5 147/13 150/14 156/2 156/10 156/11 163/14 164/10 165/12 168/14 169/11 170/2 171/5 182/18 183/25 184/23 195/20 198/19 202/7 203/22</p> <p><b>sometimes</b> [11] 15/10 37/7 53/9 67/12 68/17 69/11 71/19 117/22 125/25 141/3 146/10</p> <p><b>somewhat</b> [1] 128/8</p> <p><b>somewhere</b> [1] 158/1</p> <p><b>soon</b> [4] 27/1 93/1 148/6 204/16</p> <p><b>sophisticated</b> [3] 41/8 84/24 165/8</p> <p><b>sorry</b> [18] 1/9 22/14 76/25 106/20 119/15 124/22 134/11 154/17 158/24 172/20 172/22 179/24 183/2 183/3 190/24 196/2 198/13 201/7</p> <p><b>sort</b> [16] 42/22 43/4 45/17 46/15 52/19 59/11 70/18 78/18 125/8 126/23 129/3 146/11 159/18 168/23 189/14 203/24</p> <p><b>sort of</b> [11] 42/22 43/4 46/15 52/19 59/11 70/18 78/18 125/8 126/23 159/18 189/14</p> <p><b>sorts</b> [4] 12/11 16/16 48/25 184/13</p> <p><b>sound</b> [1] 13/6</p> <p><b>sounding</b> [1] 129/6</p> <p><b>sounds</b> [1] 77/7</p> <p><b>South</b> [7] 15/8 41/15 41/17 41/18 139/18 157/11 175/11</p> <p><b>South Africa</b> [1] 15/8</p> <p><b>South Korea</b> [6] 41/15 41/17 41/18 139/18 157/11 175/11</p> <p><b>sovereignty</b> [1] 151/10</p> <p><b>SpAd</b> [3] 143/2 152/9 154/12</p> <p><b>Spain</b> [1] 193/8</p>	<p><b>sparse</b> [2] 74/21 113/25</p> <p><b>speak</b> [2] 68/7 68/19</p> <p><b>speaking</b> [4] 46/1 64/24 90/24 148/12</p> <p><b>special</b> [2] 135/12 169/5</p> <p><b>specialising</b> [1] 2/1</p> <p><b>specialist</b> [3] 51/12 115/12 115/22</p> <p><b>specialists</b> [1] 47/1</p> <p><b>specific</b> [2] 10/18 62/18</p> <p><b>specifically</b> [4] 3/21 46/23 103/19 206/2</p> <p><b>specificity</b> [2] 117/19 117/21</p> <p><b>specifics</b> [1] 131/19</p> <p><b>spectrum</b> [1] 18/9</p> <p><b>speculative</b> [4] 205/1 205/4 205/9 205/12</p> <p><b>speeches</b> [1] 10/14</p> <p><b>speed</b> [4] 28/23 97/19 185/3 201/14</p> <p><b>speedier</b> [1] 128/9</p> <p><b>speedily</b> [3] 97/18 128/9 149/6</p> <p><b>speedy</b> [2] 130/22 165/9</p> <p><b>spend</b> [2] 31/15 51/19</p> <p><b>spending</b> [2] 33/4 183/24</p> <p><b>spent</b> [9] 18/13 74/12 78/17 78/22 95/5 125/23 184/17 187/14 203/18</p> <p><b>sphere</b> [4] 62/5 82/11 88/4 116/1</p> <p><b>SPI</b> [5] 33/19 34/17 77/10 77/10 139/19</p> <p><b>SPI-M</b> [2] 77/10 77/10</p> <p><b>SPI-M-O</b> [3] 33/19 34/17 139/19</p> <p><b>spillover</b> [4] 136/22 138/6 139/9 139/11</p> <p><b>splitting</b> [1] 43/1</p> <p><b>spoken</b> [2] 46/5 46/22</p> <p><b>spontaneous</b> [2] 82/23 83/3</p> <p><b>sporting</b> [5] 188/4 188/18 188/18 188/24 190/5</p> <p><b>spread</b> [37] 38/4 45/15 54/3 54/7 62/16 62/20 75/21 77/12 101/3 101/5 101/25 102/6 105/2 105/3 106/3 108/16 114/25 115/1 129/18 129/19 136/3 136/14 139/3 142/8 144/16 175/3</p>	<p>175/17 176/5 176/10 176/25 177/17 177/21 177/23 178/16 178/21 188/16 204/24</p> <p><b>spreading</b> [2] 101/6 102/25</p> <p><b>spreads</b> [1] 135/21</p> <p><b>spring</b> [2] 212/8 213/15</p> <p><b>spurious</b> [2] 186/22 186/22</p> <p><b>squashing</b> [5] 192/21 192/21 195/5 195/6 196/19</p> <p><b>stabs</b> [1] 209/16</p> <p><b>staff</b> [2] 36/21 163/17</p> <p><b>stage</b> [37] 4/9 10/4 13/11 32/7 32/18 34/5 34/14 56/13 57/9 89/25 101/17 103/24 105/12 105/21 107/6 107/24 110/14 112/22 114/18 115/25 116/9 133/6 133/14 138/4 139/8 140/15 142/17 143/3 143/25 153/10 175/21 176/15 179/1 180/8 194/9 198/21 208/6</p> <p><b>stages</b> [3] 91/15 178/7 178/13</p> <p><b>stance</b> [2] 20/12 161/17</p> <p><b>stand</b> [2] 31/24 201/20</p> <p><b>standalone</b> [1] 187/17</p> <p><b>standard</b> [1] 76/4</p> <p><b>start</b> [19] 1/24 10/3 20/1 35/11 55/5 100/12 100/25 104/8 111/25 114/5 117/12 119/6 125/25 153/3 168/20 168/21 170/18 193/18 193/19</p> <p><b>started</b> [8] 20/19 58/3 82/5 94/23 126/12 152/25 180/15 194/13</p> <p><b>starting</b> [7] 19/20 55/12 137/9 142/23 153/18 211/1 211/2</p> <p><b>state</b> [13] 6/16 12/14 12/19 13/9 75/20 89/23 94/17 108/3 161/8 161/22 163/23 170/23 199/8</p> <p><b>stated</b> [1] 103/4</p> <p><b>statement</b> [34] 1/18 1/19 3/14 10/9 12/9 12/23 16/6 19/24 34/17 36/6 37/6 40/20 43/15 44/25 53/11 54/11 68/18 85/2</p>	<p>109/20 110/15 118/15 123/10 123/15 127/2 154/24 160/24 164/14 164/15 181/24 196/12 197/20 209/23 212/9 214/11</p> <p><b>statements</b> [4] 1/17 78/2 184/3 206/8</p> <p><b>stay</b> [5] 54/14 57/2 58/15 83/15 86/4</p> <p><b>stay-at-home</b> [3] 54/14 57/2 86/4</p> <p><b>staying</b> [1] 193/25</p> <p><b>stays</b> [1] 115/22</p> <p><b>stemmed</b> [2] 197/11 197/13</p> <p><b>stenographer</b> [2] 4/5 124/22</p> <p><b>step</b> [3] 82/13 96/2 145/10</p> <p><b>steps</b> [12] 28/24 78/19 82/17 84/7 99/25 115/2 115/3 115/6 170/22 182/2 184/20 194/11</p> <p><b>steroid</b> [1] 5/14</p> <p><b>Steve</b> [1] 37/12</p> <p><b>Steve Powis</b> [1] 37/12</p> <p><b>stick</b> [1] 167/25</p> <p><b>still</b> [31] 34/12 44/10 60/7 60/25 78/5 90/10 92/4 105/21 109/12 112/12 113/22 115/23 116/13 118/6 139/24 140/6 143/17 159/11 163/22 176/13 176/21 188/3 191/17 196/4 202/10 202/12 203/1 207/14 212/14 212/19 213/22</p> <p><b>stocktake</b> [6] 155/20 161/3 166/21 173/11 190/22 191/14</p> <p><b>stop</b> [12] 23/9 23/10 136/14 136/14 137/11 137/13 138/16 138/17 138/22 142/3 178/2 207/18</p> <p><b>stopped</b> [2] 139/1 139/4</p> <p><b>stopping</b> [4] 20/22 56/6 138/21 150/18</p> <p><b>story</b> [1] 74/24</p> <p><b>straight</b> [1] 206/13</p> <p><b>straightforward</b> [3] 81/15 83/12 205/19</p> <p><b>strand</b> [2] 47/12 192/3</p> <p><b>strands</b> [1] 79/7</p> <p><b>strategic</b> [10] 69/7 69/9 69/10 69/12 127/5 128/23 129/13 129/20 197/12 200/20</p>

