Tuesday, 1 October 2024

(10.00 am)

MS HANDS: Good morning, my Lady.

Before Mark Tilley commences his evidence this morning, it may be helpful for me to provide you with an update on the timetable for the hearing today and tomorrow. As you know, Dr Stuart Edwardson was due to give evidence this afternoon. Having carefully considered the helpful evidence that Dr Edwardson has provided in his statement and reflected on the evidence already heard last week about the impact of the pandemic on intensive care units, patients and those working in ICU, the Inquiry has concluded that it is not necessary to hear oral evidence from Dr Edwardson today. A number of witnesses this week will also be giving evidence about critical care in the pandemic.

My Lady, with your consent, the Inquiry will publish on its website Dr Edwardson's statement after the hearing today, and I hope the public will be reassured that you will take his evidence into account when preparing your report and making recommendations.

As a result of Dr Edwardson no longer giving evidence, Professor Kathryn Rowan will commence her evidence this afternoon and will return tomorrow morning. This will then be followed by the evidence of

the intensive care experts, who will commence giving evidence slightly earlier than initially scheduled.

LADY JUSTICE HALLETT: Thank you very much and I shall of course take into account the written evidence helpfully provided. People sometimes forget that this isn't just the about oral evidence. The Inquiry is about written and oral evidence together. Thank you very much.

MS HANDS: Thank you. May I please call Mr Mark Tilley.

MR MARK TILLEY (affirmed)

LADY JUSTICE HALLETT: Thank you very much for coming along to help Mr Tilley. If at any stage you feel slightly distressed by what you have to tell us -- I will take a break if you need me to, but sometimes I find that just having a breather and a sip of water can help people when they're distressed, and it's better to get it over with, but I'll be in your hands. You tell me what you need to do.

A. Thank you, my Lady.

Questions from COUNSEL TO THE INQUIRY

MS HANDS: Good morning, Mr Tilley. You should have your witness statement in front of you, and that is INQ000485988.

A. I do.

Q. Mr Tilley, it's right, isn't it, that you are an ambulance technician who has been working in the NHS

Ambulance Service for over 20 years?

A. That is correct, yes.

Q. And you have described in your statement how you've responded to all types of calls, from emergency life-threatening incidents to non-emergency transport incidents as well?

A. Yes, that is correct.

Q. And it's also right, isn't it, that you are a GMB representative?

A. I am.

Q. And that's a role that you held before the pandemic?

A. Yes.

Q. And throughout as well?

A. That is correct, yes.

Q. Can you briefly describe your role and responsibilities as a GMB representative during the pandemic.

A. So during the pandemic, we were asked and we were there to look after the health and safety well-being of our members, our colleagues. It was the governance processes behind the scenes for making sure that everything was as safe as possible.

Q. On a daily basis, what did that involve?

A. So there was -- for me, there was multiple meetings. We were having four-hourly meetings on some occasions when it was really at the height. There was the planning of

what PPE we had or didn't have. There was the vehicles and what equipment they carried, what was wrong with them.

Q. I'm going to touch on some more examples as we go through this morning. In terms of your role as an ambulance technician, you were, before the pandemic, mostly working in a behind the scenes role; is that right?

A. Yes, that's correct. So I was a GMB rep and I had full-time release to be able to attend meetings, policies, disciplinaries, grievances, sickness absence meetings and planning of what was going on forward.

I undertook a certain amount of road shifts to keep up my clinical skills because ultimately that is what we are there for.

Q. Then, when the pandemic hit, you moved back into a patient-facing role on the front line?

A. Yes, I picked up extra shifts on the front line. I didn't have to, I wasn't made to, but that's where we are a collective. We are a group of people. We are there for our patients. Staff were falling off sick, staff weren't able to attend work because of health problems, therefore others had to backfill, and I was one of the first to volunteer because it was the right thing to do.

Q. You have described how the pandemic had a profound impact on your work. Can you give us a few examples of how that frontline role was different during the pandemic to before?

A. So before the pandemic we would -- we all know that the winter pressures were hard. We know that there was delays. However, that escalated tenfold with the amount of calls we were going to, what we was expected to undertake prior to getting to the patient. We were having to put our Tyvek suits on if we were going to perform patient -- aerosol-generated tasks, i.e. CPR, when we were bouncing up and down on someone's chest, to protect ourselves and others, and that took extra time in getting to that patient.

Q. And would you know -- you describe it taking time before you got to the patients, so would you know before you arrived at the incident as to whether you would need to don that level of PPE?

A. Sometimes we would know because it was a confirmed cardiac arrest. Other times we wouldn't. But what we did know is that basically everyone was having breathing difficulties of some description and sometimes that could be the -- breathing problems are because there's a low respiratory rate, they are not actually moving sufficient air to get the right amount of oxygen into

their body.

Q. And if you didn't know in advance, so you would be donning when you got to the scene, can you just explain to us step by step what that process involves and how long it might take you?

A. So actually we had to don when we got to scene anyway. We had lots of conversations. Our medical -- no, sorry, our director of nursing and quality and director of operations at the time, I recall having many meetings with them saying: why can't one of the crews on the DCA, on the double-crewed ambulance, be in the back of the ambulance with the suit on already and, therefore, the driver, being in the front, that would be acceptable -- we work on an SRV, which is a single response vehicle, we might work on a DCA, a double-crewed ambulance, single crewed because someone has gone sick, so having someone in the back of the ambulance would have actually meant that we were actually able to get to the patient's side quicker, might have only been a minute and a half quicker, because of putting that suit on. Because if you've already got it on, you are ready to go. We didn't have that.

That was deemed as inappropriate because -- and for me the excuse that was used was the attendant should be using the MDT screen, which is the computer we've got

in the front of the ambulance, to read what was coming through, and the Airwaves radios, they were there to answer that, all of which -- that they could have done either over the back -- in the back of the ambulance, over the Airwaves radio, and the computer we could have turned off part of it. So we could have actually been at the patient's side a minute, a minute and a half quicker in those really most serious cases.

Q. Coming back to when you do arrive and what that process involves, can you just briefly describe that for us?

A. What we ended up doing was pulling up at the scene of the address and we would get out the vehicle and we would have to get into the back of the ambulance to put on the Tyvek suits, if that's what we were going to be doing, and that meant taking off our boots because the Tyvek suits most of the time wouldn't go over them, which took extra time.

So in the back of the ambulance you would have seen the ambulance rocking where we were taking off our outer jacket, perhaps, if we had it on because it was a cold day, putting on the Tyvek suits, and then collecting the bags that we were going to take into the patient's house. And all of that could have taken a good couple of minutes, three minutes or so, before we got to the patient's side, even if it was outside.

There was times where we didn't need to have the Tyvek suits on but we would have to put the aprons on. Aprons are fine if you are in a room, if you are working in a hospital setting. It's like in here today, there's no breeze, but when you're outside, all that's happening is the apron's blowing up into your face, onto your hair. They were poor quality.

When we went to some really good thick aprons, they didn't have long ties on so you couldn't tie them up. It just wasn't suitable. And then you've got your arms exposed anyway, which is fine because you can wash them, but if you've got a jacket on because it's cold outside you couldn't then decontaminate that the following day, you couldn't wash it between shifts, because you only had one.

Q. Two points I want to take from that. The first I think is in relation to the aprons and the suits that you mention. I think you've said in your statement that there were some occasions where there weren't enough aprons or suits and you had to consider alternatives. Could you just explain what alternatives were considered.

A. So there was -- we had what's called a standard load list which is the equipment that should be on the ambulance.

LADY JUSTICE HALLETT: Sorry, standard ...?
A. Standard load list. It's an equipment list basically for the ambulances. And on that there was three extra-large suits, three medium suits, and three large suits, bearing in mind we're probably doing -- unless we were stuck at hospital we were probably doing six jobs a day, and there's two of you, but there's six in total, various size suits.

Sorry, can you repeat the question --

MS HANDS: Yes, of course. You said at times there wasn't always enough and you had to consider alternatives.
A. Yes, so therefore there wasn't enough for us for the whole shift because there wasn't the availability. The aprons were in short supply, we couldn't get appropriate equipment, appropriate aprons, so we seriously considered using bin bags and literally cutting a hole in them, because that way they wouldn't blow up in front of your face and it was a barrier between your clothes and the patient.

Bin bags wouldn't have been the most, sort of, like, sensible but it was obviously hard times.

The alternative would have been that the trust provided extra uniform because we could have technically got changed between patients if we needed to, but obviously that would have meant ambulances were not

responding every time they'd finished with another patient.
Q. And then the other point you mentioned is regarding the jacket that you were wearing. Could you describe what -- when you would be required to wear that and what that was like.
A. So we all know the NHS is 24/7. For the ambulance service it's 24/7, wet/dry, hot/cold, and also the environment you're in, because personally if I'm going into a woods to go and get a patient out and it's a hot day and it's lots of overgrowth -- undergrowth and that sort of side of things, I would be putting my jacket on because it protects my arms, but if it's cold outside, if it's nighttime, you've got your jacket on to keep warm, the only thing we could do is perhaps try and Clinell wipe down the arms of your jacket afterwards, because you didn't have the time to wash your jacket between one shift and another.
Q. And would that, therefore, be over multiple days?
A. Multiple days, and with the specification of the vehicles, technically what you should have been doing is hanging your jacket up on a clip that's right behind your head. So if I was the driver it would be there, if I was the attendant it would be there, so it would be hanging down right behind me in what should be a

non-clinical environment, because it's the front of the ambulance, but it's got equipment or exposure to bodily fluids on it right behind my head.
Q. And then coming back to when you were putting on the PPE or the RP when you arrive at the scene, what mask would you be hearing?
A. So most of the time, and obviously through the different waves and the information that was out there it did change, but most of the time it was the FFP2, just the, sort of, like, very cheap elastic band around the loops, around the ear loops. You would be wearing that in the actual ambulance to the scene.
LADY JUSTICE HALLETT: Sorry, did you mean FFP2?
A. Yes, the surgical fluid-repellant mask.
MS HANDS: I think it's FRSM.
A. Different terminology, I do apologise.
MS HANDS: Not at all.
LADY JUSTICE HALLETT: It's just that the FFP2 is a version apparently that we don't use much in the UK but is used a lot in Europe and is an alternative to the FFP3.
A. So I will be led by you, my Lady.
LADY JUSTICE HALLETT: I am learning a lot about masks.
MS HANDS: Yes, it's a blue one.
A. Yeah, the blue one, the one that you would see when you went into a hospital or whatever, we would wear them

most of the time around our buildings and in the ambulances. So we would have that on for most patients but upgrade if we were performing certain tasks with the patients or if we had a concern or, eventually, we got given the actual hoods which have got respirator masks -- battery-powered packs.
Q. Can you recall when you received the hoods?
A. I would have to check that up. It was fairly early on and I recall conversations about the fact that we had got the last batch of them because they were no longer being produced and it was a tie-over situation with what was able to be sourced.
Q. Okay.

Moving on to some of your work in January 2021 which you have described in your statement, can you provide some more information about how your work changed during that period and what it was that you were doing?
A. So obviously we all know there was waves that was hitting different areas at different quantities/amounts and that was changing daily/weekly. Living and working out of the Bognor Regis/Chichester/West Sussex area it was quite quiet in the sense of what was going on nationally.

When we were having EU exit, because obviously

I worked for the South East Coast Ambulance and Dover's there, there was a lot of concern and work that had been done for the road network because there was concerns it was just going to break down and no-one would be able to move, so there was about 40 of us that had volunteered to go up to -- it was a hotel up in Sittingbourne and work out there for at least three weeks -- it was the plan -- depending on what was actually happening.

It was like a different world up there. We had to -- we had ambulances that were brought in for us. Most of them were the most run down because the local areas didn't want them so that's what they provided, but it was an ambulance. We begged, borrowed and stealed. But then that was happening generally anyway.

The patients were as poorly as elsewhere but probably for what we'd been experiencing and seeing down in Sussex was a greater requirement of care. Going to the hospital -- I recall one day going to hospital about an hour/hour and a half after my shift had started, so I'd already got to my first patient, and we've ASHICEd the patient to hospital, so they were a poorly patient, we've pre-alerted them. We turn up at Medway Maritime and we park in a queue of ambulances, so I think we were starting at -- we were doing ten-hour shifts on that rota up there at the time, so it was a 6 o'clock start,

for example. So we were there by 8 o'clock but when our shift had finished we were still there with the patient in the back of the ambulance. We had run out of oxygen so we'd had to scan the hospital to try to find oxygen. The consultant or doctor had been out to take bloods. Our patient had deteriorated quite heavily. It was a snowy, cold, icy day.

We ordered pizza to the registration of the vehicle so that we actually had something to eat that day because otherwise we wouldn't have had anything to eat, trying to source a cup of tea. And I know it's not about us as the clinician, but we couldn't be in the back of the ambulance with the patient because of the exposure because we had to be out -- so slightly outside the back, watching in to them, and the patient, trying to look after their bodily functions, their well-being as well as -- poorly as they were, out there for hours, that was -- that was different.

Q. And the experiences you've described there around the equipment available to you in the ambulance, was that an issue that you experienced again? Did you have any other experiences of that?

A. So because what the organisation had done, they'd opened up an ambulance station that had been closed down, obviously everything had been stripped from it so we

then had to try and make it literally within a few weeks a proper functioning ambulance station. There wasn't the supplies coming through of masks or hand gel, sort of, like, specialist little bits of equipment that we might use on occasions. We're out and about in the ambulance for the whole 10/12 hours of our shift, you never know what you're going to be sent to next so you need to have all of the equipment there because otherwise you can't do the best for the patient.

So we were always trying to find -- and there was blankets -- access to blankets was really tight on occasions because it wasn't getting through the laundry system quick enough.

Q. I think in your statement you have described some of the problems with ventilation in ambulances which you have just alluded to. Can you explain what those problems were, in particular, in the summer and in the winter months.

A. Yes. So over the years we had highlighted that the ambulance was our work environment. If it's really hot outside it's hot in ambulance, and the air conditioning doesn't work, it's uncomfortable. We -- certainly I grew up with my mum and dad and they didn't have air conditioning in the car, you opened the window.

However, we are in a medical environment and air

conditioning can help reduce the temperature in the back of the ambulance. So if we've got a sepsis patient on board, we don't want it to be really hot in there, we want to be able to start chilling it down. We didn't know whether the recirculation -- the systems that were in the vehicles were separate in the front of the ambulance to the rear. So it -- whether the particles, because obviously it was airborne, was just recirculating around.

We still don't know as to the different vehicles, because there are so many different types of ambulances and manufacturers, as to whether the air goes from the front to the back, we don't know whether it filters it properly. But what we do know is that some of the vehicles had errors and faults with them where you couldn't put heating on in the front because, like -- and I'm not a mechanic, but that the valve isn't -- or the pipe is not connected properly because it's done 300,000 or 400,000 miles, it's bounced off or it's not been connected, and, therefore, the heat is not there but without putting the recirculation on, you can't have the heat and, of course, the recirculation is what we didn't necessarily want unless there was a proper particle filter on it.

Q. And did you receive any guidance locally or nationally

about how to manage these issues?

A. It was -- there was conversations, there was some communication but, if I may touch on the fact of communication, although believed to be quite good, that communication that was sent out, the staff were going into work picking up their ambulance and basically going straight out to patients. There was no time built in for what in hospitals they class as huddles.

In the ambulance sector, certainly for our organisation, there's not the time or the built-in facility to do a huddle, so you wouldn't have any important information actually directly told to you, it's only if you picked it up on an email. And with 40 or 50 emails coming in, days off and then coming back to them without a sign being put up that you might have seen, you wouldn't have known that communication had come out.

There's no -- communication is good but actually it's about the understanding of what it's meant to be saying and that wasn't -- and never verified by anybody.

Q. And just finishing up on your time down in Kent, in your statement, and you've alluded to it just a moment ago, you have explained that you were staying in a hotel away from home down there. Can you explain the impact that that had during that period of time.

A. So we travelled over -- some people travelled over New Year's Eve, I travelled over the morning of New Year's Day. So we'd said goodbye to our families, we knew that was going to be for about three weeks. We were told we could go back home on our two days in a row day off, but that obviously puts extra pressure on the fact of you going home to your family and you've been in some of the worst sort of areas dealing with patients.

You are in a hotel room. Many of us would have stayed in a Premier or Holiday Inn in our time. That was what you were in. So you couldn't go and socialise because that was stopped at that particular point in time, so you were at work in an ambulance with your crewmate for 10 hours, 12 hours, then you'd go back to the hotel, and that's where you would sit, sleep, and you had nowhere to go. So it was the facilities that was there, the television and a phone. You had just to mull over what you'd been seeing, the queues at the hospital, the poor patients that we were going to.

I went over there thinking I was going to help multiple people, I probably did but it didn't feel like it, and afterwards you'd come away thinking: was that real? Did I really do that? Did I spend all that time in the hotel room, all that time sitting outside the hospital, and actually only see a few patients? Poorly,

poorly patients.

Yeah, I'm sorry.

Q. Was there any support provided to you at the time or after that period of time?

A. So in the Ambulance Service we use a thing called TRiM, I can't remember what that acronym's for, I do apologise. That's 72 hours or so after an event, so it's fine if you've been to an individual incident that may have triggered some feelings, some concerns but this, obviously, was over a long length of time.

Me, because of my union role, I knew where I could go to talk to people but I'm not aware of any communication from the trust to the 40 people in this situation that went up there, let alone the rest of the staff as to: do you want to talk after the event? I don't think that's ever been sent out.

Q. Continuing then on the topic of infection prevention control on the ambulance vehicle itself and access to PPE, in your statement at paragraph 11 you have summarised a number of issues that you experienced during the pandemic with those. I wonder if you could perhaps just describe some of the other issues that you had.

A. So yeah, under the topic of IPC, technically we should have got a, if you like, made-ready ambulance. A lot of

the time they had been hot-loaded, so it's just bags being replaced with the equipment, obviously fluids or spillages would have been wiped up and maybe a quick mop over.

When we got a patient to a hospital, because service level agreements have changed over the years, there's no mop and bucket at the hospital for us to wipe out the floor of the ambulance. We would have wiped down with Clinell wipes the stretchers and that side of things. But the masks, when you took over the ambulance, were generally -- the ones in the front of the ambulance was in the fridge. We've got cold boxes in the front of our ambulances. So if you're storing something like that in a fridge, actually how good is it actually going to be? Because of course it's going to be damp. So is it going to work? Is it suitable?

The dates on the gloves, on the masks, were all expired. We had concerns as to how they'd been stored because we know the government had, obviously, contracts with different individuals to store them in warehouses and we know that some of those were damp and leaky -- at least that's what I'd been told.

So the aprons not being suitable, the gloves being out of date, and a lot of times, because we were getting some really cheap nasty gloves, you were putting your

hands straight through them. To start with, they ripped and tore quite easy. The masks were being stored in the fridge. If it was the more solid surgical -- more -- fluid -- FFP --

LADY JUSTICE HALLETT: FFP3.

A. Yes -- masks, they were stored in Chinese containers. We literally got some Chinese containers, or the organisation did, and that's where they stored them.

Now, if you go for small-size or a medium-size Chinese, and you put something that's going to go over your face, it's not going to fit in there, so it's squashed down, and then we put that into a bag and we again squashed it again to get in. So, actually, have we stored it correctly? And that's what we were being expected to use and trust our lives with. And obviously then going home to our loved ones knowing that 24 hours or 36 hours later we might have symptoms because the equipment, the PPE, hadn't been stored properly and wasn't in date.

MS HANDS: Yes, thank you.

Had you had any fit testing of those masks?

A. So previously, no. This all had to be worked up very quickly. Fit testing was done. There was a process that was taught to someone, that was taught to someone else, that was taught to someone else and they would

sort of, like, try to fit test you. You had to guess whether there was a sweet smell or a bitter smell, that was done to see whether you'd passed or failed it. I actually failed it with -- I have lost a little bit of weight -- but I failed it so I couldn't be fit tested on the masks that we had, bearing in mind there was three or four different styles of masks and you had to be individually tested on each one. And until we started sourcing the hoods there was no way of actually being properly protected.

Q. So during that period where you had failed the fit test and before the hoods were introduced, what were you wearing?

A. Before that -- well, before Covid, nothing, and since the start of Covid we were at times wearing the masks. Information changed. We weren't wearing then in crew rooms or EOCs. We weren't obviously -- that wasn't the recommendations at the time, and in the ambulance, you were there, you knew that you were at work, you felt fine, why would you have it on until, obviously, knowledge changed and information was shared to wear the masks in the ambulances.

Q. Did you receive any training or advice about how to communicate with patients, for example, when you were wearing the PPE, and did that cause any problems?

A. Not that I can recall. Because of the condition of my mother-in-law -- I normally get told I speak too loud when I'm talking to her, but she obviously watches our lips moving and she can talk to us in her way, and that taught me over the years that -- just to slow down and take my time.

With wearing a mask, dementia patients, hard-of-hearing patients and others, can't get that mouth movement from you. So when the hoods became available, I actually went over to wearing my hoods for virtually all the patients. Which scared some people because they were thinking I was bringing into hospital really, really poorly patients when it was a painful ankle or whatever they might have fractured, but I -- of course I had my hood on. But the patients could see my face. They could see expression. I wasn't taught that. That was life experience that I'd done that because of -- and even today, I still don't think there's been any learning from any of this or that topic because there are occasions when we should still be wearing face masks today.

Q. Moving on to some of the non-clinical areas that you would have been in during the pandemic, so in terms of ambulance staff rooms and offices, were there any issues with social distancing or IPC measures in those

environments?

A. So it was very varied. We'd highlighted about space over the time but obviously it's all about budgets.

The desk that I'm at at the moment would have been in some locations a large desk for us. So if you take this as being a large desk for us to have a meal at, there was a white line drawn down the centre of it. One would be at one end, one would be at the other end, that is where we would be expecting to have a romantic meal and eat our dinner. There was no social distancing in some areas because it wasn't physically able to be done.

It depends on how far you want to take safety. If we turned up somewhere and the knives and forks and plates were still dirty from the last people that used them, we've obviously got to wash them up, but in bigger areas where -- let's use an EOC as an example --

Q. Sorry, just to stop you there. An EOC, do you mind --

A. Emergency operation centre, so the control room. They've got dishwashers, but they went over to using disposable plates and cups, but -- when we were on the response post, where the table was this size, we would have reusable stuff, which was nice for the environment, sort of, side of things, but it's about where do you level that risk factor.

In rooms, yeah, functions like human resourcing,

organisational development, finance, they just squirreled themselves away at home very quickly and went over to using Teams for everything, so that freed up a bit of space, but we couldn't -- we had to go through a process, and I'm sure other organisations within the ambulance sector elsewhere would have done, to spread out the desks that people were at to take the 999 calls, because they were a desk similar to this with two or three screens on it and there literally just banks of them. Because it's a call centre. It's gone over to the call centre environment mentality of how much can we squeeze into this space to get best value for money, so everyone on top of themselves.

Q. Did you experience or hear of any experiences that drivers in non-emergency patient transport vehicles had with IPC guidance?

A. So in many areas, obviously, like, the patient transport services have been subcontracted out, in some areas they are still in the NHS. The majority of those vehicles would be van conversions with no bulkhead, so it's like the cab and the rear of the vehicle are all in one. So not the issue of, to a certain extent, about the circulation we had in the double-crewed ambulances, it's just literally -- because then you have got one person that's driving, goes and picks up a few walking wounded

people that are pre-planned into hospital.

It was -- sorry, what was the question?

Q. Were you aware of any issues with IPC measures in those vehicles?

A. Yeah, so it was -- because it was exposed. The driver was in there, technically, with all their patients getting on and off, and it was just that one person, so there was no separation. As to the equipment, the IPC side of masks would have been similar in the NHS setting I'm sure.

We had some patient transport vehicles which, because of trying to segregate, the service purchased bulkheads that was then put into the vehicles over a period of time but all too late in the day.

Q. And in terms of the information that was available to you during the pandemic, were you assisted at all by your GMB role and was the information accessible to you throughout?

A. So I was lucky/unlucky, depending on which way you look at it. I was aware of what was going on, obviously, behind the scenes. The plans about using ice rinks to store bodies, the fact of what the figures were, where the concerns were coming from, the lack of equipment. I had the ability to challenge for myself or for my colleagues the fact that we were doing things that was

probably just fundamentally wrong by expecting them just to follow and not ask questions.

Q. And it is a difficult question but can you describe for us, or is there anything else you want to add, as to the long-term impact that the experience of the pandemic has had on you working on the front line and those around you?

A. So my family was -- my family was -- I could have stayed at home and worked from home to look after my members, to look after the patients from there, because obviously some people need to be working from a non-patient side of things to have all of the cogs working in the engine, so to speak.

I exposed them to elements of risk that I could have avoided, and that's something that I live with, but I would be going home from work and having to strip off in the hallway so that I didn't go in in my uniform, to try and protect them. That plays on my mind. Turning up at people's houses where someone was unfortunately dead inside the front window or just on the pathway up to their property, and I've got out the vehicle and I would have normally gone over, started bouncing up and down on their chest, but we went and got our masks and suits on and all of that. That plays on my mind all the time.

Yeah.

Would I do it again? Yes. I'd be jumping out there straight away to go and start supporting my colleagues on the front line and responding to patients if we were to get another wave of something. Do I hope that people would question more? Yes.

I bottle things away. I'm quite -- I'm told quite a lot of times I'm cold. I'm not. I just deal with it in the way that I deal with it. Yeah, sort of -- I think I've answered part of your question but not all of it, so do you want to rephrase?

Q. It was if there is anything else you wanted to add about the impact on you and those around you, but if that's everything, that's fine.

A. For me, I can't change history, no matter what you talk about, it's history. We can't change it. It is what it is. But what we can do is we can learn from it, we can adjust it, we can make sure it doesn't repeat again or that we've at least looked at everything at made an informed decision but all we're seeing at the moment is things have reverted back to what it was beforehand, tight spaces for working, still having out-of-date equipment, consumables on stations and getting into the system, vehicles that are not fit for purpose.

We're lucky, I suppose, in a way, down south. We

got quite a lot of Make Ready Centres but the concept of the Make Ready Centre was to be all-encompassing, which would mean, like, laundering the uniform rather than taking it home and using your own washing machine to wash the bodily fluids and then obviously your family's undergarments going in it following wash. All those sort of bits are what I just hope that we learn from and it's -- understanding there's budgets but actually it's: what does the public want? What does the patient need? What does the staff member that's attending the scene need to actually do their job properly?

MS HANDS: Thank you, Mr Tilley.

I don't have any further questions, my Lady.

LADY JUSTICE HALLETT: I don't think there are any other questions.

MS HANDS: No.

LADY JUSTICE HALLETT: Thank you very much for your help, Mr Tilley. I'm very grateful and I understand how difficult it must have been for you and your colleagues.

A. Thank you, my Lady.

LADY JUSTICE HALLETT: Thank you very much.

(The witness withdrew)

MS HANDS: My Lady, I think we will move straight to the next witness.

My Lady, may I call Mr Marsh.

MR ANTHONY MARSH (sworn)

LADY JUSTICE HALLETT: Mr Marsh, I think you are our first witness in full uniform.

A. Thank you, my Lady. Good morning.

Questions from COUNSEL TO THE INQUIRY

MS HANDS: Good morning, Mr Marsh. You should have your witness statement in front of you, and that is INQ000479041.

Mr Marsh, you are here today in your capacity as former chair of the Ambulance Association of Chief Executives, a role you held from 2014 to July 2020; is that right?

A. That's correct.

Q. And also as the current national strategic adviser for ambulance services at NHS England, a position you've held since 2018?

A. That's also correct.

Q. And you are also the current chief executive of West Midlands Ambulance Service?

A. Yes, that's correct.

Q. I want to start with the centralisation of ambulance services in England at the start of the pandemic, and it's correct, isn't it, that ambulance services in England were led under a single command and control structure that was supported by the National Ambulance

Coordination Centre, or the NACC, from around 25 March 2020?

A. That's correct.

Q. And in your statement you've set out the role of the NACC, but can you briefly summarise that for us please.

A. In the initial stages of the pandemic, the National Ambulance Coordination Centre was essentially collecting intelligence, situational awareness, from ambulance services across England to establish the pressures that were being exerted from the pandemic, so collecting information, updating the live NACC Dashboard, and also collecting information from ambulance services that were then fed into national directors at NHS England.