<b>S</b>	102/12 104/15 111/23 149/19 162/17 168/10	<b>surface [1]</b> 166/14 <b>surge [2]</b> 55/8 55/14 <b>surprised [1]</b> 166/23 <b>surprising [2]</b> 130/21 179/12	168/6 <b>systemically [1]</b> 25/25 <b>systems [5]</b> 14/4 43/21 44/1 44/4 44/5	<b>teaching [1]</b> 50/13 <b>team [3]</b> 36/3 178/10 196/13 <b>team's [1]</b> 34/6 <b>technical [33]</b> 13/8 13/9 14/8 17/14 24/3 24/8 31/14 35/22 37/14 38/9 39/4 39/10 39/18 57/12 73/4 86/18 91/22 93/5 96/11 96/13 116/1 121/3 141/10 141/17 142/24 144/10 148/19 149/18 158/7 158/18 181/20 196/2 196/24 <b>technically [2]</b> 190/8 202/9 <b>technocratic [4]</b> 91/19 91/21 130/3 130/5 <b>tell [4]</b> 74/23 151/8 157/21 210/9 <b>telling [4]</b> 27/19 79/2 90/6 127/7 <b>tells [1]</b> 20/11 <b>temperature [1]</b> 149/9 <b>temporary [1]</b> 92/11 <b>temptation [1]</b> 137/8 <b>ten [2]</b> 174/23 207/15 <b>tend [1]</b> 129/8 <b>tended [8]</b> 38/10 52/5 53/12 79/13 80/13 80/14 80/20 99/7 <b>tendency [2]</b> 20/5 20/6 <b>tends [2]</b> 3/23 79/9 <b>tenor [1]</b> 156/3 <b>tensor [3]</b> 18/25 21/11 44/24 <b>term [6]</b> 74/8 76/4 81/13 150/7 184/5 193/7 <b>termed [1]</b> 90/4 <b>terminology [1]</b> 139/5 <b>terms [47]</b> 3/25 6/25 10/5 19/14 21/16 23/17 24/9 30/20 39/24 42/25 45/7 47/7 48/11 52/20 60/14 80/2 82/2 88/8 89/24 94/25 119/23 122/15 123/4 124/11 127/23 128/4 131/16 135/22 136/4 142/1 142/1 142/2 145/9 149/6 150/16 150/23 151/10 156/18 165/2 165/8 169/16 177/18 182/5 183/23 188/11 197/15 202/23 <b>terrible [4]</b> 80/18 137/23 142/5 172/15
<b>strategically [3]</b> 5/19 129/22 193/8 <b>strategy [26]</b> 5/23 5/25 81/16 81/18 81/19 81/20 120/20 120/22 126/18 127/14 127/18 127/21 127/24 178/14 192/17 192/19 195/4 195/7 197/15 198/10 199/9 199/22 200/17 202/10 202/12 212/10 <b>street [3]</b> 68/12 167/6 196/13 <b>strength [2]</b> 35/20 39/21 <b>strengthened [1]</b> 181/13 <b>strengths [1]</b> 40/23 <b>stress [2]</b> 16/13 35/19 <b>stressed [1]</b> 161/17 <b>stretched [2]</b> 6/1 99/21 <b>strike [3]</b> 87/22 167/12 203/22 <b>strikes [1]</b> 195/21 <b>string [1]</b> 100/17 <b>stringent [6]</b> 148/15 149/8 210/2 212/2 213/17 214/6 <b>strokes [1]</b> 8/21 <b>strong [12]</b> 4/2 37/6 41/22 73/3 74/17 80/21 82/8 99/18 134/16 169/15 210/14 211/8 <b>stronger [2]</b> 20/16 164/22 <b>strongly [1]</b> 48/24 <b>struck [4]</b> 50/19 50/20 67/17 211/10 <b>structural [1]</b> 43/8 <b>structure [2]</b> 12/25 13/5 <b>structures [1]</b> 86/1 <b>struggled [1]</b> 41/1 <b>stuck [1]</b> 97/23 <b>studies [2]</b> 4/16 5/6 <b>study [1]</b> 30/1 <b>style [3]</b> 64/12 97/10 121/19 <b>styles [1]</b> 97/11 <b>subcommittees [3]</b> 46/17 46/18 173/19 <b>subject [7]</b> 35/4 60/7 60/12 60/13 72/22 98/5 194/23 <b>subsequent [4]</b> 72/6 101/8 211/24 213/14 <b>subsequently [9]</b> 15/17 25/15 66/1	<b>subset [1]</b> 102/10 <b>substantial [2]</b> 169/13 177/7 <b>substantially [4]</b> 53/20 76/22 92/17 159/6 <b>substantive [2]</b> 111/11 161/13 <b>substitute [1]</b> 77/16 <b>successors [1]</b> 37/11 <b>such [12]</b> 42/13 46/23 47/1 64/23 86/24 125/12 126/22 127/4 149/8 159/16 201/15 212/3 <b>suffered [1]</b> 98/19 <b>sufficient [3]</b> 82/23 134/9 180/9 <b>sufficiently [5]</b> 14/3 45/6 52/6 178/22 180/1 <b>suggest [4]</b> 29/2 111/15 139/20 202/5 <b>suggested [7]</b> 14/1 29/4 70/17 74/1 129/12 209/17 215/8 <b>suggesting [2]</b> 155/12 165/22 <b>suggestion [3]</b> 38/19 211/22 214/3 <b>suggests [2]</b> 108/11 214/8 <b>suite [1]</b> 209/16 <b>summarise [1]</b> 84/11 <b>summary [4]</b> 41/4 41/5 117/1 125/10 <b>summon [1]</b> 63/19 <b>support [4]</b> 5/12 8/10 149/13 214/5 <b>suppose [1]</b> 20/3 <b>supposed [4]</b> 47/16 126/13 203/20 209/18 <b>suppress [8]</b> 175/20 211/23 212/16 212/25 213/10 214/15 214/22 215/3 <b>suppressed [1]</b> 210/5 <b>suppressing [3]</b> 54/15 194/12 196/20 <b>suppression [7]</b> 129/18 192/19 192/22 195/7 212/10 212/24 213/23 <b>sure [16]</b> 21/7 21/20 23/16 25/23 35/21 37/21 61/1 98/25 112/9 112/17 130/19 133/13 138/6 149/1 190/17 192/14 <b>surely [5]</b> 27/12 34/3 54/24 58/17 199/5	<b>surrounding [4]</b> 44/23 114/25 175/1 188/1 <b>suspect [1]</b> 180/16 <b>suspicion [1]</b> 73/10 <b>sustain [4]</b> 109/16 168/21 200/16 207/21 <b>sustainability [2]</b> 194/22 194/23 <b>sustainable [11]</b> 103/17 104/24 108/22 132/9 133/15 133/17 133/19 134/1 139/2 175/7 194/21 <b>sustained [22]</b> 33/23 103/12 105/7 108/11 108/20 132/25 133/5 133/7 133/17 134/6 135/3 135/7 139/11 139/17 141/21 143/11 143/22 154/19 177/2 191/9 191/10 192/7 <b>sustaining [2]</b> 108/11 133/11 <b>swine [1]</b> 56/17 <b>swine flu [1]</b> 56/17 <b>swing [1]</b> 34/22 <b>switch [1]</b> 41/25 <b>sworn [3]</b> 1/5 1/6 216/3 <b>symptomatic [3]</b> 33/16 160/8 174/16 <b>symptoms [5]</b> 102/9 149/24 150/1 160/21 204/18 <b>system [66]</b> 4/22 13/15 13/16 14/23 23/6 23/12 28/23 31/6 35/8 35/8 39/13 40/19 41/2 41/8 41/14 42/7 42/13 43/1 43/3 44/6 44/9 44/17 44/18 68/4 68/10 72/4 86/16 95/11 95/17 107/19 107/19 111/5 113/16 116/6 116/11 119/12 119/23 119/24 123/4 126/21 127/6 130/22 131/13 134/22 142/20 145/3 145/6 147/12 147/21 147/23 147/25 149/12 163/21 164/16 165/2 165/4 165/9 166/10 166/12 167/22 170/6 171/13 179/14 184/22 184/25 185/2 <b>systemic [2]</b> 165/20	<b>T</b> <b>table [4]</b> 21/14 49/19 49/24 180/14 <b>tack [1]</b> 131/14 <b>tactical [5]</b> 127/14 127/18 198/10 198/14 205/8 <b>take [37]</b> 10/3 22/17 25/10 27/15 35/24 73/18 77/12 82/17 84/6 88/16 90/18 90/24 90/25 94/3 96/2 97/12 106/15 106/21 106/25 107/23 108/5 112/25 116/8 120/11 133/19 145/18 150/11 153/19 157/5 169/10 170/21 171/4 171/6 184/24 193/20 199/1 215/6 <b>taken [26]</b> 26/21 28/24 32/20 40/8 40/16 48/11 78/20 82/14 86/24 89/16 89/17 92/16 95/1 96/22 112/17 115/6 131/13 150/7 152/11 152/21 181/1 182/2 184/20 187/12 194/11 208/7 <b>takes [4]</b> 106/16 130/23 173/5 192/4 <b>taking [15]</b> 10/5 19/14 100/13 100/25 112/3 112/6 112/18 113/12 113/18 115/15 141/19 146/20 171/8 189/12 215/5 <b>talk [8]</b> 32/2 32/12 32/13 142/18 147/5 197/6 197/9 213/7 <b>talked [7]</b> 77/21 107/12 137/12 171/3 171/23 171/24 211/5 <b>talking [20]</b> 21/16 44/3 46/11 59/1 78/6 100/22 103/18 103/20 120/3 121/24 146/1 168/23 169/11 183/24 186/25 191/17 196/25 211/25 213/6 213/21 <b>Tam [9]</b> 9/4 9/19 10/2 100/9 101/8 104/18 108/6 109/21 148/5 <b>Tam's [1]</b> 111/17 <b>taxes [1]</b> 91/8 <b>TB [1]</b> 119/16 <b>teachers [1]</b> 36/20	