Q. And from around September 2020, when the national emergency level was lowered, it's right that the NACC responsibilities changed, didn't they? Could you just briefly say how they changed.

A. That's correct. There were two aspects of the responsibilities of the National Ambulance Coordination Centre, and indeed my role, that were moved from the national co-ordination to the regions, which were requests for military assistance to civil communities, so military support, and secondly, mutual aid as well was moved to the regions.

Q. Do you want to briefly describe your role in that.

A. My role in NACC was to support the preparations for ambulance services in response to the pandemic, to provide advice to ambulance services and what I thought they should be doing to prepare, and then deal with the various waves of the pandemic, to oversee and make recommendations on the escalation of Protocol 36, the flu -- the pandemic protocol within the triage systems. The deployment of the mutual aid of the St John Ambulance national contingency as well fell with my responsibilities, and also working with British Telecom when we put in place the two filter arrangements, one for dealing with information calls and, secondly, for dealing with 999 duplicate calls as well.

Q. We're going to come on to discuss some of those this morning.

Did the emergency level increase again after September 2020 and, if so, was the decision to change the responsibilities of NACC reviewed again?

A. The level did change, so you're right that the national emergency within the NHS was de-escalated to a 3, was increased again to a 4. The levels of responsibility, i.e. the MACA request and the mutual aid, remained with the regions at that time. They didn't revert back to national co-ordination.

LADY JUSTICE HALLETT: How many levels are there?

A. Four, my Lady.
LADY JUSTICE HALLETT: So 4 is the worst?
A. Yes, my Lady.
MS HANDS: And it's correct that you didn't have any involvement as the strategic adviser, this is, with your equivalents in Wales, Scotland or Northern Ireland, did you?
A. That's correct.
Q. And you've also said in your statement that you didn't have any relationship in that role with the College of Paramedics, the chief medical officers or public health bodies?
A. That's also correct.
Q. Touching then on your role in the AACE, the ambulance association, that's a membership organisation for ambulance trusts across the UK, isn't it?
A. Correct.
Q. And all ten English ambulance services and the Welsh ambulance service are full members; is that right?
A. Yes.
Q. And Scotland, Northern Ireland and the Isle of Wight are associate members?
A. Correct.
Q. Could you just very briefly explain what the distinction is in practice.

A. There's really only one distinction, and that is that full members, i.e. the ten English ambulance services and the Welsh ambulance service are able to vote and the associate members are not. But in terms of voting, the only time I can ever recall us voting is to elect the chair of the association, once every three years.
Q. Again, as chair of AACE, you didn't work directly with any equivalents in the devolved nations, did you?
A. That's correct.
Q. Or in that role as chair with the College of Paramedics?
A. That's correct.
Q. And the AACE was represented on the UK IPC cell but not by yourself, is that right?
A. That's also correct.
Q. We'll come on to discuss that more in due course.
Turning now, to the topic of capacity in the ambulance service, you refer in your statement to REAP levels, R-E-A-P. Can you briefly explain the four levels and what the agreed national triggers were for those levels?
A. So essentially an ambulance service operating business as usual, where activity is stable, staff attendance is stable, then that ambulance service would be operating at level 1.
As pressures emerge, which could be in response to

increased emergency activity or inclement weather or staffing, those escalation levels will increase up to the highest level of the fourth -- the fourth level.
And at each level, not only is there a series of triggers that determine the escalation of each of those levels, there's also a set of actions that should be considered by each individual ambulance service to determine their response to mitigate those pressures that are being presented.
Q. And were there changes to the trigger levels during the pandemic?
A. There weren't changes to the trigger levels. The trigger levels are already established within the policy and within the procedure.
Q. And it's correct that you advised on when the timing of escalation and de-escalation of REAP levels and therefore the impact on the triage systems during the pandemic, didn't you?
A. Not quite, if I've understood the question correctly. If I may?
Q. Yes.
A. So, the levels of REAP is a matter for individual ambulance services. They determine the level that they believe is appropriate depending upon the prevailing circumstances and the actions that they are able to

take. Where I was recommending escalation is in relation to the Protocol 36 of the 999 call-handling triage system.
Q. Which we'll come to. Thank you for clarifying.
So at the end of March 2020 in England, it's correct that six out of ten ambulance trusts were at REAP level 3 and three trusts were at level 4, which was extreme pressure, weren't they?
A. That's correct.
Q. That level 4 of extreme pressure also includes the potential for service failure; is that right?
A. Potentially.
Q. Then moving forward into July 2021, is it right that all English ambulance services were at REAP level 4?
A. That's correct.
Q. And that continued into the end of 2021, around November?
A. Yes.
Q. It's correct that you advised on increasing capacity in your role as adviser to NHS England and as the chair of the NHS England 999 ambulance cell; is that right?
A. Correct.
Q. And you've described some of the objectives of that NHSE cell, and the topic's discussed in your statement, which included triage systems, protocol levels and to review

data; is right?
A. Correct.
Q. You've said in your statement that around 26 March you advised that 999 call handlers capacity should be increased?
A. Yes.
Q. And that trusts should look to using students to help with that capacity.
A. Yes, but just to clarify, if I may, please? Earlier on, as pressures were building in response to the pandemic, I'd already advised ambulance services they should be acting now to increase capacity both in the control room and in ambulance crews. So that was happening throughout February and into March.

In relation to the point the deployment of university students, my initial advice was that, commensurate with their training, given they're in three years, so year 1, year 2, year 3 students, those students should be mobilised and deployed where possible to help support and increase ambulance crews, not necessarily in the control room, but that clearly is a consideration that could be made on an individual basis.
Q. I think you said in your statement that not all trusts followed that advice, and we also heard from Ms Nicholls

of the College of Paramedics last week that perhaps students could have been used more effectively in increasing capacity.

So what's your view as to what the barriers were to increasing capacity and how perhaps that could be improved going forward?
A. So certainly the mobilisation of university students on to the front line has never been put in place previously. My view was that we were confronted with a national emergency and what I had seen happening in parts of Europe and some states in America, where emergency services were under enormous pressure, I was absolutely trying to ensure that the ambulance service across England did everything we could as early as possible to increase the number of ambulance crews. And so therefore deploying those students was something that I saw as a really valuable resource, given it was a career that they had chosen to pursue, which is why they had gone to university, and that potentially, particularly the year 3s, had already spent nearly three years at university, a significant proportion of that time as part their clinical placements with the ambulance crews, and therefore to me it just seemed a very obvious way of mobilising those onto the front line to support our existing staff by splitting crews

and therefore potentially being able to increase quite significantly the number of ambulance crews available.

But I think because it was something we'd never done before, there was some apprehension or concern about actually implementing that advice, and I think that was really the reason why some ambulance services were more hesitant than others. But my view was really clear: this was a national emergency and we needed to act now to save as many lives as possible.
Q. And in terms of staff that weren't students and increasing the capacity in call handling centres there, what were the barriers there?
A. So ambulance services recruiting sufficient staff, I just feel that some ambulance services really gripped it and thought "We absolutely need to recruit more staff, advertise, go through the selection process, recruit and train", and other ambulance services, in my opinion, should have been more robust in the timescales that they applied in terms of being able to recruit all of those staff as quickly as we needed to.
Q. In either role for the AACE or as adviser, did you support those trusts in implementing those measures?
A. Absolutely. I kept giving advice to increase the capacity in the control rooms. The arrangements for recruiting 999 call handlers were in place. All

ambulance services have those in place and that's business as usual.

But my advice was that we needed to substantially increase the number of 999 call handlers, because I was concerned that if the pressure was such that there was significant increase in 999 calls for ambulance services, that would place pressure on BT, that answered the calls initially, to determine whether you need police, fire or ambulance and then connect the caller to the relevant emergency control room, that there could be members of the public that actually needed maybe fire or police that wouldn't be able to get through because BT would be so busy dealing with ambulance calls and not being able to connect them as quickly as necessary to the relevant ambulance controls. And I was doing everything I could to prevent the ambulance service -- and, as part of our national critical infrastructure, from being overwhelmed.
Q. And you provided a checklist, I think, didn't you, for trusts to fill out for their surge preparation. Were they monitored for compliance?
A. That wasn't the purpose of the checklist. The checklist was to identify the areas where I felt ambulance services could focus their energy where I believe this would give them the greatest benefit and the greatest

impact to increase staff in the control rooms and ambulance crews, and then I followed up with specific advice to each individual ambulance service based on the information within their return.

Q. And moving away from people to vehicles and fleet availability, in a survey on escalation of care that the Inquiry commissioned, 45% of paramedics and 55% of GPs said that a barrier to escalating care was access to an ambulance, and part of your role was about maximising fleet availability, so were you aware of these issues and was any support provided to increase the availability of the fleet?

A. Yes, it was. So there was a number of things. Firstly, again, I offered advice to say that we needed to increase the size of the fleet, which, given ambulances are very specialist vehicles, that's not always easy to do, but I gave some specific advice about how that could be facilitated, and indeed how we can reduce the downtime of the fleet to maximise the operational availability of the fleet that we did have.

And that advice was ongoing as well, particularly for a couple of ambulance services who did get into difficulty at various points during the waves of the pandemic.

Q. And in terms of the use of non-emergency patient

transport vehicles, particularly early on in the pandemic, where their work and their journeys were significantly reduced, was there any work done to try to utilise, effectively, their services and their vehicles and to co-ordinate that work?

A. Absolutely. A couple of points on that.

Firstly, those PTS staff that volunteered to undertake additional training, we asked them to step forward, complete that additional training, and we used those staff on the lower acuity emergency calls in some urgent cases as well.

And then for the PTS staff that were remaining that weren't required necessarily to do their normal PTS business-as-usual work, I asked that those crews pay particular attention to discharges, hospital -- patients from hospital, so that we could really speed up the flow through the hospitals to avoid delays in the emergency department and delays of unloading ambulances outside of the emergency department.

Q. Can you recall when that advice was given and when that work started?

A. That was March 2020.

Q. You have referred in your statement to the issues with staff absence in the ambulance service during the pandemic and you've said how some 999 call handling

centres were impacted by staff absence up to 30% and, indeed, NHS data shows that absence peaked actually later on, in January 2020, at around 9%.

LADY JUSTICE HALLETT: 2020 --

MS HANDS: 2021. I beg your pardon.

What action was taken at a national level to support trusts not only to try to reduce the amount of staff sickness, but also to meet the demand when those staff sickness absence levels were high?

A. A couple of points. Firstly, national advice was issued to ambulance services to protect the workforce that we already had; so providing advice and the installation of plastic screens around the call handlers to protect them from the potential spread of any virus from colleagues sat in close proximity to those staff, but also regular wipe-downs of their desks, using hand gel before and after they entered the control room, before and after they entered the building, and all of the IPC arrangements that were set out for clinical areas were also applied in large part to non-clinical areas, which included the control.

So protecting the existing workforce was the first priority.

I've already mentioned recruiting additional staff to deal with that capacity, but we also then put in

place two filters with British Telecom, who monitored the 999 calls: one for information calls, patients who actually didn't need an emergency ambulance but just wanted information in how to handle the Covid symptoms for themselves; and then, secondly, later on, where there were delays for ambulances responding, patients would often ring back, not -- on the 999 system, seeking an estimated time of arrival for the ambulance.

MS HANDS: Mr Marsh, I'm just going to stop you there because we are going to come on to those two call filters in more detail. But, in terms of the staff absence in the call centres, it's right that there wasn't any national guidance for those non-clinical areas, so the AACE, in fact, produced working safely guidance, didn't they, that was updated throughout the pandemic for use in those areas?

A. That's correct, but there was initial business-as-usual arrangements for good IPC measures across all of our working areas, which included the control rooms, but more specific advice in response to the pandemic and rising absence levels was introduced later on by AACE, you are quite right.

Q. Were you made aware of issues with implementing that advice on the ground; so whether it could actually be implemented?

A. Not in the control rooms from memory, no.
Q. What about other staff areas, staff rooms, break-out areas, those kind of areas?
A. Once the guidance had been issued, I'm confident no-one ever drew to my attention that the guidance or the advice was not being followed, but I recognise there was a gap between business-as-usual good hygiene amongst our work areas and the more specific guidance that was issued for non-clinical areas in due course, and that was obviously why that additional guidance was issued.
LADY JUSTICE HALLETT: I think what Ms Hands is trying to get at is, for the previous witness, Mr Tilley -- I don't know if you had a chance to listen to his evidence?
A. Most of it I did, my Lady.
LADY JUSTICE HALLETT: The suggestion was that there were some trusts certainly where the guidance that you were giving, for good reason, wasn't being implemented. It didn't come to your attention?
A. Not to my attention. I am really sorry if that was the case, because the guidance was there for all of us to follow, to protect all of us.
MS HANDS: You have accepted, Mr Marsh, in your statement there were times during the pandemic that demand did outstrip capacity in 999 call handling centres. Was

enough done to prevent this happening early in the pandemic, early enough in the pandemic?
A. I don't believe it was.
MS HANDS: My Lady, before I move on to my next topic, I wonder if that might be a convenient time to have a break.
LADY JUSTICE HALLETT: Certainly.

I'm sorry about this, Mr Marsh, but we take regular breaks for the sake of everybody. I shall return at 11.25.

(11.09 am)

(A short break)

(11.25 am)

MS HANDS: Mr Marsh, we're going to move on to a new topic of call handling and triage systems.

First of all, I wanted to just establish what the systems are that are used in England. So we have two systems for emergency call handling -- in fact they are used across the UK -- and that's NHS Pathways and AMPDS. I'm going to talk about the changes to the triage Pathways that were introduced into 999 and 111 in response to the pandemic.

It's right that you chaired the Emergency Call Prioritisation Advisory Group advising NHS England on ambulance call prioritisation, triage systems and

clinical coding; is that right?
A. Correct.
Q. If we can have on the screen, please, INQ000479041, this is taken from your statement and this sets out the initial changes that were made in mid-March 2020 to ambulance disposition codes within 999 and a new prioritisation pathway for Covid-19 callers contacting 999 with breathing difficulties.