<b>T</b>	112/11 113/19 116/15 119/23 119/24 126/17 129/14 131/6 136/8 137/23 137/25 143/23 144/22 146/16 147/10 147/21 150/18 156/10 158/10 160/22 161/3 161/19 166/13 167/15 168/1 175/5 178/15 180/24 181/6 181/20 183/12 185/23 186/12 187/24 188/12 189/25 191/21 192/11 192/25 194/6 198/23 198/23 200/10 202/5 202/22 203/25 204/3 205/11 206/9 206/15 207/18 208/19 212/25 214/20 214/23 215/6	72/6 72/19 73/19 74/25 77/8 81/10 82/17 83/13 84/6 90/4 91/24 93/6 94/16 94/17 94/17 94/24 97/23 97/23 100/22 104/15 110/3 114/17 116/19 118/21 119/17 122/4 122/4 124/16 125/23 127/21 127/22 128/11 134/2 134/6 136/3 137/11 137/20 138/8 138/19 143/13 144/9 145/5 145/18 154/18 155/20 155/23 156/21 160/4 169/14 170/7 173/13 175/4 175/7 183/9 183/11 185/12 186/13 186/20 188/8 190/16 190/20 194/20 195/12 196/10 211/23 212/13 212/14 214/3 214/23 215/4	128/8 130/12 130/13 136/4 137/22 142/3 144/2 144/13 144/18 145/19 146/15 146/25 147/19 153/9 154/2 155/9 158/9 158/13 158/17 158/25 159/7 169/5 169/7 169/14 173/14 182/14 197/6 200/9 201/10 206/24 208/14 209/25 212/1 213/6 213/22 214/5 214/6	183/10 183/18 184/10 186/25 188/22 188/23 189/1 189/5 189/7 189/7 195/2 195/18 196/25 197/7 198/1 204/20 208/2 208/16 209/19 210/2 210/14 210/25 211/2 211/4 213/21 213/22
<b>terribly [3]</b> 69/6 74/24 203/25	<b>their [40]</b> 8/25 14/5 15/2 30/16 30/20 41/14 41/22 43/21 44/4 50/5 51/9 51/22 51/25 54/21 57/15 57/15 63/3 64/17 66/4 68/17 73/20 80/14 85/19 91/3 91/18 94/3 96/12 99/4 115/15 128/23 135/4 136/20 148/10 180/17 189/2 204/19 208/22 209/15 210/1 210/24	<b>they [187]</b> 1/20 3/24 8/12 8/14 8/16 14/9 14/20 15/13 15/22 16/24 19/16 23/2 23/2 26/15 26/17 27/12 27/14 27/15 39/7 41/19 41/20 41/20 41/20 41/22 50/22 50/22 51/7 51/8 51/15 51/21 51/25 53/1 57/16 57/17 57/24 58/11 62/3 63/11 63/12 63/12 63/13 63/14 63/18 63/24 64/3 64/4 64/10 64/18 64/20 64/23 65/17 65/19 65/20 67/19 67/21 68/6 68/8 68/9 68/16 69/17 72/5 73/19 75/9 75/10 75/12 75/13 78/7 78/8 79/13 79/14 80/7 80/13 80/22 80/23 80/25 80/25 81/1 82/14 85/21 86/7 86/8 86/11 86/13 86/14 86/15 86/25 87/1 87/16 87/19 87/20 87/20 87/21 90/8 90/13 90/18 90/23 91/18 91/19 91/25 92/20 93/22 93/23 94/3 94/20 94/21 95/2 95/2 95/3 96/9 97/23 97/23 98/25 109/16 112/14 112/17 121/17 123/20 124/9 126/4 126/7 126/8 126/13 126/22 128/9 130/7 130/14 134/2 134/15 135/16 140/4 140/5 143/21 144/18 144/25 145/12 145/13 147/4 147/15 148/23 149/3 149/10 149/14 149/15 149/16 149/19 150/7 155/4 156/6 158/3 158/15 159/22 164/8 169/5 169/7 171/7 176/23 177/2 178/22 179/25 180/1 180/9	<b>they'd [2]</b> 26/5 68/7 <b>they're [12]</b> 49/21 49/21 64/18 98/15 102/10 158/14 160/1 169/8 169/17 184/10 195/19 195/19 <b>they've [5]</b> 147/7 147/7 147/8 147/9 179/18 <b>thin [1]</b> 122/17 <b>thing [36]</b> 19/17 24/17 28/2 29/20 30/17 32/1 51/10 58/25 66/10 67/18 69/6 70/14 70/15 71/11 75/2 85/8 88/20 91/1 92/24 109/11 117/18 117/20 117/21 122/15 122/20 127/20 127/24 142/14 149/21 160/22 183/12 184/9 197/14 208/19 214/21 215/7 <b>things [85]</b> 8/3 8/21 20/9 21/1 24/15 28/11 28/15 28/19 29/5 29/13 30/17 31/9 32/10 32/16 32/20 33/9 38/2 40/4 41/20 47/7 47/17 48/20 48/21 55/21 56/6 62/18 65/17 76/10 77/20 82/4 91/6 92/3 98/8 98/23 99/10 105/17 108/4 110/22 114/6 114/21 116/21 122/11 130/3 130/10 130/13 136/16 137/11 140/3 145/14 146/9 146/12 147/3 147/11 147/16 147/20 147/22 147/23 147/24 151/22 152/22 155/10 159/20 159/20 169/6 169/14 172/8 177/25 179/11 189/10 190/1 192/2 193/12 193/13 193/14 193/18 193/22 194/2 194/18 195/17 197/2 198/21 203/20 205/17 211/9 213/6 <b>think [451]</b> <b>think-through [1]</b> 164/23 <b>thinker [1]</b> 110/20	
<b>test [9]</b> 40/25 41/3 41/8 75/9 78/7 78/8 81/9 99/11 173/24	<b>theoretical [1]</b> 48/21 <b>theoretically [1]</b> 111/25 <b>theory [1]</b> 196/4 <b>therapeutic [2]</b> 5/11 5/14 <b>there [369]</b> <b>there's [27]</b> 41/12 55/21 57/11 60/12 60/13 65/8 83/22 87/2 92/4 113/4 131/19 131/19 135/10 138/16 143/10 149/18 158/5 168/8 171/24 173/8 173/18 189/21 192/19 200/5 204/3 211/22 212/15 <b>thereafter [4]</b> 41/2 139/19 150/23 174/17 <b>thereby [2]</b> 74/13 129/23 <b>therefore [25]</b> 6/22 7/25 12/23 12/24 13/4 34/1 48/10 49/6 61/23 66/7 77/4 82/3 87/1 88/1 89/17 103/10 106/12 108/13 142/4 156/9 178/23 182/4 190/20 196/1 208/9 <b>these [77]</b> 15/22 18/8 22/1 28/11 28/14 28/15 28/19 29/19 31/7 38/2 38/15 39/9 40/8 40/15 53/3 53/15 56/6 56/7 58/16 62/5 65/16 65/17 71/3 75/8 75/11 78/1 78/9 83/20 86/19 86/21 92/19 96/21 98/8 108/4 109/4 109/6 110/3 113/3 115/9 127/25	<b>tested [2]</b> 18/16 39/20 <b>testing [5]</b> 37/22 37/22 41/2 75/3 129/4 <b>text [2]</b> 167/16 199/19 <b>Thailand [2]</b> 148/7 157/11 <b>than [61]</b> 7/4 11/5 11/16 17/24 20/6 20/16 21/12 21/16 29/4 32/5 34/24 44/12 47/25 50/4 55/15 56/19 65/8 76/9 76/22 77/20 79/14 92/10 104/5 105/22 105/24 108/18 109/1 109/17 110/14 118/3 118/4 121/23 127/11 128/9 129/4 130/17 132/23 136/24 142/8 148/16 152/5 152/15 157/5 168/22 168/25 175/23 176/15 176/18 177/12 184/6 187/14 188/12 189/6 195/18 196/16 197/7 199/23 200/14 201/17 210/2 210/22 <b>thank [10]</b> 1/10 1/12 1/15 64/22 84/10 172/24 173/10 190/18 204/5 215/11 <b>thank you [9]</b> 1/10 1/12 1/15 64/22 84/10 172/24 173/10 190/18 204/5 <b>Thanks [3]</b> 204/13 206/18 206/23 <b>that [1211]</b> <b>that point [1]</b> 160/13 <b>that's [101]</b> 3/2 6/19 8/24 9/9 9/10 16/13 28/2 29/14 29/19 30/23 36/7 43/3 44/25 45/2 50/5 51/24 56/12 58/12 59/19 62/15 67/25 70/13 73/6 73/12 73/12 73/19 81/10 81/14 82/6 83/11 83/18 84/6 87/13 93/14 93/20 93/20 97/8 97/14 98/1 105/14 105/15 106/13 109/7 110/24 112/11	<b>test [9]</b> 40/25 41/3 41/8 75/9 78/7 78/8 81/9 99/11 173/24 <b>tested [2]</b> 18/16 39/20 <b>testing [5]</b> 37/22 37/22 41/2 75/3 129/4 <b>text [2]</b> 167/16 199/19 <b>Thailand [2]</b> 148/7 157/11 <b>than [61]</b> 7/4 11/5 11/16 17/24 20/6 20/16 21/12 21/16 29/4 32/5 34/24 44/12 47/25 50/4 55/15 56/19 65/8 76/9 76/22 77/20 79/14 92/10 104/5 105/22 105/24 108/18 109/1 109/17 110/14 118/3 118/4 121/23 127/11 128/9 129/4 130/17 132/23 136/24 142/8 148/16 152/5 152/15 157/5 168/22 168/25 175/23 176/15 176/18 177/12 184/6 187/14 188/12 189/6 195/18 196/16 197/7 199/23 200/14 201/17 210/2 210/22 <b>thank [10]</b> 1/10 1/12 1/15 64/22 84/10 172/24 173/10 190/18 204/5 215/11 <b>thank you [9]</b> 1/10 1/12 1/15 64/22 84/10 172/24 173/10 190/18 204/5 <b>Thanks [3]</b> 204/13 206/18 206/23 <b>that [1211]</b> <b>that point [1]</b> 160/13 <b>that's [101]</b> 3/2 6/19 8/24 9/9 9/10 16/13 28/2 29/14 29/19 30/23 36/7 43/3 44/25 45/2 50/5 51/24 56/12 58/12 59/19 62/15 67/25 70/13 73/6 73/12 73/12 73/19 81/10 81/14 82/6 83/11 83/18 84/6 87/13 93/14 93/20 93/20 97/8 97/14 98/1 105/14 105/15 106/13 109/7 110/24 112/11	