Could you briefly explain what this change meant in practice if I called 999 with Covid symptoms, firstly with breathing difficulties and then, secondly, without, at this time?
A. When patients ring 999, once we've established whether the patient's breathing or not, we ask the caller, which may or may not be the patient, what the chief complaint that they're suffering with is. And if they were suffering with difficulty breathing or any particular problem with their breathing, then normally that patient would be taken through the difficulty breathing algorithm. But once the pandemic protocols were implemented, those patients would be taken through the pandemic protocol to establish or not whether those patients can be safely and appropriately dealt with without an ambulance being sent or whether they need an ambulance to be sent and, therefore, the speed of which

and the category that would be applied to that particular patient.
Q. When you say the pandemic protocol, are you talking about Protocol 36?
A. Yes, I am.
Q. That wasn't introduced until 3 April 2020. So looking at the changes that were made on 12 March 2020, in front of you, what was this pathway and how was this different?
A. These were two new disposition codes that were introduced to be able to identify, given the questions that were being asked of patients and the definitions of potential Covid at this point, if those patients potentially had Covid then there was an opportunity, an option, for the call handlers to assign one of those two codes to that particular patient.
Q. What level of scrutiny did these changes undergo at this time?
A. It was the clinical coding group, which is made up of doctors, medical directors from ambulance services, and the clinical director within NHS England.
Q. Between the introduction of this pathway in March, and Protocol 36, which we'll come on to, in April, was there any review of those disposition codes or any changes to them?

A. Not in that intervening period.
Q. So these pathways remained in place with the disposition codes you have just described until Protocol 36 was introduced?
A. That's correct.
Q. Moving on then to Protocol 36, my understanding -- please correct me if I'm wrong -- is that the intention of Protocol 36 was to ensure that call handling services were not so overwhelmed with calls about Covid-19 that they were prevented from triaging and responding to other incidents and to focus on those most in need?
A. Yes, it's designed that the ambulances aren't overwhelmed rather than the actual call handlers in the control rooms themselves.
Q. And it's right that Protocol 36 was first proposed on 23 March 2020 and implemented on 3 April 2020 in all ambulance trusts; is that right?
A. In England, correct.
Q. In England. We know demand was increasing before that and you've said in your statement that obtaining approval for pandemic triage code set changes or escalation levels often proved challenging due to the time it would take to get sign-off from NHS England and therefore decisions were not always implemented quickly enough.

Is this an example of when it wasn't implemented quickly enough?
A. No.
Q. The current AACE chair has provided a statement to this Inquiry and he has referred to trusts requesting permission to shorten call handling triage before Protocol 36 was introduced, and in fact you wrote to ambulance trusts in England on 7 April -- so a few days after Protocol 36 was introduced -- with agreed principles to allow trusts to make changes to their call handling process, and AACE developed a set of codes that they could use alongside it.

Why were these principles and this set of codes produced at this time when Protocol 36 had been introduced?
A. There's two separate issues here. We've talked about Protocol 36 and the escalation. This particular reference is in relation to a shortened training course for new 999 call handlers.

The usual duration of training for new call handlers is about five weeks, plus several weeks, maybe up to two months, where new staff, having completed their training, then work in the control room alongside existing experienced members of staff to gain their competence and to build their confidence before they

take 999 calls on their own.

It had been drawn to my attention that a couple of ambulance services were looking to provide a shortened initial training course for new recruits, much less than the usual five weeks.
Q. It's right, isn't it, that in fact they were looking to reduce it to one day from the five weeks?
A. So I believed -- in at least one service.
Q. And what action did you take in response to that?
A. As you referred, I -- as soon as it was drawn to my attention I sent an email to all ambulance service chief executives in England saying that I didn't support such a proposition. Clearly it is a matter for individual ambulance services and their chief executives as to what training they provide but I made my position very clear that I didn't think it was sensible, the training of five weeks is there for a reason, and that if ambulance services still believed it was the right thing to do, they needed to ensure that the training that they were going to provide, the shortened course, still met the requirements of the licence and the requirements of the regulator for that particular provider of the triage system.

And then, second, it was followed up with a letter, which you just referred to, which again

reaffirmed my position but also did include some principles that if an ambulance service still believed it was the right thing or it was necessary for them to do, that they should at least apply and adhere to those principles that were set out by AACE.
Q. Were any changes to the length of training monitored at a national level?
A. No, it was a matter for individual ambulance services.
Q. Were you aware of any guidance or advice that was in place to support, for example, new call handlers around decision-making on the type of assessments that they were offering to callers? For example, whether they were passed on to a clinical call handler for an assessment or remote assessment?
A. Are you referring to the new call handlers?
Q. Well, both.
A. Well, those arrangements exist business as usual. Call handlers are able to either transfer 999 callers or, indeed, once they've closed the case, then place that case on the queue for paramedics and nurses to call those patients back where that's necessary, and control rooms generally have at least one paramedic that's available to provide, in real time, clinical advice whilst that call is in progress as well. That's business as usual.

Q. Were you aware of instances where there wasn't the capacity to provide that clinical supervision to call handlers?
A. There would have been occasions where that option's not always available in all control rooms from time to time.
Q. And in terms of Protocol 36, returning back to that, trusts that use NHS Pathways as a system had to use paper workarounds with scripts; is that right?
A. In the early stages that is correct.
Q. So it's right, isn't it, that they would be updated almost daily, sometimes multiple times a day, as the situation was developing in the early stages of the pandemic?
A. Correct.
Q. And that would provide that the script, the questions that the call handler should be asking the caller?
A. On the potential Covid algorithm, that is correct.
Q. And was there any concern or are you aware of there being any inconsistencies in that advice being followed, given that it was on a paper basis?
A. No. From time to time, previous to the pandemic, paper workarounds are introduced if something urgent comes up before the system can be updated. But, as you quite rightly say, this was happening much more frequently given the change in information in relation to the

initial wave of the pandemic.
Q. I think in an investigation that was carried out by the Healthcare Safety Investigation Branch into 111 services in fact found that there was up to 35 different changes to the algorithm within 2020 whereas there would normally be seven to eight per year. Does that sound about right?
A. Yes. Yes, it does.
Q. So those would be in NHS Pathways on paper?
A. Certainly the initial workarounds would be but then they would be built into the system within a few weeks.
Q. Moving on to the escalation and de-escalation of pandemic protocols and 999 call handling, you have set out in your statement that a tiered approach was taken to national changes depending on the escalation level but that it applied -- that level applied across England; is that right?
A. That's correct.
Q. If we could have up, please, INQ004790471.

And the top of the page, this is a table that's in your statement. Now, we can see here the different levels from 0 to 3. These are, just for clarity, different to the REAP levels that we discussed this morning, aren't they?
A. Yes, they are.

Q. And these were specific to Covid-19; is that right?
A. That's correct.
Q. And it's correct that you had responsibility for deciding on the level at the time?
A. And making recommendations to NHS England for ratification, that's correct.
Q. It's right that during the peak waves of Covid-19, Protocol 36 was implemented at level 1, is that right, so when it was introduced in April, it was at level 1?
A. Correct.
Q. But level 1 wasn't exceeded at all throughout the pandemic, was it?
A. Correct.
Q. And in fact we went back to level 0 quite a few times, didn't we?
A. That's also correct.
Q. Why did we not go above level 1, in your view?
A. To move to level 2, and ultimately to level 3, would provide more codes for clinical assessment and potentially not initially sending ambulances. What I was trying to assess was the balance of risk across England as a whole to ensure that that balance was proportionate to those services which were under pressure, and that clearly needed level 1, maybe an element of level 2, and the rest of the country that may

not have been under the same amount of pressure, and trying to keep a consistent approach so that those ambulance services that had availability to send ambulances still continued to do so.

In some ways these Protocol 36 levels formalise the internal surge levels within ambulance services, and so I was clear that we needed to make sure that we didn't expose more risk by trying to address the particular challenges that might have existed in one or two ambulance services at any particular point in time.
Q. So, in practice, one ambulance service could be under severe pressure but because, as a whole, the ambulance service in your view and recommendation was under moderate pressure, the whole of the ambulance services in England would be at level 2?
LADY JUSTICE HALLETT: 1.
A. 1.
MS HANDS: 1. I beg your pardon, 1.
A. That's correct.
Q. Thank you.

If we could, please, have up INQ000472375, and these are minutes of the ambulance expert group of the National Directors of Operations from 4 November 2020.

Now, I accept that you weren't present at this meeting but if we could look at the bottom of this

document, please, where it's highlighted, and the escalation levels that we've just been looking at were discussed at this meeting and we can see here that it says that the position was summarised as EMAS and NWAS -- now they are two different ambulance services, aren't they?

A. Correct.

Q. -- were withdrawing their request to escalate following clarification. However, NASMeD -- and that's the National Ambulance Service Medical Executive Directors' Group, isn't it?

A. Medical directors, yes.

Q. -- had not withdrawn their request:

"In essence the process is not working as envisaged."

And somebody confirmed that YAS -- and that's another ambulance service, is that right?

A. Correct.

Q. -- had withdrawn their request and no further requests to escalate were received.

What this is essentially showing is that three ambulance services had requested an escalation to a higher level but their requests had been withdrawn; is that right?

A. Correct.

Q. But, despite that, NASMeD were of the view that there should still be consideration of an escalation to a higher level.

In the second part of that box there is a suggestion that the previous barrier to regional escalation had been resolved and:

"[It] might open a possibility to [NHS England] reviewing the process to introduce regional discussions on escalation rather than the national approach currently in place."

Why was there no review at this point of whether -- or was there a review at this point, as to whether a regional approach to escalation would be beneficial?

A. There was a review and I did consider the benefits and the disbenefits of moving from a national position to allowing some regional flexibility but, on balance, I still held the view, and so did other senior colleagues, that England remaining at one level consistently was still the right thing to do on balance.

Q. It's right, isn't it, that in Wales they had adopted a more flexible approach where they could adapt based on the regional pressures at the time?

A. Yes, given that Wales is, you know, a devolved nation.

Q. Moving further through this document to page 3, please,

and -- yes, thank you -- the major incident update in the North West Ambulance Service, here a major incident was declared and the stack of holding calls was reduced from 520 to nearer 250, and it caused in the Greater Manchester area extensive delays, lost hours at ED. Then there was reference to a suspension of meal breaks and a request for a report. "SoS" -- is that the Secretary of State?

A. I believe so.

Q. Thank you.

Is this one of the consequences on a regional level of that decision not to allow for a regional approach to the levels?

A. No, not at all.

Q. Can you explain why?

A. Of course. Individual ambulance services already have their specific surge plans, and whilst REAP is in place for a longer period of time, which we've discussed already, the individual surge plans are on-the-day, in-the-moment plans that deal with rising surge as increases in demand occur during the day or maybe handover delays deteriorate during the day or maybe inclement weather causes disruption for the ambulance service response.

So the individual ambulance service, so North West

in this case, would still have had their specific surge plans that they would have applied in managing the demand and the pressures that they experienced on that day. Moving to level 2, or even level 3, across the whole of England wouldn't have helped the North West on this particular day.

Q. You provided the Inquiry with a statement as chief executive of the West Midlands Ambulance Service and you've referred in that statement to there being cells and regular meetings in response to Covid which allowed the trust to make informed, effective decisions about how to operationally respond which were dynamic and were reactive to the changes in national guidance, resourcing and resource availability.

Would you agree, therefore, that that localised decision-making can allow for more dynamic and effective decisions and responses based on the situation on the ground, as happened in your trust?

A. Yes.

Q. If we could have on the screen, please, INQ000410621, please.

This is a summary of a legal opinion you received in relation to changes to triage processes for Covid-19 on 2 April 2020. So this is the day before Protocol 36 was implemented in England.

The question comments that it's not clear from the documentation as to how the needs of vulnerable groups have been taken into account.

And then in the response below it confirms that there has not been a formal impact assessment of the impact on vulnerable groups of the changes to triage before implementation but it was going to remain under review.

Was a review conducted at any point during the pandemic?

A. Not a formal review outside of the existing arrangements that are in place for the algorithms for all patients.

Q. But Protocol 36 was introduced specifically for Covid-19; is that right?

A. It is, but the basis upon which the algorithms work are based on the clinical presentations of patients and, therefore, the code and the category that follows from that.

Q. Were you aware of Protocol 36 having an impact on vulnerable groups during the triage process?

A. Not any more than would have normally been the case.

Q. I want to turn now to the practical impact of Protocol 36 and a real-life example so that we can put it into some context. That can be seen in a report produced by the emergency call prioritisation group that

you chaired, 23 March 2020.

So it's INQ000281180. Thank you.

It's the box in the middle here. Essentially what we have here is an example of what would happen under Protocol 36. So in order to demonstrate the comparable triage outcomes in the two systems, the clinical scenarios describe the change in management for a patient with low acuity symptoms and a patient requiring an emergency response.

So, dealing first with the low acuity:

"A 30-year old who has chest pain and Coronavirus symptoms ... will be assessed based on these symptoms and managed in a similar way. As the triage levels escalate patients who are assigned a category 5 response priority at triage level 1 will be signposted to home management by call handlers at triage level 3 ..."

And that disposition would be the same in both the systems we have discussed under the pandemic protocols.

And then in terms of the more serious emergency response:

"A patient who has severe breathing difficulty (Classified as fighting for breath/ineffective breathing ...) will be allocated a category 2 response across each of the escalating triage levels."

A triage 2 response would be slower in terms of

the ambulance arriving at the scene than a category 1 response; is that right?

A. That's correct.

Q. And that's the same in both of those examples; is that right?

A. Well, in the first example the patient would have been potentially assigned category 5.

Q. And that would be -- a category 5 response, under the pandemic protocol, would be to have stay-at-home management advice?

A. Category 5 is for a clinical assessment ringback.

Q. Thank you.

Did that change apply to the triaging of callers who did not report Covid-19 symptoms?

A. There were some codes that were not on the Protocol 36 or the pandemic algorithm that were allocated a lower category response priority in levels 2 and in levels 3 if they had been implemented.

Q. And it's right, isn't it, that in August 2020 the emergency call prioritisation group conducted a review of Protocol 36 specifically in regard to ineffective breathing and recommended that a category 1 response should be received as opposed to category 2; is that right?

A. That's true. That was new code for ineffective

breathing that was applied to the pandemic protocol at category 2 and when we conducted that review in August we decided that that code should receive a category 1 response.

Q. Were there any instances that had led to that decision being made in August?

A. It was just a review of those codes and the application of those codes and as part of that review it was determined that that code would be better suited to a category 1 response and so therefore it was changed.