<b>T</b>	193/6	46/3 48/22 53/18 54/1 54/2 57/4 57/5 57/13 58/20 61/8 72/8 74/12 78/16 78/22 82/1 82/7 84/3 84/5 85/17 85/20 90/17 90/17 92/8 95/5 95/7 96/5 99/20 104/5 104/11 115/23 116/12 117/8 117/11 117/23 118/5 119/19 119/22 120/2 121/6 122/21 123/25 130/23 133/17 134/2 134/13 135/24 136/1 136/5 136/10 140/5 140/14 144/2 144/5 150/8 159/1 159/6 159/17 159/21 159/22 167/13 181/2 183/24 184/1 184/16 185/21 185/25 187/7 187/11 187/12 187/13 187/13 189/23 190/12 190/21 191/22 191/23 192/12 192/15 198/7 198/18 199/12 200/2 201/8 203/10 203/18 203/23 206/1 206/9 208/2 213/18 214/15	138/19 146/4 158/11 208/2 <b>top [11]</b> 18/1 18/2 23/15 42/16 82/4 127/24 156/7 164/2 165/13 167/23 175/25 <b>topic [1]</b> 54/10 <b>total [1]</b> 11/15 <b>towards [4]</b> 21/18 126/23 140/17 185/21 <b>trace [1]</b> 41/8 <b>traced [1]</b> 174/11 <b>tracing [1]</b> 204/17 <b>track [2]</b> 127/13 131/4 <b>traction [2]</b> 117/8 117/9 <b>trade [2]</b> 147/7 148/14 <b>traditional [1]</b> 166/12 <b>tragic [1]</b> 34/25 <b>train [1]</b> 32/21 <b>trained [1]</b> 179/14 <b>training [2]</b> 168/17 169/20 <b>trains [1]</b> 188/16 <b>trajectory [1]</b> 81/22 <b>trans [1]</b> 37/5 <b>transmissibility [3]</b> 135/7 136/2 136/5 <b>transmissible [3]</b> 102/17 135/9 181/10 <b>transmission [80]</b> 23/24 33/23 34/16 56/21 72/2 75/22 82/2 89/24 101/11 101/13 101/16 102/3 102/16 102/18 102/20 103/5 103/7 103/9 103/12 103/17 103/18 103/22 104/2 104/21 104/23 105/7 105/8 105/13 106/10 108/12 108/19 110/1 114/23 129/3 132/8 132/9 132/25 133/1 133/5 133/7 133/10 133/11 133/15 134/2 134/5 134/8 135/4 135/8 137/19 137/25 138/25 139/2 139/12 139/17 141/22 143/12 143/23 144/16 152/10 154/19 154/20 157/15 160/7 160/8 160/11 160/16 160/17 160/18 175/16 176/13 177/2 178/12 181/11 181/14 191/9 191/11 192/7 205/10 206/6 207/13 <b>transmitted [2]</b> 32/4 109/4 <b>transmitting [1]</b> 193/5	<b>transparency [2]</b> 98/16 206/11 <b>transparent [2]</b> 29/14 72/25 <b>transparently [1]</b> 73/7 <b>transpired [2]</b> 153/5 168/10 <b>travel [2]</b> 148/10 161/22 <b>travelled [2]</b> 109/5 157/15 <b>Treasury [3]</b> 63/11 73/10 170/2 <b>treated [3]</b> 111/9 138/13 164/6 <b>treatment [1]</b> 214/19 <b>Trial [1]</b> 5/7 <b>trials [2]</b> 4/20 38/16 <b>triangulated [1]</b> 158/1 <b>tribute [3]</b> 36/1 71/15 159/13 <b>tried [11]</b> 11/10 11/14 16/1 60/10 61/14 61/16 67/19 67/21 81/12 136/17 172/4 <b>trigger [15]</b> 101/9 101/12 104/25 105/4 106/7 106/8 106/12 106/15 107/1 107/25 107/25 114/5 144/19 145/6 153/6 <b>triggered [4]</b> 144/13 145/19 147/1 152/18 <b>triggers [30]</b> 100/10 100/12 100/24 101/7 101/20 102/11 104/25 105/1 105/5 106/13 107/7 107/9 112/13 113/3 143/15 143/18 143/20 144/11 144/13 144/14 144/18 144/22 145/8 145/12 145/16 145/19 146/15 146/25 152/18 154/2 <b>trivial [3]</b> 109/7 110/6 207/3 <b>tropical [9]</b> 2/3 2/5 2/10 2/13 79/1 80/2 173/23 188/10 188/14 <b>trouble [4]</b> 26/5 139/8 139/14 194/5 <b>true [11]</b> 36/7 53/16 53/17 76/19 81/9 81/9 88/25 127/25 135/11 175/21 185/11 <b>truly [1]</b> 103/22 <b>trumped [2]</b> 72/20 73/17 <b>trumps [2]</b> 82/7 122/21 <b>Truss [1]</b> 96/9 <b>Trust [1]</b> 2/4
<b>thinking [14]</b> 24/24 24/25 37/22 58/11 69/16 70/25 104/6 121/6 121/20 126/22 127/5 145/15 147/6 185/5 <b>thinks [1]</b> 185/1 <b>third [2]</b> 90/1 206/3 <b>thirdly [1]</b> 149/16 <b>this [596]</b> <b>Thomas [1]</b> 9/7 <b>thoroughly [1]</b> 61/6 <b>those [73]</b> 5/16 11/11 15/14 19/2 20/23 20/24 20/24 21/11 21/17 21/25 23/4 23/14 24/8 24/8 28/7 29/13 31/16 32/16 34/25 35/1 36/8 36/22 42/5 45/17 46/4 51/20 64/25 66/13 69/15 69/21 76/1 76/3 76/11 79/4 79/17 82/15 83/17 84/2 86/3 101/7 101/20 102/1 116/23 117/24 124/10 124/17 126/22 128/16 130/15 130/21 134/1 134/8 134/23 134/24 135/21 143/22 146/12 153/23 155/17 156/25 159/16 159/19 160/2 160/23 178/12 178/19 187/2 192/15 196/5 198/14 207/15 212/3 214/4 <b>those weeks [1]</b> 28/7 <b>though [8]</b> 76/14 85/10 104/1 128/17 144/1 150/14 152/7 194/9 <b>thought [49]</b> 11/6 12/2 12/2 17/24 19/10 19/18 29/10 29/11 34/18 36/13 38/8 41/20 63/19 67/14 69/14 71/15 77/13 80/4 82/1 82/1 85/9 87/3 87/5 87/14 92/24 93/18 95/13 101/15 113/16 118/19 122/10 125/9 127/16 128/6 131/13 131/22 133/22 136/10 142/25 148/22 148/23 149/2 158/8 158/12 172/17 198/5 198/15 201/2 211/7 <b>thought-out [1]</b> 128/6 <b>thoughts [1]</b> 180/17 <b>thousand [1]</b> 113/10 <b>thousands [5]</b> 98/13 100/5 167/11 167/12	<b>thrashed [1]</b> 18/20 <b>threat [44]</b> 9/23 9/25 35/15 109/23 153/4 154/13 154/20 154/22 155/15 156/1 156/13 156/14 162/11 164/4 165/5 166/3 166/8 167/2 167/4 167/7 167/23 168/5 168/18 168/22 168/23 168/24 168/25 169/21 170/14 171/14 171/15 171/18 171/20 173/17 177/7 178/25 179/3 180/1 180/2 180/3 180/3 185/10 187/8 191/15 <b>threats [7]</b> 164/6 164/9 164/17 164/17 164/17 165/9 166/11 <b>three [24]</b> 9/3 14/11 32/5 40/2 49/17 55/11 74/21 100/12 100/24 101/20 121/21 124/8 124/10 127/14 158/16 169/25 187/9 191/12 198/3 198/4 198/14 210/21 213/20 213/24 <b>three hours [1]</b> 49/17 <b>three months [2]</b> 74/21 191/12 <b>three weeks [3]</b> 32/5 158/16 187/9 <b>three-page strategy [1]</b> 127/14 <b>threshold [1]</b> 116/3 <b>through [31]</b> 17/8 21/19 24/23 24/24 25/1 35/25 38/8 39/12 39/13 47/13 50/18 52/22 53/2 72/19 92/9 97/21 100/4 104/7 121/13 124/11 132/1 156/5 156/20 164/23 170/20 172/3 172/17 193/21 198/5 198/15 213/7 <b>throughout [10]</b> 3/5 12/18 13/17 14/6 36/4 55/6 129/25 155/22 173/15 193/5 <b>throwing [1]</b> 65/21 <b>thrown [1]</b> 59/2 <b>ticked [1]</b> 74/24 <b>Tier [1]</b> 10/16 <b>Tier 3 [1]</b> 10/16 <b>tiers [1]</b> 86/6 <b>till [1]</b> 24/1 <b>time [111]</b> 1/10 1/16 7/17 9/3 9/24 13/7 15/1 15/18 17/6 21/10 21/17 25/10 25/12 26/2 26/14 26/24 34/7 34/15 34/20 41/25	<b>timeliness [1]</b> 49/15 <b>timely [1]</b> 201/14 <b>times [10]</b> 12/22 14/13 28/4 36/6 37/21 84/4 94/5 99/6 174/23 211/6 <b>tip [1]</b> 102/22 <b>today [1]</b> 50/9 <b>today's [1]</b> 1/4 <b>today, [1]</b> 172/20 <b>today, Sir Chris [1]</b> 172/20 <b>together [13]</b> 1/20 3/24 5/3 14/16 17/4 35/14 36/3 39/1 39/2 108/24 123/19 124/2 129/16 <b>toing [2]</b> 167/10 168/3 <b>told [4]</b> 19/8 42/22 64/4 177/17 <b>tomorrow [4]</b> 9/5 173/6 206/18 215/11 <b>tonight [1]</b> 173/7 <b>too [20]</b> 21/2 21/5 21/8 27/1 27/2 29/23 29/24 45/11 45/14 51/19 56/21 71/1 74/11 74/11 114/10 114/10 114/10 148/6 168/11 200/6 <b>took [18]</b> 9/23 10/1 20/13 23/3 41/21 50/23 87/21 92/8 92/11 97/6 110/25 115/18 116/17 128/10		