Q. Thank you.

I want to look now at the meeting minutes from the National Ambulance Service Medical Directors' Group meeting on 23 April 2020.

And this is INQ000410581.

Here there was a discussion around the escalation levels of Protocol 36, or card 36, as it is referred to here. There was a reference that it "should be lowered to 0", but that it wasn't present -- "it wasn't possible at present but they thought it should be considered if trusts were operating at good performance levels."

If we could go down, please -- thank you -- just a little bit more, to "Several Trusts".

It was discussed at the meeting that:

"Several Trusts [had] reported increases of

patients found deceased when crews arrived, more serious illnesses in patients, patients waiting longer before calling 999, and ... patients were reluctant to go to hospital, and needed to be convinced sometimes that the diagnosis related to other conditions and not COVID-19."

And the North West Ambulance Service wanted to know how long you might need to stay on card 36.

I accept you weren't at that meeting but were you aware of issues as such as those described here and did they continue throughout the pandemic?

A. So I was aware of the issues that are highlighted here but I think there are two separate points being made here.

Firstly, on level 1 of the pandemic protocol, actually medical directors were reporting that many patients were getting a more appropriate safe response rather than automatically just sending an emergency ambulance, and that was one of the considerations that led us to believe that remaining on level 1 was the right thing to do.

In relation to the other point in this highlighted section, I do believe it's -- it was the case that some patients were delaying calling for help and, as a sad, terrible consequence of that, by the time the ambulance call was made and the ambulance arrived, those patients

hadn't made it and, as we've gone on to see in this section, that even when the ambulance had arrived, some patients were also reluctant to be conveyed to hospital as well.

Q. You referred earlier on to the delays that there could be to the changing of triage codes. Was one of those examples a change to the script included the loss of taste and smell in May 2020?

A. Not that I remember, no. I don't think there was a delay.

Q. In the healthcare safety investigation branch report into 111 services they found that there was in fact a delay of four days in which the script was not updated. So anybody calling in that period would not have been told it was a symptom. So you weren't aware of that?

A. No, not at the time.

Q. Is that the kind of example of where the processes that were required to change the scripts impacted on the callers?

A. I don't believe so because whilst that's an important factor in recognising whether the patient may or may not be suffering Covid, it wouldn't have influenced in any way the code that was allocated to the patient once they had been taken through the algorithm.

Q. Moving on then to the demands on 999, there was a

significant increase in 999 call answering time in England in March and April 2020, with an average 49 seconds compared to an average of 10 seconds before the pandemic.

One of NACC's role was to monitor performance and report data. How did you respond to escalate those issues and what did you do in response -- what response did you receive to those issues?

A. So we were monitoring 999 call answering on a very regular basis throughout the day, every day, and receiving reports from British Telecom as to the number of over two-minute delays on a daily basis on each ambulance service, and I asked the colleagues within AACE to develop some arrangements whereby they could provide support, advice and mutual aid to those ambulance services that were under pressure by strengthening the buddy arrangements, which we already had in place, and to see what further steps we could take to provide mutual aid to those 999 ambulance services that were under pressure, and at the same time to ensure that the technical links were in place that once a 999 call had been answered in an ambulance service in which the incident hadn't occurred they could transfer the details of that case to the host ambulance service to enable them to respond.

Q. And when was that introduced?

A. It was finally completed by October 2020 but most of those ambulance services already had the ability to transfer those cases, with the exception of London, and that was the one that took the most time to complete.

Q. In your statement you've discussed the issue of "no send scripts", and essentially they are used during times of significant pressure, for example asking the call handler to make their own way to hospital as part of individual trust surge plans. So there's no national agreed script; is that right?

A. That's correct.

Q. You've said that they were discussed at the emergency call prioritisation group to standardise the scripts and set out the changes that were agreed nationally. Were those changes monitored for implementation to ensure that there was consistency across the trusts for the scripts that were used?

A. Absolutely. That was the whole purpose of the pandemic protocol and moving through those levels. But "no send" was a generic term that was used, it didn't automatically mean that all of those patients that resulted in the end disposition from that algorithm didn't get an ambulance. Some may have been advised to make their own way to hospital but the majority of those

patients actually were then sent for further clinical assessment before a decision was made whether they actually needed an ambulance or not. And some of them did and an ambulance was subsequently sent.

Q. Moving on, then, to NHS 111 during the pandemic, it's correct, isn't it, that the instruction from the Secretary of State was that NHS 111 should remain a single point of contact for all enquiries for Covid-19?

A. Correct.

Q. And were you a member of the NHS England 111 Covid-19 cell?

A. No.

Q. Would it have been helpful if you had been a member of that cell to ensure consistency across 999 and 111 services?

A. I don't believe so.

Q. We know that there was a dramatic increase in calls to 111 in March 2020 with over 3 million calls in that month and over half of those were not answered.

If we could, please, look at INQ000348589.

This is a briefing note that was prepared for -- by Public Health England for a cabinet meeting on the following day on 26 March, and the author states at the top there that capacity -- sorry:

"Whilst PHE has maintained high level of

capacity and recruitment that the beginning of the incident would now be providing additional core NHS 111 staff but that had not happened.

To your knowledge why did NHS England not recruit call handlers before 26 March?

A. I honestly don't know. I wasn't involved in decision-making with NHS England in relation to 111, I'm afraid.

Q. Are you able to help us with the call filters that were introduced to NHS 111 in March 2020 in order to manage demand?

A. I'll try if this is a specific question, of course.

Q. Okay.

If we could, please, have up INQ000320204.

And this is the Healthcare Safety Investigation Branch report that I've referred to into the changes to 111 triage.

These changes suggest that they were requested at the -- at the request of the NHS England central ambulance team and it was only to be used by providers when advised by NHS England, and this is a further pathway update at the end of March with a Covid-19 level 4 switch enabling an ambulance category 3 and category 4 dispositions reached by core NHS 111 health advisers using the Covid-19 algorithm to instead be

performance, this has been a difficult time for NHS 111."

And we can see the performance of NHS 111 below. They say that:

"The capacity at NHS 111 has responded to around 40,000 calls with slightly more at weekends since the beginning of the incident. This is despite calls offered being regularly over 100,000 per day. If anything, their ability to answer calls has dropped since mid-March."

In fact if we look specifically at 23 March, it is quite small, at the bottom of the graph. You can see there that the NHS 111 calls answered in 60 seconds is 10% and the target was around 95% at that time.

Then if we move down the page to page 3, please.

At the first paragraph there had been a request from NHS England and NHS 111 to PHE for additional 1,000 call handlers, which was achieved within 24 hours' notice, in order to support capacity of NHS 111 Covid response separate from the PHE capacity.

Then if we just go to the final page 4, please, and at the bottom and paragraph 3.1, one of the issues that Public Health England draws attention to is that capacity issues at the end of March 2020 in NHS 111 remain. There would be no attempt to augment the core

directed to a clinician, with a "Speak to a clinician from our service immediately".

So is it right that in this -- when this switch would be turned on, those that were calling that would ordinarily have received a category 3 or category 4 ambulance response would now be actually called back by a clinician in the first instance?

A. Yes, to determine their clinical needs, that's correct.

Q. And is it correct that you were part of that NHS England central ambulance team?

A. Yes, that's true, yes.

Q. So were you involved in advising when this should be switched on or off?

A. Yes.

Q. If we move to the next page, please, and 4.2.8, and then we can see here that there were further updates to the pathway we've just been looking at around pregnancy, vulnerability and the symptoms, and depending upon those would depend on the disposition that they reached?

A. That's correct.

Q. Thank you.

If we move down to 4.2.10, sorry, this is another update the following day. So this is 31 March. Here the summary of the update was that:

"Those who [were] not breathless and identified as

extremely vulnerable by the NHS will be triaged for persistent cough and fever."

And:

"Those over 65 years of age will now receive a full breathlessness triage and will reach an appropriate disposition."

Are you aware as to the clinical input and quality assurance that those updates underwent?

A. No.

Q. And it's correct that the call handlers that would be dealing with these issues were not clinically qualified or trained, were they?

A. That's correct.

Q. And a substantial amount of them, as we've just looked at from that note, would be new call handlers that had just been drafted in that would be dealing with these calls?

A. Some of them would have been, yes, yes.

Q. And do you know how long their training period and supervision was?

A. I believe it's the same if not very similar, circa five weeks plus a good number of weeks in the call centres gaining their experience and competence.

Q. During the pandemic, are you aware as to whether that period of training was reduced?

A. Not formally but whether an individual provider or an individual ambulance service reduced it, then that may well have been the case. But I certainly wasn't made aware of any shortening of the experience time in the control rooms.

Q. Do you accept that the result of these changes overall was that more people were advised to manage their symptoms at home to reduce the demand on 111 services?

A. That would have been the case where it was believed to have been safe and appropriate, yes.

Q. Thank you.

That document can come down. If we could, please, have up INQ000069487.

This is an email between the Deputy CMO, the CMO and Department of Health and Social Care on 30 May 2020, where they refer to NHS 111 wanting to remove Covid symptoms, and it reports that NERVTAG were "very uncomfortable" and that we would "lose an important early warning system for a resurgence", and a note from 111 had been requested.

Were you aware or involved in discussions about NHS 111 no longer coding Covid-19 cases and the impact that could have?

A. Not at all.

Q. Do you know who would have been involved in that

decision?

A. I'm assuming it would be the NHS 111 Pathways team but I couldn't be sure.

Q. Thank you. That can come down.

We've discussed a little bit about the alternative and additional helplines and assessment services that were set up during the pandemic and, indeed, there were a number of them. Those being set up by NHS England were the Covid-19 Response Service and the Covid-19 Clinical Assessment Service, and then there was also the Public Health England helpline; is that right?

A. That's my understanding.

Q. And were you involved in setting those up, monitoring or deciding on when they would be switched on or off?

A. None of those at all.

Q. NHS England was responsible for monitoring the Covid-19 Response Service. You didn't play any part in that?

A. That's correct. I played no part in it.

Q. Moving on then to the NHS 111 First service which you referred to, this was a booking system for NHS 111 online -- sorry, NHS 111 and NHS online -- 111 online, for emergency departments that was available to trusts by March 2021 to encourage access and to reduce pressures on A&E and NHS 111. Were you involved in the implementation of that?

A. No, but I was aware of it.

Q. In terms of future triage systems, you recommended that there should be a single NHS 999 call prioritisation triage system, and in fact the AACE made a similar finding following a review in July 2020. Are you aware as to whether anything was done in response to such findings at that time or since to implement that?

A. No. This has been an ongoing debate amongst ambulance services for many years actually, and I do strongly believe that having one prioritisation system for 999 ambulance calls is the right thing to do.

Q. Moving on to the topic of call filtering, please, it's right that you approved the switching on of a BT call filter on 27 March 2020 to refer patients calling 999 who required Covid advice to NHS 111 online if it wasn't life-threatening or they were not over *(sic)* 5 or above 70 years old; is that right?

A. Under 5 and over 70, that's correct.

Q. Yes. And on 15 April 2020 there was an update to that to change the 5 years old to 16 years old. Were you involved in that decision?

A. Yes.

Q. Can you explain why that change was made?

A. That was advice that was given to us by some of the ambulance service medical directors and the NHS England

clinical director.
Q. And it's right that those call filters were switched on and off throughout the pandemic; is that right?
A. Correct.
Q. And the second filter that you switched -- that you advised on is one that you referred to around duplicate callers asking for an ETA as to when their ambulance would arrive if they had already requested it and they hadn't deteriorated.

In the expert report from Professor Snooks, she referred to research during the pandemic identifying that NHS 111 telephone triage may have underestimated the importance of those repeated callers as predictors of adverse outcomes.

Is that something that you recognise and is that something that was considered before the call filter was switched on?
A. Not at that point. That was knowledge that wasn't known to us at that time. But we did very clearly set out in the algorithm which was issued to BT for their use that if the patient had deteriorated or the condition had changed then the call was to be connected to the ambulance control room. It was only those patients that felt comfortable that the condition hadn't deteriorated or changed in any way, that they were simply only asking

for an ETA, it was those calls that were not connected to the ambulance control rooms.
Q. Are you aware of any training that those call handlers were given on that distinction?
A. I'm not aware of any training but the algorithm was very straightforward. It was a series of yes/no questions and answers. And of course if there was any doubt then we said to BT: please connect the caller to the control room.
Q. Moving on to conveyance to hospital and decision support tools, it's right, isn't it, that NHS England developed clinical guidance for paramedics to aid decision-making on conveyance to hospital for adult patients in April 2020?
A. That's correct.
Q. And in fact that guidance was issued on 10 April 2020 but it was issued by mistake, essentially, because there had been identification of potential impact on patient safety with the inclusion of the clinical frailty scale?
A. Correct.
Q. Later that month it was reissued without the clinical frailty scale; is that right?
A. That's my understanding, yes.
Q. So there were 12 days when it was in use. Do you know if patient safety was monitored during that time?

A. To be honest, I have not found any evidence that ambulance services applied that guidance. It was posted on the website, as I understand it, but I actually don't think it was implemented in any ambulance service.
Q. And it's right that there was no national guidance issued on conveyance after that until much later in the pandemic; is that right?
A. Until much later, when the toolkit algorithms were published.
Q. And as a result of that were you aware that ambulance trusts were developing their own tools?
A. Yes, but, again, some ambulance services will have had or potentially will have had some kind of conveyance advice or tools within their individual trusts, but overwhelmingly the guidance for ambulance paramedics on conveyance of patients exists within the Joint Royal Colleges Ambulance Liaison Committee guidelines.
Q. Were you aware of requests from those on the front line who were making those decisions for a national tool to support that decision-making?
A. Not specifically, no.
Q. Could we have up, please, INQ000499523 and if we could go to page 34.

This is the survey that the Inquiry commissioned into escalation of care decision-making, and if we look

at the fourth quotation down, this is a quotation from a paramedic. He said that:

"One example of frontline staff being left to make very difficult decisions on managing critically unwell patients was not being able to ventilate a patient, unless we were in level 3 PPE ..."

Sorry, it actually should be the top one. Sorry, that's my fault, the first one, the "Harm from inability to escalate care":

"It was very difficult and upsetting to leave some sick patients at home due to tightening of criteria for conveyance to A&E. Some of these patients would have deteriorated and died. I understand why it had to happen, but it went against my paramedic values."

Do you agree that a national tool early in the pandemic would have assisted those on the front line that were making these kind of decisions?
A. Possibly.
Q. And it was January 2021 when a decision support tool was issued but use of it in the ambulance service in England was discretionary; is that right?
A. Correct.
Q. What led to the tool being developed at that time?
A. Well, I wasn't involvement in the development of the tool but my understanding is that it was an attempt to

standardise advice over and above that which already exists within the Joint Royal Colleges' guidelines so that paramedics had a clearer algorithm to follow for patients, based on a series of observations, to help them decide which patients needed to be conveyed to hospital and which of those patients could safely be left at home.

Q. And did you receive any feedback as to the benefits of that advice after it had been issued?

A. No.

Q. Were you made aware of any guidance or reasonable adjustments that were made to allow for patients with additional needs to be accompanied in an ambulance during conveyance to hospital?

A. The guidelines that were issued were for patients that had no requirement for someone to accompany them, that they should be conveyed alone, but for those patients that were vulnerable or children, et cetera, then should have an appropriate responsible adult conveyed with that patient.

Q. And were you made aware of any issues with that guidance being followed?

A. Not other than it was enormously distressing for patients and their relatives.

Q. I want to move on now to infection prevention and

control. It's right, isn't it, that national guidance is invariably based on hospital settings and not always suitable for the ambulance setting and that was the case pre-pandemic?

A. That's correct.

Q. So when it came to the pandemic, it had to be updated multiple times, which you said took some time to arrange; is that right?

A. Sometimes, yes.

Q. And part of AACE's role was to review that guidance and to make recommendations to NHS England; is that right?

A. Yes.

Q. And I think you've said in your statement that they were always accepted?

A. Yes.

Q. If we could look, please, at INQ000226616.

This is feedback from a survey of the workforce at the West Midlands Ambulance Service, your trust, following wave 2.

And if we could look at box 2, some of the feedback received from those in your trust was that:

"The trust [had] taken the approach that one PPE solution fits all."

And they were saying that:

"This isn't always the case ... [and it's not

always] possible ... staff have to balance risk benefits and often fly intubated patients whilst in level 2 PPE. We have asked for a specialist solution but been told the same WMAS party line. I think going forward there has to be acceptance that specialist teams may require specialist PPE."

Is that "one solution fits all" approach something that you were aware of during the pandemic?

A. Certainly my service we were very clear that before the pandemic we had already procured the respiratory hoods, because we recognised the enormous challenges of fit testing, et cetera, with FFP3 masks, and so we moved to the respiratory hoods. And of course during the pandemic I was very clear that we were going to do everything necessary to protect our staff, and therefore to protect the emergency service.

And actually, in the early stages of the pandemic, potential Covid patients and certainly patients for which an AGP was being undertaken that would have required level 3 shouldn't have been conveyed in the aircraft anyway because at that point we weren't able to adequately decontaminate the aircraft having conveyed such a patient. So those patients would have been conveyed by land, as they would if the aircraft's not flying and indeed at night when the aircraft didn't fly.

Q. Thank you.

Did you seek to raise those concerns at a national level in those roles that you held, around the guidance on PPE and the solutions?

A. Well, more generally, I was aware that staff were, concerned about the levels of PPE that they were being advised to wear and I absolutely raised their concerns with senior colleagues within NHS England, yes.

Q. We'll come on to that in a bit more detail.

Throughout the pandemic the hierarchy of controls was promoted by public health bodies and AACE. We heard from the College of Paramedics last week that they didn't think it was suitable for the sector and indeed they raised those concerns throughout the pandemic.

Do you agree that it was not appropriate for the sector and did you take any action to escalate those concerns?

A. Well, I actually think that applying the hierarchy of control is the right thing to do. The principle set out in the hierarchy, for example eliminating the risk where that's possible, we increased hear and treat rate through the Protocol 36 level 1 we've already discussed, by ventilating the area as best you can, by regular wiping down of surfaces, et cetera, I think is the right thing to do.

But I absolutely recognise the enormous anxiety that frontline staff were experiencing in dealing with the pandemic.

Q. The UK IPC cell agreed on 6 March 2020 that PPE for ambulance guidance would be, "downgraded" and it was David Cunningham, on behalf of the AACE, that attended on behalf of the sector. During a later meeting in that month it was confirmed that ambulance trusts were not consulted on ambulance PPE guidance. At that time you were chair of the AACE. So how regularly did you correspond with Mr Cunningham and discuss the information coming out of the cell with him?

A. Not at all. That was dealt with by the expert groups of the IP&C with NHS England, the IPC cell and Public Health England. It falls outside of my experience and expertise. So there would have been no value in me regularly meeting with the experts.

Q. But you received correspondence from, for example, Unison and the GMB union and the College of Paramedics about the issues that they were having with the recommended level of PPE and RPE on the front line. Did you seek to raise those or bring those to Mr Cunningham's attention in order for them to be raised at the UK IPC cell?

A. Yes, he was aware of the concerns. I raised I did with

colleague that were in AACE, and of course the colleagues that were part of the ambulance policy, advisory and assurance group that was established as well.

Q. And what was the response?

A. That we should continue to follow the guidance from the experts of Public Health England and the NHS England IPC cell.

Q. If I could bring you forward a bit more in time now to the end of 2020/the start of 2021, where we start to see an increase in the handover delays.

So if we could look, please, at a graph in your statement. It's INQ0004190041.

And the national handover delays are set out there at the top. It's correct that the target is 15 minutes, isn't it?

A. Correct.

Q. And we can see here that the delays are increasing in December 2020 and January 2021 and coming up to -- well, certainly over 30,000 --

A. Yes.

Q. -- hours lost in those two months. And then from April 2021 onwards we can see a significant deterioration in the hours lost, can't we?

A. Correct.

Q. Put very simply, that meant that patients and crew were spending longer in the back of an ambulance cab than they would have been had there not been the delays; is that right?

A. Absolutely right.

Q. I think it's right to say that sometimes up to 12 hours in December 2021, and the longest delay in that month was, in fact, 20 hours?

A. Correct.

Q. The Inquiry heard from the College of Paramedics last week that as delays increased at the end of 2020 they were advocating for a change in the IPC guidance for staff to have flexibility to conduct a dynamic risk assessment on their PPE levels.

Did you share those concerns at that time as well, that paramedics essentially should be given that flexibility?

A. They already had it. Even from the very start of the publication of the guidance for ambulance staff they already had the ability, having undertaken what we call the dynamic risk assessment, it was simple -- a case of assessing the risk that you believed you were being confronted with, and if the level of PPE -- the minimum level of PPE, whether it was level 2 or indeed level 3, if you didn't think that risk that you were being

confronted with was being sufficiently mitigated, our staff had the ability to upgrade some or all of their PPE in order that they felt safe. And that was no different when we got into these dreadful handover delays in the winter.

LADY JUSTICE HALLETT: Sorry to interrupt, does that depend on, whether they could upgrade, whether the equipment was on the ambulance?

A. I absolutely accept that that is also down to availability. But the point I was making was they already did have the ability to upgrade where that equipment was available and it should have been made available.

MS HANDS: It's right, though, isn't it, that there was no guidance on how to actually conduct that dynamic risk assessment until 2022?

A. There may not have been specific written guidance, but our staff are well trained, professional colleagues right across the country, that, by their own admission -- and I fully understand that -- were feeling enormously vulnerable, and they felt that the PPE that they were being advised to wear was inadequate, so by definition, if they had established that they believed the PPE was inadequate, they had already undertaken the dynamic risk assessment, even it was just

subconsciously, and therefore they could have and were able to, subject to the equipment being available -- been able to upgrade any item or all of the items of PPE.

Q. Ms Nicholls from the College of Paramedics told the Inquiry that it was impossible to carry out a risk assessment about Covid because you didn't know what you were going to and staff would often be working on a closed basis with no windows and she wasn't aware of any training for Covid risk assessments specifically.

Do you think that would have been helpful to have training or guidance earlier than 2022?

A. I think it would have been very helpful if we had used language, narrative, that was much more straightforward for our crews. Using terminology like a "dynamic risk assessment" and "hierarchy of control" when actually we were saying "If you don't feel safe, upgrade your PPE" -- would have been much more straightforward. I entirely accept that.

LADY JUSTICE HALLETT: It doesn't seem to be an NHS thing, speaking in plain English.

A. No, it's a challenge, and we need to get better at that, my Lady.

MS HANDS: The outcome of the College of Paramedics raising those concerns and the UK IPC cell considering them was

that there was no change to the national PPE guidance or any changes for the ambulance setting at that time; is that right?

A. That's my understanding, that's correct.

Q. And there were a set of suggestions made as to how the risks could be mitigated.

So if we could have on the screen, please, INQ000412354 -- thank you -- and just down to the bullet points.

If I can just summarise these, essentially they advise that: patients should wear a surgical mask at all times where possible; minimise people accompanying the patient; avoid sitting face-to-face; maintain ventilation systems; rotate clinicians regularly; and decontaminate more frequently.

Those suggestions appeared a bit later on in statements by the AACE. Ms Nicholls told us about how she was disappointed by this response.

Mr Marsh, were these suggestions practical in the ambulance setting, for example the back of a cab, in the middle of winter during these handover delays?

A. Well, so I think a couple of things. Firstly, I absolutely recognise the stress and the anxiety our staff were under. I share that absolutely. But I also think that taking a sensible approach as best we could,

within the circumstances ambulance crews work, of as best you can ventilating the ambulance, the patient wearing a mask where that wouldn't undermine their clinical treatment and wiping down are good measures. Most of those -- with the exception of the patients wearing a face mask, most of those measures would have been taken as business as usual anyway.

And I accept, you know, in the winter you wouldn't want to leave both of the back doors wide open for all of the time, but you could leave a door slightly ajar. Because we are into a balance of risk, trying to mitigate the risk of any potential transmission but also protecting the patient as well.

Q. Another matter that was discussed on the same topic of the back of ambulance cabs is that of ventilation. In fact it was discussed that UK IPC cell in June 2021, where it was recorded that Public Health England had raised concerns about poor ambulance ventilation, but it wasn't taken any further as events and moved on and the scenario was no longer relevant.

Was the lack of ventilation and extraction in ambulance vehicles and the unique environment of the back of an ambulance cab given enough attention and guidance during the pandemic?

A. I believe it was. That's not to say that we could have

communicated to our staff in a much more straightforward way. But, as I understand it, advice was given to crews to set the ventilation system to extract in the back of the vehicle, that the changes per hour -- the minimum standard in the changes per hour in the back of an ambulance is 20 per hour. In hospital rooms, it's about 12 and in the specification of the ambulances in my service it's 20 times per hour.

And of course there was also the option, where appropriate, to leave one of the doors ajar as well to be able to provide fresh air ventilation into the ambulance as well.

Q. The delays that we were looking at continued, as we saw in that graph, and in an AACE report they concluded that 12,000 patients by the end of 2021 could have experienced severe harm, including patients with Covid who needed continuous oxygen therapy.

Was enough done at a national level to prevent these delays increasing and what more could have been done?

A. Well, I raised my deep concerns in relation to ambulance crews being unable to hand over their patients promptly. Almost on a daily basis. There were various meetings and national meetings on the pressures across ambulance services every day and everyone was aware -- we've

mentioned earlier the National Ambulance Coordination Centre live dashboard that included long delays, there were daily reports setting out the numbers of lost hours in each ambulance service, the longest delays at each of the most challenged hospitals across the country. So we were all aware, everybody was aware of the enormous pressures. And despite everyone's best efforts, unfortunately, those delays in handing over patients continued.

Q. Moving on to non-emergency patient transport services, were you aware of concerns around the issues with social distancing when conveying multiple patients to hospital in those vehicles?

A. Yes, and that's why national guidance was issued, yes.

Q. It wasn't issued until September 2020, though, was it?

A. I think it was issued -- there was clarification and changes in September but the initial guidance was published much sooner, I think March 2020.

Q. And were you aware and did you help with resolving issues around access to the national PPE supply for those providing non-emergency patient transport services that were not part of the NHS?

A. I wasn't aware there were challenges, only much more recently, that some non-NHS PTS providers experienced difficulty. Which is a great shame because, frankly,

had I have been made aware at the time I would have definitely intervened and resolved the challenges that they were experiencing.

Q. Dealing briefly with aerosol-generating procedures, and I really do want to deal with this briefly, but its right, isn't it, that there were contrary positions adopt by the different bodies, including Public Health England and AACE and the Resuscitation Council UK and College of Paramedics, as to whether or not CPR and intubation were an AGP. Were you aware of those contrary positions at the time?

A. Yes, I think -- if I may, I think it was more about whether cardiac massage constituted an AGP rather than any of the other procedures. But yes, I was aware that there were conflicting opinions.

Q. And what role did you play in trying to assist perhaps those that came to you with concerns and anxieties around those different positions?

A. Two things. Firstly, to ensure that the experts were aware of the concerns that were being raised by ambulance staff and by paramedics, so that everyone was very clear. And then, secondly, that my view was that we should still continue to follow the advice of the experts. They had access to all of the experience, the expertise, the scientific data, and it -- therefore we

should follow their -- we should follow their advice.

Q. If we could, please, have up INQ000499523, please.

And, again, this is a quotation from the survey that was commissioned by the Inquiry into escalation of care, and this is the quotation I took you to earlier. So:

"[The] example of frontline staff being left to make very difficult conditions on managing critically unwell patients was not being able to ventilate a patient, unless we were in level 3 PPE ... Ambulance staff were therefore forced to not intervene when they had the skills and equipment to hand and watch people die ... Arguably this was implemented to protect ambulance staff from contracting COVID, but still an ethically challenging time."

Were you aware of those concerns at the time?

A. Yes, I was.

Q. Did you do anything to try and escalate or deal with those matters?

A. Well, as I mentioned, I raised the concerns of frontline staff with senior colleagues. But I think the point that's being made here is that the moral injury, the moral harm that was being caused to frontline staff because they knew -- we all know -- that time is of the essence for those patients that are critically ill, that

we need to move forward as quickly as we can -- I think the point, if I'm understanding you correctly, that is being made here that staff felt that whilst they were donning that level 3 PPE we were losing time to be able to help that patient.

Q. And did you consider whether there might be anything that could help reducing that time to don that level of PPE? For example, whilst they were travelling to the scene?