<b>T</b>	40/1 44/9 58/5 74/25 76/7 89/22 90/3 95/1 100/14 101/1 137/19 137/25 138/7 138/25 140/25 143/24 151/5 151/10 153/4 153/11 153/21 153/21 159/13 163/19 168/21 169/3 175/3 175/4 176/3 191/8 200/18	<b>understanding [11]</b> 15/16 29/1 30/24 42/13 62/8 69/20 155/24 167/2 176/10 195/3 205/5	195/13	91/7 116/20 132/13 166/6 168/24 178/22 182/16 182/16 182/19 184/1 184/4 184/9 185/24 187/10 191/22
<b>trusts [2]</b> 125/5 126/20	<b>UK Government [1]</b> 7/1	<b>understands [1]</b> 61/25	<b>unpalatable [1]</b> 27/18	<b>used [17]</b> 28/8 28/9 41/22 55/24 56/10 57/25 58/3 59/2 63/5 74/8 114/17 125/13 144/22 179/8 184/12 184/15 186/24
<b>truth [4]</b> 81/16 92/2 162/1 190/3	<b>UK's [2]</b> 118/18 123/22	<b>understatement [1]</b> 172/14	<b>unreasonable [1]</b> 102/12	<b>useful [15]</b> 11/8 30/10 37/10 65/2 69/6 75/8 76/20 120/6 120/7 122/10 156/5 177/9 186/1 187/14 193/16
<b>try [13]</b> 17/3 17/12 17/22 22/14 24/13 61/13 78/13 84/16 100/6 124/23 156/21 197/6 201/11	<b>UK-resourced [1]</b> 39/8	<b>understood [10]</b> 54/20 80/23 83/4 94/1 150/22 155/15 156/15 165/15 184/7 184/11	<b>unrecorded [2]</b> 70/24 98/7	<b>uses [3]</b> 74/19 78/1 110/3
<b>trying [31]</b> 21/1 33/7 33/8 34/8 35/4 40/5 51/24 71/6 71/7 78/18 80/6 81/4 91/18 107/4 136/16 137/5 167/18 185/21 186/3 187/15 189/24 194/9 200/9 203/18 203/24 206/11 207/18 207/19 208/20 212/23 213/7	<b>UKHSA [1]</b> 43/3	<b>undiagnosed [1]</b> 100/20	<b>unreliable [1]</b> 51/18	<b>using [7]</b> 41/14 77/19 81/7 139/5 184/11 193/24 205/13
<b>Tuesday [1]</b> 1/1	<b>ultimate [1]</b> 89/10	<b>undocumented [2]</b> 70/21 70/21	<b>unruly [1]</b> 51/18	<b>usually [5]</b> 15/1 38/2 39/3 49/16 126/11
<b>turn [8]</b> 9/12 58/25 85/25 99/25 104/9 138/8 187/16 196/6	<b>ultimately [15]</b> 70/20 74/10 86/11 86/19 90/10 91/25 92/19 93/21 96/23 114/11 125/9 195/16 195/18 196/22 213/19	<b>undoubtedly [3]</b> 45/17 59/15 94/22	<b>up [68]</b> 1/19 4/6 4/16 7/11 15/19 18/3 22/4 22/8 22/19 23/21 31/2 38/7 40/6 40/6 41/2 41/8 41/13 41/20 42/11 43/20 55/17 55/19 55/22 59/18 65/12 67/5 68/12 71/11 74/24 76/17 80/15 82/25 88/10 88/11 90/3 104/15 107/4 107/24 117/20 117/21 118/24 123/19 124/5 128/14 130/24 138/12 143/5 145/10 150/8 157/24 158/22 159/11 160/5 165/1 165/17 167/5 175/23 176/19 177/8 187/8 187/18 193/19 193/21 193/22 193/23 194/2 197/16 207/20	<b>utilised [1]</b> 144/11
<b>turning [1]</b> 6/5	<b>unable [1]</b> 160/10	<b>unduly [1]</b> 150/12	<b>update [3]</b> 161/15 161/16 191/2	<b>V</b>
<b>turns [1]</b> 150/2	<b>unacceptable [1]</b> 67/23	<b>unfair [2]</b> 32/1 155/6	<b>upon [20]</b> 10/12 10/19 11/3 11/22 41/2 48/9 68/2 71/1 72/17 74/13 76/3 82/22 84/23 135/5 140/20 152/7 161/6 162/2 182/1 203/4	<b>vaccination [2]</b> 36/22 38/13
<b>twisted [1]</b> 87/18	<b>unaware [2]</b> 155/4 199/21	<b>unfortunate [1]</b> 190/7	<b>unwieldy [1]</b> 51/18	<b>vaccine [5]</b> 4/21 214/13 214/14 214/17 214/22
<b>two [44]</b> 5/25 9/13 17/16 21/1 21/11 21/17 22/25 27/20 31/9 31/16 32/3 32/8 33/20 41/12 49/16 62/15 63/20 65/9 65/23 70/1 71/23 79/20 90/2 92/3 93/19 102/10 104/17 109/10 133/19 134/8 135/14 138/1 141/18 144/25 153/17 153/21 160/23 165/18 177/24 182/20 187/8 196/5 207/16 212/19	<b>uncertain [1]</b> 140/15	<b>unfortunately [3]</b> 76/6 80/10 92/15	<b>unwieldy [1]</b> 51/18	<b>vaccines [2]</b> 25/9 47/12
<b>two days [1]</b> 33/20	<b>uncoiled [3]</b> 195/8 212/7 213/15	<b>unhelpful [5]</b> 108/1 144/23 144/23 171/11 188/7	<b>unwieldy [1]</b> 51/18	<b>valid [1]</b> 165/25
<b>two months [2]</b> 9/13 27/20	<b>uncontained [1]</b> 206/5	<b>unilateral [1]</b> 151/4	<b>unwieldy [1]</b> 51/18	<b>Vallance [8]</b> 3/11 5/3 16/20 18/24 29/3 135/1 186/8 186/13
<b>two weeks [2]</b> 32/3 109/10	<b>under [16]</b> 8/18 8/23 36/11 61/11 115/8 124/8 135/18 155/10 156/2 164/13 168/15 171/2 177/5 182/18 198/14 207/14	<b>unique [1]</b> 97/7	<b>unwieldy [1]</b> 51/18	<b>value [3]</b> 11/6 135/24 200/16
<b>two years [1]</b> 212/19	<b>under [16]</b> 8/18 8/23 36/11 61/11 115/8 124/8 135/18 155/10 156/2 164/13 168/15 171/2 177/5 182/18 198/14 207/14	<b>United [34]</b> 6/7 6/23 14/2 25/16 33/23 35/7 35/16 41/9 77/11 89/24 109/24 118/22 123/8 134/19 136/7 141/25 143/14 143/19 152/10 152/12 157/12 167/3 175/12 176/8 176/11 177/1 192/7 195/4 203/8 204/14 205/11 206/25 207/4 209/6	<b>unwieldy [1]</b> 51/18	<b>valued [1]</b> 99/12
<b>two-month [1]</b> 104/17	<b>under way [1]</b> 124/8	<b>United Kingdom [29]</b> 6/23 14/2 25/16 33/23 35/7 35/16 41/9 77/11 89/24 109/24 118/22 123/8 134/19 136/7 141/25 143/14 157/12 167/3 175/12 176/8 176/11 177/1 192/7 195/4 204/14 205/11 206/25 207/4 209/6	<b>unwieldy [1]</b> 51/18	<b>Van [10]</b> 9/4 9/19 10/2 100/9 101/8 104/18 108/6 109/21 111/17 148/5
<b>type [3]</b> 84/24 168/22 185/10	<b>under-prepared [1]</b> 156/2	<b>Universal [1]</b> 54/5	<b>unwieldy [1]</b> 51/18	<b>vanguard [1]</b> 77/14
<b>types [1]</b> 43/24	<b>undercalling [1]</b> 19/25	<b>University [2]</b> 2/7 2/8	<b>unwieldy [1]</b> 51/18	<b>variants [2]</b> 5/1 10/24
<b>typically [1]</b> 132/22	<b>underestimated [1]</b> 63/3	<b>unknown [1]</b> 132/9	<b>unwieldy [1]</b> 51/18	<b>varied [1]</b> 21/17
<b>U</b>	<b>underestimating [1]</b> 183/18	<b>unless [5]</b> 26/15 103/14 112/7 137/22 195/14	<b>unwieldy [1]</b> 51/18	<b>variety [11]</b> 9/8 26/20 32/20 57/19 82/14 130/17 150/25 170/16 173/20 184/13 209/13