A. I honestly don't believe that would have been safe for the crew to have done so.

Q. You've touched briefly on shortages of PPE in the non-emergency ambulance vehicles. What action did you take to ensure that the ambulance sector was prioritised for access to and resupply of PPE and RPE?

A. I made it very clear with national colleagues that, given the unique circumstances that ambulance crews work in, i.e. no access to running water so it was much more difficult for ambulance crews to be able to wash their hands and their equipment, that appropriate PPE should be prioritised to the ambulance sector. But also the types of PPE as well, so, for example, the aprons.

Q. And what was the response to those requests you received?

A. They were accepted. The situation was understood. The

request was accepted. So, for example, the slightly thicker aprons were attempted to be prioritised to the ambulance service, but actually that ambition to ensure that those thicker aprons were sent to ambulance services didn't always happen on the ground, and I suspect that may just have been down to logistics, the huge logistical operation that was having to be put in place to get that PPE -- the right PPE to the right NHS sector.

Q. And you have referred earlier in your evidence to the use of the powered respiratory hoods in your trust. Did you take any action on a more national level to encourage the use or availability of that type of RPE in other trusts?

A. Certainly the use, not the availability. That was clearly outside of my control unfortunately.

But every ambulance service was aware that at least two services had already procured the respiratory hoods before the pandemic, in fact earlier in 2019, and other ambulance services during the pandemic, when they absolutely as well recognised the challenges of fit testing and the different types of FFP3 masks that were being delivered and therefore having to repeat the fit testing, et cetera, several other ambulance services attempted to move over on to respiratory hoods as well.

Q. Were you aware of fit testing issues?

A. Yes, that was one of the main reasons we moved to respiratory hoods in 2019.

Q. And on a national level, not just on your trust, were you aware of that during the pandemic?

A. Yes.

Q. And were you aware -- you have talked about those hoods becoming available -- well, advising that they should be looked and considered but not necessarily available. So were you aware of there being issues with alternative PPE being made available if fit tests were failed?

A. There was no national -- so far as I'm aware, there was no national alternative to FFP3s. Respiratory hoods, to the best of my knowledge, weren't being made available through the NHS push stock.

Q. I think in fact it's one of your recommendations, that that should be considered; is that right?

A. Absolutely, my Lady, yes.

Q. Dealing with the issue of Covid-19 testing for ambulance workers, can you explain what your involvement in that was, please.

A. Yes. As soon as testing was being made available, I made it very clear, nationally, that I believed that ambulance staff, critical ambulance staff, should be including early testing. By "critical" I meant

frontline crews, paramedics, but also the control room staff as well. I truly believe those staff needed to be included in the early roll-out of testing. And that advice was accepted as well.

Q. You've said in your statement, on the topic of risk assessments for staff, that you were aware that some ethnic minority staff felt that risk assessments had tokenistic and failed to lead to sustained change or action.

Did you take any action in response to such concerns or did you have those concerns at the time and, if so, did you make any response to them?

A. I wasn't aware of specific concerns absolutely at the time, which was around May 2020, but certainly I was doing everything I could in my own trust to make sure that we firstly protected our vulnerable staff, particularly our BME staff, and equally importantly that they understood that we were doing everything we could to protect them as well.

Q. Do you think there should have been a national risk assessment tool for the ambulance sector specifically?

A. I think a standard risk assessment would have been helpful. Each individual ambulance service developed their own risk assessment but I think a standard national risk assessment would have been helpful, yes.

Q. And were you aware in your national roles of issues implementing or following risk assessments in other trusts?

A. No.

Q. You've said in your statement that your belief is that IPC guidance was sufficiently clear for the ambulance sector setting and there were clear definitions for what procedures constituted an AGP. Based on the evidence you've heard, do you accept that there were those on the ground implementing that guidance who did not agree with that assessment of it?

A. I think, if you don't mind me saying, if the question is do I believe the guidance was clear, I do believe the guidance was clear. If the question is slightly nuanced, insofar that did everyone agree with the guidance, I think that's slightly different. And I think there were other things at play as well.

Q. Would you accept that others may have formed the contrary view that it was clear?

A. Yes.

MS HANDS: My Lady, I have just a couple more topics but I wondered if that might be a convenient place to break.

LADY JUSTICE HALLETT: How long do you think your couple of topics will take?

MS HANDS: No longer than 15 to 20 minutes, my Lady.

LADY JUSTICE HALLETT: Oh, another 15 minutes. Are you all right to come back this afternoon, Mr Marsh?
A. Yes, my Lady.
LADY JUSTICE HALLETT: Very well. I shall return at 1.45.
(12.47 pm)
(Luncheon Adjournment)
(1.45 pm)
LADY JUSTICE HALLETT: Ms Hands.
MS HANDS: My Lady, good afternoon.

Mr Marsh, I have just two short topics left to cover with you, and the first is in relation to Long Covid.

I acknowledge that you say in your statement that you didn't in fact provide any advice or information on Long Covid during the pandemic, and you've referred to guidance produced in England for the sector in July 2020.

The Inquiry has heard evidence from -- has received evidence from the Welsh Ambulance Services, who developed an action card called "Guidance for Employers" to inform them on how to manage Long Covid sickness/absence as an employer from March 2021. Do you think anything more could have been done on a national level in England to support sufferers from Long Covid in the ambulance sector?

A. Guidance was issued by NHS Confederation for all NHS organisations, which I know the ambulance sector followed, and the principles of the way in which we cared for staff suffering Long Covid was built upon that which we already provide for staff suffering other conditions as well.
Q. Can you provide a couple of examples of those principles, please.
A. Yes. So certainly staff that may be unable to undertake a full range of shift duty, so there may be staff that just can't work nights anymore and, therefore, we can provide flexibility around their shifts, but also suitable alternative employment. So there may be a particular individual that undertakes a role that is of a physical nature, maybe a paramedic on the front line, and therefore we could offer them alternative employment working in the control room, so it's less activity, less strenuous, maybe with less shift work, shorter working days. Whatever was required to best accommodate their needs in order to keep them in the workplace and keep them gainfully employed.
Q. Moving on then to the topic of mental health and well-being support for the ambulance sector, the Inquiry has received an expert report from Professor Snooks which touches upon the absence rates in the sector,

which we've already discussed but also the stress, anxiety and depression which was the single biggest reason for sickness absence among ambulance staff both before and during the pandemic.

So given that data before the pandemic, should mental health support have been included in pandemic planning for the ambulance sector?
A. Yes, I believe it should have been, and certainly we will continue to build upon the arrangements which were in place before the pandemic and during the pandemic into plans going forward, and I know that all ambulance services have really strengthened their work in relation to health and well-being support for all of our staff, our volunteers and our students.
Q. And it's right that the College of Paramedics issued guidance in April 2020 to support managers with supporting their employees with mental health and well-being. There wasn't any national guidance or advice on managing mental health and well-being at that time, was there?
A. Not specifically in relation to the pandemic, no.
Q. And it's also right, isn't it, that in August 2021 the chief executives of trusts in England came together to request immediate additional support for employee mental health support until -- and that was issued until the

end of 2020; is that right?
A. Yes.
Q. One of the outcomes of the pandemic has been a substantial increase in the turnover of ambulance staff and those that are leaving the profession.

In your view, was enough done at a national and at a local level early enough to support the mental health and well-being of ambulance staff during the pandemic?
A. Well, the first thing I would say is that attrition levels vary quite considerably between ambulance services and I think that is one of the factors as a result of the support that individual ambulance services provide. But I do absolutely recognise there is a lot more that we should be doing both nationally and locally to support our staff, for them to be able to give of their best looking after all of our patients every day, and in particular recognition of the enormous pressure that we were all under in response to and during the pandemic. And I think our staff deserve it.

You know, I am enormously proud of all of our staff, our volunteers, our students, staff that retired that returned to work to deal with the pandemic. I am enormously proud of all of those individuals that stepped forward, often in harm's way, and gave their all to keep as many patients safe and to save as many lives

as possible.

So by offering greater health and well-being support in part is also a recognition of everything all of our staff did on the front line and in our control rooms and working alongside our union staff representatives as well is so, so important going forward.

Q. And you've summarised in your statement what your main objectives were as a national adviser for the ambulance sector, and they were to protect staff, to maintain a safe 999 service, increase capacity in ambulance emergency operation centres and crews, reduce handover delays, and mitigate the possibility of services being overwhelmed.

Upon reflection, do you believe those objectives were achieved during the pandemic?

A. In the main, yes.

Q. Mr Marsh, do you have any other lessons or recommendations for the future that have not already been covered in your evidence today?

A. Only those that I've set out in my witness statement, my Lady.

MS HANDS: Thank you.

My Lady, I don't have any further questions.

LADY JUSTICE HALLETT: I have been asked to ask you

wearing hoods in the West Midlands, why is it that you were prepared to accept the IPC guidance nationally so that the ambulance service in, say, the South East would be wearing fluid-resistant surgical masks? I think that's question, and Mr Simblet is nodding.

A. If the patient was having an AGP performed upon them then they would not have been in a type 2 mask. The crews would have been wearing FFP3, if they didn't have a respiratory hood. Whereas in the West Midlands we didn't have FFP3s, they had been withdrawn. So for AGPs it was the hood, and for all other patients, unless following a dynamic risk assessment justified the wearing of a hood, then the staff would have been wearing surgical masks in the West Midlands as they would everywhere across the country.

LADY JUSTICE HALLETT: I think I have taken it as far as I can, Mr Simblet, thank you.

Those are all the questions we have, Mr Marsh. Thank you very much for your help and I'm sorry we had to bring you back over the lunch adjournment. Very grateful to you.

A. Thank you, my Lady.

(The witness withdrew)

LADY JUSTICE HALLETT: Mr Mills.

MR MILLS: My Lady, may I please call Ms Tilna Tilakkumar.

a follow-up question, Mr Marsh. The question is this: if you took the view that the national IPC guidance was adequate requiring FRSMs with a dynamic risk assessment, if you were satisfied with the guidance in your role as chair of the AACE, why did you make respirator hoods mandatory across the entirety of the West Midlands Ambulance Service?

A. Thank you, my Lady.

The hoods that we made available to all of my staff in the West Midlands in 2019 were for specific airborne transmission viruses and other high consequence infectious diseases. They weren't for all patients. So that would have applied, then, when we got into the pandemic: the use of those hoods would have applied to those staff undertaking AGPs and as part of the dynamic risk assessment or just, plain speaking, a member of staff that felt vulnerable to upgrade to wearing the hood for all other patients. It wasn't that the hood was made mandatory for all patients, only those for AGPs and for those crews that thought the patient justified the situation, justified them wearing the respiratory hoods.

LADY JUSTICE HALLETT: I think the point being made is that if the national guidance is saying that those of your staff who, with those strict conditions, would be

DR TILNA TILAKKUMAR (affirmed)

LADY JUSTICE HALLETT: I hope we haven't kept you waiting too long, Doctor.

Questions from COUNSEL TO THE INQUIRY

MR MILLS: Your full name, please.

A. It's Dr Tilna Subanthi Tilakkumar.

Q. Dr Tilakkumar, you have provided a statement to the Inquiry. For the transcript, the reference is INQ000492278.

You completed your training as a GP in December 2022?

A. Yes, that's right.

Q. Prior to that, and I'm summarising, you attended medical school from 2009 to 2015. That was at Barts and The London School of Medicine?

A. *(The witness nodded).*

Q. Before starting your GP training in August 2019?

A. Yes.

Q. In February 2020 you started a six-month rotation with a community adult mental health team; is that right?

A. Yes.

Q. Could you just describe for us the pattern of your working day there before the pandemic.

A. So this was a community adult mental health team. I was a junior member of that medical team. There was myself,

another two psychiatry trainees and a consultant, as well as mental health nurses, therapy staff and social workers.

We had a patch, a locality that we would look after. My day-to-day work was clinic, so outpatient clinics of patients with chronic mental health conditions. We would, on occasion, do scheduled home visits for patients who were too unwell to attend clinics, but it was all face-to-face appointments, and then I also did on-calls to look after the inpatient mental health patients.

Q. On 25 March 2020, you were at home on annual leave and you received a phone call from a consultant within your home trust. Tell us about that call, please.

A. Yes, it was a very brief call. We were already in lockdown at that point, so my annual leave was spent at home, and I was told that there was a Covid -- suspected Covid outbreak on one of their inpatient wards and that they needed more medical assistance, and so I was chosen as the GP registrar to go there and assist.

Q. For those of us who aren't familiar, can you just introduce us to the type of inpatient ward that you were redeployed to?

A. So this was a fairly unique ward. It was what we call a continuing care ward. So it was for patients who had

complex mental health needs that would require inpatient hospital care for life, and not suitable for a nursing or residential home in the community.

Q. When you were told that this was happening, how did it make you feel?

A. I wasn't surprised. We were already being informed that redeployments were going to be happening. They were happening in the acute trust close by, so I was aware from colleagues that this was happening, and we were in the midst of the first wave, so I didn't really have any questions. I did just go along the next day, not knowing what was happening.

Q. So you joined the next day, 26 March, and you worked there until 29 April.

A. Yes.

Q. On the day that you joined, did you receive a risk assessment about working in a ward that had Covid?

A. No.

Q. Did you ever receive a risk assessment at any point you were on that ward?

A. No.

Q. Did you ask for one?

A. No.

Q. Why not?

A. I didn't realise it was a thing until it was offered to

me later.

Q. When you say it was offered to you later?

A. On a different placement at a different trust.

Q. You have told us that Covid was on the ward. Were both patients and staff affected at that point?

A. Yes. So the ward, which was a home to long-term residents, suffered their outbreak because a small group of patients from another ward was transferred into this unit, because there was a Covid outbreak on that ward. So it seemed like they were trying to mitigate risk and move patients away from that ward but obviously one of them already had caught it and spread it into this ward.

Initially it was one patient on arrival who had a fever and by the end of the next week, when I arrived on the Thursday, there was 11 patients who had symptoms of Covid. Friday, it was 12, and by the following Monday it was 15, and staff numbers had dropped day by day as well. So we had a very skeletal team.

Q. Are you able to help us with how far below being fully staffed the ward was when you joined?

A. So I was told ordinarily this would be a ward that was staffed by two nurses, two mental health nurses. There would be a ward manager as well, who was a senior nurse but would not be doing any clinical work, and there would be maybe four or five support staff as well as

occupational therapists, psychologists, who would come in and out to do activities.