<b>UCL [1]</b> 2/4	<b>undermine [1]</b> 187/2	<b>unmitigated [4]</b> 182/1 182/4 183/6	<b>unwieldy [1]</b> 51/18	<b>various [15]</b> 13/9 39/25 47/7 75/4 78/8 78/19 85/20 92/1 114/13 124/17 127/6 182/6 182/23 184/3 199/18
<b>UK [54]</b> 3/25 4/2 4/14 4/24 6/25 7/1 7/3 9/23 12/16 14/19 15/24 15/25 23/23 32/5 32/6 35/13 37/5 37/18 39/5 39/8 39/9 39/17 39/20	<b>underneath [1]</b> 127/15		<b>unwieldy [1]</b> 51/18	<b>vary [2]</b> 83/14 159/22

<p><b>V</b></p> <p><b>vehicle... [3]</b> 47/23 47/24 70/9</p> <p><b>ventilated [1]</b> 5/13</p> <p><b>verbal [9]</b> 61/21 64/6 64/8 65/2 65/9 66/16 69/18 98/6 98/12</p> <p><b>verbally [3]</b> 64/11 70/21 70/23</p> <p><b>verbally-based [1]</b> 64/11</p> <p><b>versions [3]</b> 63/20 157/25 174/5</p> <p><b>very [177]</b> 3/12 4/2 5/6 8/3 9/17 9/19 10/1 12/4 14/19 18/3 19/10 19/12 20/14 20/25 21/22 23/7 23/24 26/5 26/16 27/17 27/18 29/12 29/21 30/12 33/12 35/12 36/4 36/8 36/20 39/12 39/23 40/13 41/16 41/22 43/3 44/15 45/10 45/14 46/9 46/10 48/19 48/19 48/22 52/23 52/25 53/20 58/1 59/20 60/8 60/17 62/6 63/5 64/19 66/19 67/7 74/10 74/21 76/9 76/17 76/20 77/25 79/12 79/15 79/22 80/6 81/13 86/13 86/14 87/22 88/23 89/15 90/9 90/25 91/6 92/6 92/7 92/7 93/1 93/3 95/6 95/15 95/15 95/21 96/3 99/17 101/24 101/25 102/2 102/7 104/11 105/4 106/19 107/14 110/19 110/19 111/3 111/16 111/24 112/3 112/7 113/13 113/18 116/15 117/8 117/9 118/8 119/10 119/10 121/14 122/24 125/2 125/17 128/4 131/1 134/12 135/8 136/6 140/10 140/11 141/19 142/6 142/16 142/19 144/2 144/4 144/4 144/7 147/16 147/22 149/11 149/14 149/15 150/10 150/19 150/22 151/4 151/4 151/5 151/5 153/19 155/8 156/3 158/2 158/8 158/17 162/14 163/15 164/2 164/12 165/25 169/12 170/17 170/20 171/24 172/18 174/9 175/15 177/11 178/11 179/16</p>	<p>179/21 179/21 181/19 183/8 183/21 186/18 188/6 194/17 200/5 204/16 206/7 207/21 208/13 210/14 210/16 212/2 215/11</p> <p><b>via [5]</b> 47/13 48/23 51/4 62/14 88/22</p> <p><b>vicinity [1]</b> 147/14</p> <p><b>view [146]</b> 5/22 11/10 18/1 19/8 19/21 19/21 19/22 21/7 22/9 22/25 24/4 24/22 25/2 25/6 26/6 26/14 27/7 27/14 27/22 32/24 34/9 35/23 36/15 36/19 36/21 36/23 37/17 38/2 38/6 38/10 39/11 39/11 42/23 44/10 49/22 50/10 50/24 53/14 53/14 55/16 56/14 59/6 59/7 60/19 60/19 60/20 61/2 61/13 61/19 62/25 64/17 65/22 65/25 66/4 67/24 70/12 73/18 77/21 78/10 85/24 90/8 90/10 90/13 90/16 90/22 92/18 94/13 94/15 94/19 94/23 95/1 100/24 103/23 104/4 110/5 111/1 113/15 117/24 120/5 120/6 121/3 121/10 121/19 122/1 122/16 122/23 123/25 126/2 127/10 128/15 129/1 136/22 140/17 148/24 152/25 156/5 158/10 162/22 164/7 164/16 166/10 169/2 169/5 169/6 170/3 170/13 170/24 170/25 171/4 171/6 171/7 172/6 172/16 182/20 184/22 188/2 192/1 194/15 194/17 195/11 195/18 196/22 196/24 197/12 198/10 198/16 199/6 202/16 203/7 203/20 205/6 205/24 208/7 208/13 208/16 209/8 209/9 210/14 210/17 210/18 210/24 211/2 211/16 213/24 213/25 214/2</p> <p><b>views [17]</b> 17/23 17/24 36/22 61/15 61/21 64/23 65/4 80/21 96/18 140/3 140/21 148/10 150/12 181/23 197/21 204/22 208/21</p> <p><b>virologists [1]</b> 79/14</p>	<p><b>virology [1]</b> 52/3</p> <p><b>virtually [2]</b> 16/24 202/3</p> <p><b>virtue [2]</b> 73/22 85/12</p> <p><b>virus [41]</b> 74/15 75/20 75/22 89/25 101/11 102/17 102/22 106/24 109/23 114/23 115/3 115/4 121/4 123/3 129/20 135/9 136/3 137/20 137/22 138/25 142/3 148/18 154/14 159/20 174/23 174/25 174/25 175/3 175/6 175/17 176/3 176/8 176/10 176/22 178/20 180/25 181/9 193/4 213/13 213/14 215/3</p> <p><b>viruses [1]</b> 137/24</p> <p><b>vital [2]</b> 4/25 187/7</p> <p><b>voices [2]</b> 62/10 62/13</p> <p><b>voluntarily [1]</b> 83/23</p> <p><b>voluntary [2]</b> 83/3 84/12</p> <hr/> <p><b>W</b></p> <p><b>wading [1]</b> 19/1</p> <p><b>wait [14]</b> 20/7 20/8 20/10 21/17 29/5 110/11 111/18 114/7 114/17 114/20 115/16 116/20 124/16 128/22</p> <p><b>Waite [1]</b> 9/7</p> <p><b>waiting [3]</b> 19/1 69/11 117/9</p> <p><b>walk [1]</b> 156/20</p> <p><b>want [36]</b> 3/16 25/22 26/22 49/14 49/14 59/11 68/13 85/25 87/12 90/15 94/3 94/14 97/12 101/19 115/5 116/18 130/25 131/24 133/20 138/10 146/5 148/24 152/3 162/14 162/24 166/14 171/6 172/11 180/16 180/17 181/22 187/1 187/4 200/3 201/24 213/3</p> <p><b>wanted [25]</b> 15/25 36/14 36/18 36/21 37/16 38/5 41/20 53/16 68/9 68/15 68/25 70/6 81/1 94/21 101/23 117/1 136/20 137/14 138/20 145/18 148/21 149/1 178/1 192/14 205/18</p> <p><b>wanting [4]</b> 29/4 106/21 106/25 112/24</p> <p><b>wants [1]</b> 69/21</p> <p><b>warm [1]</b> 73/12</p>	<p><b>warmed [1]</b> 73/11</p> <p><b>warn [1]</b> 28/6</p> <p><b>warned [1]</b> 172/21</p> <p><b>warning [1]</b> 158/3</p> <p><b>Warr [1]</b> 152/9</p> <p><b>was [791]</b></p> <p><b>was got [1]</b> 158/12</p> <p><b>was X [1]</b> 61/2</p> <p><b>wash [1]</b> 30/15</p> <p><b>washing [1]</b> 193/20</p> <p><b>wasn't [67]</b> 11/2 11/21 12/1 17/1 39/18 43/4 47/8 48/7 50/10 50/19 52/3 53/24 55/16 55/17 55/18 55/19 55/19 57/3 57/5 61/12 65/10 67/13 67/23 69/3 69/6 72/7 75/23 76/14 77/6 90/6 90/22 90/24 91/14 91/17 93/19 94/14 95/4 95/21 99/13 99/13 99/18 119/18 120/4 120/8 121/10 121/17 124/4 127/16 127/19 133/5 143/6 154/22 155/15 155/16 155/16 156/13 162/21 163/5 163/6 167/13 170/10 176/24 183/21 200/3 202/9 208/3 214/1</p> <p><b>wasn't weeks [1]</b> 200/3</p> <p><b>watch [2]</b> 32/12 188/20</p> <p><b>watched [1]</b> 189/7</p> <p><b>wave [35]</b> 15/7 15/8 15/11 15/11 15/14 15/24 21/9 55/9 55/13 55/15 58/25 137/20 192/10 192/20 193/11 193/12 195/5 195/8 195/12 195/13 196/6 210/5 210/6 210/7 210/15 210/20 211/23 211/24 212/15 212/20 213/11 213/22 214/16 214/19 214/23</p> <p><b>waves [2]</b> 15/9 84/20</p> <p><b>waving [1]</b> 124/23</p> <p><b>way [81]</b> 1/16 4/17 6/2 8/17 14/17 16/4 16/17 19/23 24/12 27/5 27/22 27/25 28/1 30/2 33/3 33/5 34/3 34/13 35/4 35/25 36/20 39/12 39/13 42/25 44/22 54/8 58/24 59/3 60/9 61/7 64/10 66/9 66/12 68/3 68/10 68/11 71/18 80/3 80/13 83/7 84/1 92/13 94/12 94/22</p>	<p>97/6 99/3 101/15 105/15 105/24 105/24 106/24 107/10 108/1 108/21 115/2 115/4 116/12 123/9 124/8 127/12 129/18 133/21 136/19 161/25 162/10 164/6 164/7 166/15 170/13 171/3 179/3 179/3 194/21 196/5 203/14 205/24 206/9 206/12 211/24 213/9 213/16</p> <p><b>ways [11]</b> 14/5 15/22 40/3 57/19 58/14 59/23 72/4 98/3 128/19 170/16 177/24</p> <p><b>we [427]</b></p> <p><b>we'd [12]</b> 17/21 18/20 23/23 27/6 28/10 38/8 44/20 44/20 84/19 125/23 159/8 207/16</p> <p><b>we'll [17]</b> 9/5 9/6 32/15 46/14 57/10 84/18 110/3 113/16 114/13 126/16 142/18 146/7 160/4 165/23 172/18 177/14 182/14</p> <p><b>we're [18]</b> 17/7 25/1 32/10 59/24 96/17 120/3 131/25 139/8 142/17 153/18 168/22 169/10 172/19 172/21 192/22 192/25 207/18 207/19</p> <p><b>we've [22]</b> 32/17 32/24 40/8 42/9 44/2 81/17 102/18 106/18 120/18 130/8 130/8 135/14 152/15 157/10 159/4 159/11 161/2 195/8 196/10 203/3 204/5 207/6</p> <p><b>weakness [2]</b> 35/21 65/7</p> <p><b>Wednesday [1]</b> 215/15</p> <p><b>week [7]</b> 46/1 107/2 143/10 153/1 181/5 185/20 199/7</p> <p><b>weeks [18]</b> 19/2 25/1 28/7 32/3 32/5 33/24 109/10 128/1 133/22 153/21 158/16 171/15 187/9 191/10 199/24 199/25 200/3 204/16</p> <p><b>weigh [4]</b> 22/4 22/8 88/10 88/11</p> <p><b>weighing [1]</b> 82/25</p> <p><b>weight [7]</b> 9/1 21/16 82/23 84/12 84/17 84/23 93/12</p> <p><b>weighting [2]</b> 21/15</p>
--	--	--	---	---

<b>W</b>			
<b>weighting... [1]</b> 28/16	62/13 67/10 67/11	130/12 132/9 134/17	144/11 154/9 154/22
<b>well [104]</b> 2/9 5/18	68/14 74/4 76/6 77/24	141/10 153/22 156/19	156/13 165/16 166/8
8/9 14/6 14/24 15/3	81/16 89/20 92/22	165/4 166/1 166/22	166/14 169/15 171/15
18/13 19/6 19/10	94/1 94/5 102/12	168/3 168/4 168/9	192/25 195/4 196/10
21/22 23/20 27/4	104/6 104/14 106/4	173/25 178/23 188/17	197/22 206/15 207/9
30/14 30/21 31/23	106/25 113/2 114/9	192/20 196/18 202/22	<b>wide [10]</b> 18/9 39/5
34/5 36/5 37/8 38/24	114/10 117/17 120/1	<b>which [291]</b>	45/14 46/8 54/6 71/24
39/23 42/1 42/11	127/2 131/3 131/9	<b>while [4]</b> 2/11 43/25	74/10 113/23 158/9
42/12 42/14 44/1 47/3	136/12 138/24 158/5	92/12 158/11	159/9
50/6 52/20 53/15	158/20 167/23 169/8	<b>whilst [4]</b> 60/10 88/6	<b>wide-ranging [1]</b>
54/16 55/2 56/8 57/25	169/21 170/1 177/22	125/3 190/5	71/24
67/21 68/13 69/7 71/6	192/5 192/13 194/10	<b>whittled [1]</b> 119/21	<b>widely [6]</b> 18/16 23/5
74/16 77/8 79/4 83/6	200/6 202/25 204/16	<b>Whitty [6]</b> 1/5 1/6	101/25 112/4 156/8
84/5 84/20 86/25	205/18 206/20 208/16	1/13 135/1 206/22	178/10
92/24 97/10 98/20	212/5 214/9	216/3	<b>wider [15]</b> 22/11
101/14 101/21 102/7	<b>where [127]</b> 7/3 11/6	<b>who [69]</b> 4/5 5/12	22/11 22/12 22/23
107/3 109/13 110/10	11/6 13/2 13/11 14/14	5/13 5/16 9/7 9/14	24/4 24/5 47/25 51/21
111/25 115/9 118/23	15/2 17/5 17/22 18/16	13/7 19/6 22/3 22/18	65/3 68/14 104/24
125/1 126/13 126/15	18/16 18/18 24/1 24/2	34/13 45/25 48/8	105/7 116/5 116/6
130/19 132/18 136/16	30/11 30/17 32/3 33/8	48/13 49/19 49/23	187/5
138/1 139/9 140/1	34/9 34/12 36/10	54/20 55/3 60/25 63/6	<b>widespread [7]</b> 102/3
140/12 142/9 143/22	36/13 36/14 38/1 38/3	64/25 66/14 67/13	140/6 175/2 176/3
146/1 147/3 147/13	38/24 40/4 40/16 43/4	71/23 75/24 76/1	176/8 176/22 178/20
148/2 152/21 153/4	44/6 44/11 44/19 50/3	79/12 80/21 80/24	<b>will [59]</b> 4/6 13/14
153/14 154/16 154/23	51/1 53/9 53/22 54/4	85/18 93/25 94/3 96/4	15/5 18/23 21/7 24/15
156/5 156/16 156/19	54/6 55/9 56/15 58/4	96/4 99/18 102/8	25/21 29/8 31/8 31/9
156/25 157/1 158/10	58/23 62/25 65/13	102/9 104/3 108/2	31/10 31/14 33/24
166/9 170/22 171/22	65/14 68/24 69/1	109/5 112/2 121/12	37/10 37/16 45/25
172/18 173/17 176/12	69/15 70/18 73/7	126/12 135/5 139/23	49/20 56/22 75/6 78/8
181/12 182/24 183/10	74/18 74/23 75/11	140/8 140/9 140/20	78/14 81/17 82/17
194/17 196/22 198/4	76/10 81/21 82/1 82/1	141/1 141/1 141/2	83/17 103/17 104/9
198/10 198/22 199/13	85/17 87/3 87/14	148/21 149/1 155/17	105/15 107/2 107/3
200/14 202/7 203/3	87/17 92/16 93/10	157/18 161/6 167/20	115/19 138/8 140/18
203/11 213/5 214/3	93/18 98/24 99/6 99/7	169/24 171/16 171/25	146/2 147/17 153/24
<b>well known [1]</b> 56/8	104/8 105/25 107/9	181/6 181/16 184/9	154/23 157/7 159/22
<b>went [8]</b> 19/22 21/8	107/21 107/22 112/8	184/12 186/24 196/24	159/24 162/6 171/6
27/1 46/9 46/12 98/22	113/16 114/3 114/6	202/15 203/4 208/2	182/8 183/10 183/13
104/5 126/22	114/14 116/3 116/4	<b>who's [2]</b> 45/23	183/15 184/3 184/16
<b>were [431]</b>	116/5 117/19 119/2	141/10	190/14 194/18 200/21
<b>weren't [13]</b> 34/11	124/18 130/16 131/5	<b>whoever [4]</b> 37/17	203/11 205/14 206/18
39/14 64/14 66/17	131/6 131/20 137/4	50/2 96/11 96/15	212/13 212/14 213/11
71/6 80/23 87/19	138/18 142/10 146/10	<b>whole [13]</b> 25/4	214/9 214/16 215/2
112/14 134/23 159/7	151/25 152/4 152/25	32/12 34/22 71/7	<b>William [1]</b> 152/9
170/8 172/5 190/18	153/2 156/21 160/21	71/11 86/22 119/21	<b>William Warr [1]</b>
<b>Western [1]</b> 118/23	162/18 163/4 163/14	145/14 146/16 146/18	152/9
<b>what [249]</b>	165/17 166/17 167/24	153/4 169/12 196/10	<b>willingness [2]</b>
<b>what's [6]</b> 75/4	171/23 175/22 176/14	<b>wholesale [1]</b> 41/7	213/16 214/5
110/21 150/16 168/20	178/4 178/4 183/7	<b>wholly [5]</b> 182/7	<b>winnowing [1]</b>
182/24 191/24	189/3 189/13 191/25	183/25 184/23 185/1	107/21
<b>whatever [14]</b> 25/11	193/17 200/1 200/21	211/22	<b>winter [18]</b> 38/16
39/19 66/5 81/2 86/6	205/7 206/20 207/16	<b>whom [6]</b> 9/4 9/6	55/8 55/14 90/19
88/7 89/12 92/16 97/3	207/17 208/1 208/3	39/5 46/5 176/20	199/2 210/3 210/7
116/25 117/3 126/9	208/17 210/20 210/25	208/22	210/16 210/17 210/20
161/20 185/10	211/22 213/11 215/2	<b>whose [3]</b> 53/14	210/23 211/5 211/9
<b>WhatsApp [1]</b> 187/4	<b>whereas [1]</b> 81/7	94/23 113/10	211/13 212/17 213/14
<b>WhatsApps [3]</b>	<b>wherever [2]</b> 11/18	<b>why [42]</b> 11/12 17/25	213/22 215/3
185/20 186/6 197/5	81/12	25/5 31/11 31/15 43/7	<b>wish [8]</b> 7/13 17/19
<b>when [59]</b> 15/23	<b>whether [37]</b> 28/24	51/14 66/22 67/1	27/8 27/16 51/19
19/21 20/19 22/5	28/24 39/25 46/4	77/12 80/18 81/10	64/21 203/11 213/15
24/20 27/11 27/15	50/11 57/20 81/9	81/16 86/21 86/22	<b>wished [3]</b> 26/15
30/4 31/6 36/18 38/5	81/17 90/11 103/11	86/23 101/14 101/20	63/23 67/17
51/7 57/24 61/15	111/19 114/24 115/20	112/11 120/18 120/20	<b>wishes [1]</b> 203/16
	115/21 116/16 118/1	131/20 137/6 137/7	<b>within [38]</b> 9/16
	120/21 125/23 130/11	137/17 141/3 143/17	10/20 13/1 13/4 13/5
			19/11 22/25 23/4 55/2
			55/23 70/23 72/14
			74/2 86/16 87/2 87/13
			97/15 115/8 115/22
			115/22 116/1 120/7
			126/20 126/21 130/1
			130/1 133/1 142/24
			144/10 145/2 146/10
			147/21 147/23 147/24
			153/1 156/23 170/11
			206/24
			<b>without [12]</b> 21/12
			26/4 29/12 65/21
			78/13 83/21 131/21
			141/9 157/24 164/11
			182/19 201/21
			<b>witness [8]</b> 1/4 1/17
			1/18 1/19 78/2 110/14
			184/3 196/11
			<b>witnesses [9]</b> 44/24
			46/22 51/20 55/7 74/1
			98/18 119/20 126/19
			128/3
			<b>woefully [2]</b> 121/7
			156/1
			<b>woman [1]</b> 63/21
			<b>woman/man [1]</b>
			63/21
			<b>won [1]</b> 96/6
			<b>won't [3]</b> 84/19 90/4
			138/9
			<b>wonder [1]</b> 178/23
			<b>wondered [1]</b> 85/9
			<b>wonderful [1]</b> 132/13
			<b>Woolhouse [2]</b>
			134/14 134/16
			<b>word [5]</b> 107/25
			144/22 148/25 166/7
			201/22
			<b>wording [1]</b> 203/24
			<b>words [8]</b> 31/7 66/25
			110/3 116/20 178/19
			178/23 179/8 212/1
			<b>work [33]</b> 10/21
			18/18 34/6 34/6 35/11
			35/14 45/12 46/16
			59/3 68/17 79/7 79/8
			79/9 96/11 96/14
			102/20 103/16 115/15
			119/15 149/10 149/16
			150/24 159/8 169/3
			171/23 174/11 178/12
			186/2 191/7 191/17
			191/19 191/21 192/3
			<b>worked [10]</b> 12/4
			14/24 15/3 36/2 44/23
			77/3 77/5 95/6 124/11
			195/2
			<b>workers [7]</b> 101/2
			101/10 101/11 101/16
			102/8 105/1 144/17
			<b>working [7]</b> 4/6 15/3
			17/11 39/10 99/10
			107/20 111/6

<b>W</b>	108/15 157/16 175/1	92/4 93/23 95/24	110/9 111/18 112/15
<b>works [1]</b> 157/4	<b>Y</b>	104/6 110/25 111/4	112/23 114/19 116/8
<b>world [15]</b> 13/22	<b>yeah [30]</b> 46/15 56/3	111/24 112/6 122/12	116/20 116/22 117/4
13/24 14/14 14/16	86/25 92/22 103/1	128/24 139/23 140/3	118/15 120/17 123/10
44/1 44/5 107/3	120/15 121/1 122/3	140/18 141/1 142/11	123/14 124/25 127/2
107/15 134/18 158/16	122/25 127/10 130/25	148/23 150/10 155/9	135/6 137/9 140/20
163/9 175/4 185/4	139/6 143/8 145/21	156/9 158/18 164/12	140/21 140/21 147/10
202/25 207/1	150/9 153/16 160/14	167/22 172/6 172/7	152/7 155/14 156/9
<b>Wormald [2]</b> 167/17	160/20 161/21 162/5	179/8 179/9 180/13	160/24 161/22 165/25
167/18	163/1 164/19 175/24	193/20 200/8 206/9	166/6 170/4 171/10
<b>worried [5]</b> 73/16	185/15 188/5 192/14	207/23 208/19 212/15	171/18 172/20 172/22
85/16 117/7 189/17	194/25 203/18 209/4	213/20	173/15 176/9 177/9
211/7	209/21	<b>you'd [5]</b> 25/8 130/19	178/22 180/7 181/23
<b>worry [4]</b> 85/23 120/2	<b>year [1]</b> 212/12	156/19 185/4 193/19	181/24 184/21 188/2
148/25 164/4	<b>yearly [1]</b> 142/15	<b>you'll [8]</b> 59/5 123/14	193/20 196/14 197/20
<b>worse [5]</b> 92/7 92/17	<b>years [4]</b> 92/10 134/8	148/4 154/16 154/17	197/21 200/15 200/18
104/4 210/8 210/22	164/3 212/19	165/21 180/7 209/17	203/3 203/7 203/14
<b>worsen [1]</b> 210/4	<b>yep [6]</b> 65/19 100/11	<b>you're [46]</b> 26/8	204/22 208/5 208/25
<b>worst [27]</b> 135/20	108/23 135/11 192/16	30/10 33/7 43/16	209/24 212/25 213/12
136/15 162/23 181/22	209/14	46/11 77/19 78/6	213/16 213/16 214/5
181/25 182/1 182/5	<b>yes [88]</b> 3/7 4/13 6/9	83/19 83/19 94/11	<b>yourself [25]</b> 12/23
182/11 182/17 182/24	6/12 6/13 7/8 7/19	105/23 106/23 107/4	14/6 17/9 18/11 19/1
182/25 183/5 183/20	8/13 9/2 11/1 12/8	109/8 112/10 114/9	32/13 74/4 85/5 85/11
183/22 184/6 184/18	13/3 16/5 17/15 32/24	114/10 117/20 117/21	85/13 89/9 89/11 93/9
184/19 185/6 185/18	35/13 42/18 43/22	134/12 137/21 138/8	94/7 98/14 100/21
185/22 186/3 186/4	49/12 52/13 60/17	138/9 138/15 138/20	115/10 123/18 137/11
186/10 186/15 187/10	68/22 72/12 73/25	138/22 141/4 143/22	148/4 154/9 161/7
191/3 191/4	84/25 85/14 86/10	144/24 145/12 146/1	166/4 204/9 209/2
<b>worst-case [25]</b>	87/6 87/8 88/20 90/2	165/7 165/11 173/6	<b>Yvonne [1]</b> 100/9
135/20 136/15 162/23	93/20 94/12 101/22	189/24 195/22 195/22	<b>Yvonne Doyle [1]</b>
181/22 181/25 182/1	103/23 108/8 112/11	195/24 196/5 199/14	100/9
182/5 182/11 182/17	117/5 118/14 122/2	204/2 204/22 206/10	
182/24 182/25 183/5	125/11 125/16 132/22	206/11 213/1 213/1	<b>Z</b>
183/20 183/22 184/18	133/6 135/10 136/8	<b>you've [43]</b> 1/17 1/21	<b>Zealand [1]</b> 15/21
184/19 185/6 185/18	139/7 139/14 140/8	20/9 21/22 28/4 29/21	<b>zero [1]</b> 214/12
185/22 186/3 186/10	140/23 144/21 148/19	58/9 60/18 65/2 66/12	<b>Zika [2]</b> 2/24 133/23
186/15 187/10 191/3	148/20 149/17 151/3	72/9 77/21 78/3 89/2	<b>zoonosis [1]</b> 101/5
191/4	151/11 153/18 156/12	89/3 97/18 98/5	
<b>worth [6]</b> 124/5 131/2	157/20 159/19 159/25	107/22 114/17 116/16	
131/7 131/18 135/15	160/15 160/24 161/1	122/4 125/16 126/15	
141/19	165/12 167/18 168/8	128/2 129/13 141/24	
<b>would [256]</b>	168/24 175/14 177/24	150/3 160/24 165/21	
<b>wouldn't [13]</b> 49/24	181/18 182/10 184/2	167/6 171/23 173/13	
56/20 62/2 67/18 84/5	185/4 185/23 186/19	174/12 177/17 178/9	
102/2 150/2 150/15	189/1 190/8 190/10	180/2 191/21 193/14	
155/10 162/9 166/22	190/18 192/5 192/25	197/15 197/23 198/18	
180/16 180/17	193/12 194/17 205/2	203/13 212/16	
<b>wound [1]</b> 190/21	208/5 212/9 215/12	<b>your [117]</b> 1/10 1/11	
<b>write [1]</b> 71/10	<b>yesterday [2]</b> 1/9	1/23 1/24 1/25 3/14	
<b>writes [1]</b> 142/13	172/2	4/9 5/17 10/9 10/20	
<b>writing [1]</b> 142/18	<b>yet [7]</b> 34/11 73/11	12/9 12/22 16/6 17/10	
<b>written [5]</b> 16/14	103/7 143/5 143/6	17/11 19/24 20/5 20/7	
51/12 72/6 121/12	144/13 214/13	24/18 25/25 26/1 29/8	
172/3	<b>York [1]</b> 153/15	29/22 31/21 36/5	
<b>wrong [13]</b> 12/2	<b>you [769]</b>	39/25 40/20 42/13	
24/16 34/22 75/7	<b>you can [1]</b> 83/14	43/15 44/25 53/11	
105/24 111/20 125/22	<b>you know [55]</b> 24/8	54/11 56/24 58/22	
141/13 149/4 149/20	26/8 26/9 28/12 29/16	60/21 61/21 64/3 64/5	
183/19 200/5 207/15	33/7 35/18 40/16 43/2	64/5 66/15 70/22	
<b>wrote [7]</b> 37/10 52/3	50/7 59/20 62/17	72/23 75/19 84/11	
52/4 127/13 136/8	64/13 64/17 65/12	85/2 85/7 85/11 85/12	
143/2 154/11	67/15 69/3 71/14	86/2 92/21 96/18	
<b>Wuhan [5]</b> 15/14 77/3	71/20 73/13 73/14	97/12 97/16 100/6	
		100/22 106/7 106/8	