When I arrived there was still a senior -- the ward manager and maybe one nurse and then just a handful of support staff. And we did rely on community staff to come in voluntarily day to day but they were very patchy. We didn't know who was coming when and how long they would be there for. It could be an hour, it could be a whole day.

Q. Can you describe to us the work you did during your first few days on the ward?

A. So when I joined part of the medical team -- the medical team, I didn't explain, sorry, is two consultants who would come once a week to review their patients. Then there would be two ward doctors who would also come once a week to mop up anything in between. It was long-term residents so they didn't really require that much medical input.

So on the first day that I arrived there was one ward doctor. They were already showing signs of being unwell when I met them. And so Friday they called in sick, they didn't turn up, so I was the only doctor there. The consultants also were off sick or on leave. So I was trying to move -- the ward functioned more like a care home into a medical ward, so I was trying to

firstly isolate patients who were showing signs of Covid. It had large communal spaces. I thought about isolating them into their bedrooms, perhaps cohorting patients, because we didn't have enough staff to monitor them one to one each so we were trying to see if we could cohort them. That wasn't a possibility because they had bedrooms. These were not hospital rooms that they could move between very easily.

I set up, sort of, spreadsheets of patient lists, patient names, vital signs, charts of what we call national early warning system, so you can score their vital signs and see who's scoring high and who needs further medical assistance. We had one observation machine to go round 26 patients, which we required to be wiped down between each use so it took a long time. This wasn't something that they would be doing ordinarily on the ward, so I had to sort of signpost them to what -- or show them what ranges were normal, what was abnormal, what needed to be flagged to me as a doctor, or the nurse.

Yes, it was really just trying to organise chaos.

Q. At this point had you been provided with any information or guidance about how to treat a patient with Covid-19?

A. No. Nothing from the trust. It was all sort of word of mouth from my colleagues in the main hospital. It was

largely supportive. There was nothing else we could do in our healthcare setting anyway.

Q. In terms of how the patients responded to some of the measures that were implemented within the ward, you divided them I think into two groups. Can you describe to us the two types of response that you perceived from patients?

A. Yes. So these were patients with chronic mental health issues. So a large majority of them were how I could describe as subdued, would be compliant with instructions to stay in their rooms, hypoactive, quiet, and then there was a group who was more restless, more agitated, and that includes the six acutely mentally unwell patients who came from that other ward who needed psychiatric input. One of them in particular was very agitated and definitely couldn't be kept in their room, would often be walking around, coming very close to you, breaking that 3-metre rule, would never wear a face mask, could spit as well. Yes.

Q. For those sorts of patients, what level of staff supervision was required?

A. We didn't try to restrain this patient. For his mental health he probably needed one-to-one observation just to make sure he didn't come to harm himself, when he was particularly agitated perhaps two-to-one.

Q. Moving to a different topic, you say in your statement that almost immediately upon joining the ward you began to have phone conversations with family members of patients who were identified as potentially not surviving severe illness with Covid-19 as a result of their comorbidities. Are you able to describe in general terms the nature of those conversations?

A. On the whole they went well. In my experience they all went fine. These were long-term residents so the families of these residents knew the staff, you know, were happy with their care and trusted the staff and so there was good communication and rapport with them already.

They knew what was going on nationally, they knew what was going on on the ward in terms of the outbreak that we had here, and more and more patients were becoming unwell every day and staff were going off sick, so they were very understanding.

My conversation with them was more anticipatory. So did they already have ideas, did they already have wishes that they knew their loved one had about whether they would want to be admitted to hospital should they become unwell, would they want resuscitation, if not -- if their wish -- some of them would have had wishes to die in their own home, which was this ward. Some of

them made requests for specific music to play if they should be unwell and pass away on the ward.

So, yes, it was -- I know it was difficult for the staff to have these conversations because I think there was nothing that they would have been planning for any time soon. These weren't particularly elderly patients.

Q. Did you personally feel equipped to both have the conversations and cope with having had them?

A. Because of my experience before GP training I'd done quite a few years in geriatrics already so I did feel comfortable having these conversations but it's always difficult when it's a patient you don't know, relatives you don't know, and doing them over the phone and not face-to-face is very difficult.

Q. Can I ask you about PPE and IPC guidance. When you arrived on the ward, what were the standard PPE requirements that you were expected to wear?

A. I do not know if it was a guideline or guidance but what was happening on the ward was that everyone was wearing full PPE. So that was a surgical mask, gloves, apron, shoe covers, at all times everywhere on the ward, and then at some point, in the middle of the next week, we were downgraded to only having to wear that when we were in contact with the Covid patients.

Q. I'll ask you about the downgrade in a moment but first

can I ask you this: that was the requirement, what ought to have been worn. Was the PPE always available?
A. Initially it was. When I first started towards the end of March, yes, we had PPE that was accessible, yes.
Q. It sounds like you're about to say but it then wasn't?
A. Yes. When it was downgraded to only being used with Covid patients then it became very hard to actually find where they were and replenish stock.
Q. Were there instances of staff having to source their own PPE?
A. Yes. So we -- so a lot of us used our own scrubs. I borrowed some scrubs from the neighbouring trust, an acute trust. We bought visors and goggles off the internet. That was something that we asked for. That wasn't included in the original PPE that we had, but we needed that specifically for our cohort of patients who could come very close to you, spit. So we did end up buying those ourselves because they never came from the trust.
Q. Were you reimbursed?
A. No.
Q. You have referred to the downgrade. Can I ask you this, how were the changes in that guidance communicated? How were you told that the PPE you had been wearing was in effect no longer required?

A. Verbally. So we would get visits from managers to the ward on a daily basis, different managers, different roles that we didn't always understand but, yes, we would be communicated verbally or it would be through maybe a Teams call to our ward manager and our ward manager to us on the ground.
LADY JUSTICE HALLETT: I am terribly sorry, I am going to have to rise.
(2.13 pm)
(A short break).
(2.19 pm)
LADY JUSTICE HALLETT: Sorry about that, everyone. I suppose if you are going to feel sick you might as well do it with a GP in the witness box. Everyone stay away from me is all I can say. I'll think I'll be all right. If I make another rush for it, you will all know what is happening.
MR MILLS: Thank you, my Lady.
Dr Tilakkumar, you were just explaining the communication of the downgrade in PPE requirements. Can I ask you this: having become accustomed to wearing a certain level of PPE and that level being downgraded, how did you and the other members of staff on the ward feel about your safety?
A. As far as we were concerned nothing had changed in our

clinical environment. We were still dealing with at least 15, probably more, patients with Covid at that point. None of them were successfully being -- not all of them were being successfully isolated at that point. So there was no guarantee that we could contain Covid to bedrooms, so the entire ward was a Covid ward as far as we were concerned and PPE needed to be worn at all times, and I know some staff members did continue to wear PPE at all times.
And there was an incident where a visiting manager did come and see a healthcare assistant wearing a plastic apron and she pulled it off her. And the healthcare assistant was black and the manager was not.
Q. Because the healthcare assistant was wearing that apron somewhere where the guidance said you do not need to?
A. Yes.
Q. Can you tell us about your experience of being fit tested for FFP3 masks.
A. So this was something that I was asking for and was being rolled out at the trust anyway. On Friday, 3 April we had fit testing on the ward. I called in my colleagues who worked in other places on the site to come to the ward and have fit testing and then realised they were using FFP2 masks, so I told them to stop. And we did later have FFP3 masks tested at various points

over the next few weeks.
I failed on two of the masks and I passed on a third. That was by the end of April.
LADY JUSTICE HALLETT: Can I just check. Are you using FFP2 in the same sense as the previous witness? The blue masks that we all got used to seeing or do you mean the actual specialist FFP2 which is one step down from the FFP3?
A. Yes.
LADY JUSTICE HALLETT: Thank you.
MR MILLS: Did you ever have a day where you wore an FFP3 that had been fit tested correctly to you?
A. No. We were told they really only needed to be used during aerosol-generating procedures, so that was only CPR, so I didn't have to wear it in any case in the end.
Q. Before you had your successful fit test, you've just touched on it in respect of CPR, it is right, isn't it, that you had a serious concern about who might be able to perform CPR on the ward?
A. Yes. I mean, all our staff are trained in CPR so we could all initiate it, but as the doctor, especially on call, you would obviously be looked to to be the one who would lead the basic life support until paramedics arrive.
Q. Did testing become available whilst you were working on

the ward?
A. Testing for staff was available if you were symptomatic. That was across the trust which covered multiple sites, and there were only 35 tests available a day. Tests for patients did come in at some point and that was being done on a weekly basis when it did start.
Q. Did you ever receive a test?
A. No, I didn't show any signs, so I never had an antigen test but I did have the blood test for PCR antibody done in May. That was being done by my other trust that I was employed by and I tested positive for antibodies, which did suggest that I had been exposed and had a reaction to Covid.
Q. During your time on the ward, I think it's right, isn't it, that you requested that you and your partner be moved into hotel accommodation. Can you tell us about what prompted that request?
A. Both -- so I was working on a Covid ward and my husband was working in A&E at the time, at a different trust. We were both living with my parents at the time, who were both in their late 60s. Initially it didn't occur to me that we would need to probably shield from them or they would have to shield from us but, as time went on, and I realised how serious Covid was and how prevalent it was on our ward and how I couldn't really keep myself

safe from catching it, nor my husband, we asked for accommodation to shield my parents.
Q. Was it provided?
A. Yes.
Q. How long did it take?
A. Maybe a week.
Q. We heard some evidence this morning from a paramedic who was living in a hotel. Can you tell us about the impact that living in a hotel had on you and your husband.
A. It was a very basic hotel but definitely not meant for long-term living. There was no -- I mean, we had food provided to us by the trust, so we had three meals a day provided from the canteen, so we were provided for. But, yes, apart from a kettle we didn't have anything else in our room and laundry was difficult.
Q. The concerns that you have told the Inquiry about this afternoon were things that you raised eventually with the trust; is that right? What, if any, response did you receive from management after you raised those concerns?
A. So I raised concerns throughout the time that I was on the ward from the very first, so I joined on the Thursday and over that first weekend I drafted a very long email and I sent it out to everyone that I could cc in, everyone I could think of in the trust, and this

chain continued for over the five weeks I was on that ward.

I did get more medical help, so I got two other doctors redeployed to join me on that ward by the next week but, other than that, my requests for another observation machine didn't come, my requests for more PPE was patchy, for other staff members was, as I said, voluntary -- on a voluntary basis, so there was nothing consistent. Other bits of equipment that we asked for, a syringe driver for palliative care medication was difficult to come by and in the end the communication was getting a bit more difficult by email and then in the end I was asked -- I was referred to speak to our Freedom To Speak Up champion at the trust and this was towards the end of April.
Q. Are you able to tell us about the conversation you had with the Freedom To Speak Up champion?
A. Yes, it was -- it felt very open and very friendly. We spoke for quite a while, maybe half-an-hour to an hour, and I laid out all -- a summary of all the things that I'd been asking for that the ward still needed, equipment, more staff, better well-being facilities for the staff. At that point I still hadn't been fit tested, so my fit test was organised the next day, but then I was also just moved back to my original placement

by the next day as well. The other two doctors were not.
Q. When you returned to your previous -- this is the community role, isn't it -- on 29 April, in what ways had that role changed since you left it in February?
A. So it was mostly all -- well, it was mostly remote working. Everything was being done by phone, so all our appointments were by phone or video. My consultant was shielding so I never actually saw him again in the flesh, so all my supervision was done remotely. There had to be one doctor on the team available on site so we -- me and the other two doctors had a rota -- rotation to go into the office, otherwise we worked from home with laptops.
Q. Did you feel as if you could provide the care you wanted to patients remotely?
A. I don't think our number of appointments went down but telephone and even video consultations does form a barrier with patients who have -- already have mental health difficulties. So in that way I'm not sure how effective the consultations were.
Q. Was it possible at that time to arrange face-to-face appointments with certain patients?
A. Not straight away. I think the clinics were still closed. We could do home visits still with PPE provided

to us. We could go out and see patients if we needed to.

Q. You then, I think, in August 2020 began a rotation in obstetrics and gynaecology; is that right?

A. Yes.

Q. Whilst you were there, did you perceive the impact of visiting restrictions on patients receiving maternity care?

A. Yes. We -- so pregnant people were not allowed to bring in anyone else to the antenatal appointments, so they would attend alone. There was no visitors allowed on the antenatal ward and only one birthing partner allowed in the birthing suites, which were obviously private suites, and then again when they went back to a postnatal ward no partners were allowed -- no visitors were allowed which was, yes, hugely impactful for new parents.

Q. In March 2021 you rotated to general practice for the first time in your training; is that right?

A. Mm-hm.

Q. Can you tell us about the IPC measures that were in place at the surgery where you were.

A. Yes. We had -- we were doing everything remotely at that point, March 2021. It was all video and telephone calls. If we had to bring anyone in it was -- every

practice would be different on this but our practice, we had one room that was available to bring in patients if you needed to see them and you would wear full PPE, which was apron, gloves, and a surgical mask, the blue mask. We did have a visor as well.

Q. The patients that were attending the surgery in March 2021, were you able to perceive whether there had been a real downturn in their physical health?

A. Because I'd never done general practice before the Covid pandemic I wouldn't know how to compare the population before and after, but everyone who was asking for an appointment needed an appointment, yes.

Q. Did there come a point during 2021 when you were offered psychological support?

A. Yes. This was through my GP training programme. We were offered -- we still had once-a-week a half-day teaching session as a group and during one of those sessions in 2021 we were offered sort of a break-out group for those who -- it was optional if you wanted any kind of debrief about the Covid pandemic. We were offered a psychologist there, so it was a bit of a group session. But during that session the psychologist suggested that I probably should seek further counselling because it might be possible that I had PTSD from my time working on the Covid ward.

Q. Did you seek that further counselling?

A. I did. I asked -- I went through occupational health and had a consultation and I was told that I probably didn't have PTSD but I could self-refer to the trust's counselling service, which I didn't do at the time.

Q. Is the impact of working during the pandemic on your mental health something you still feel today?

A. Yes. I didn't -- I didn't have any problems with my mental health before the pandemic. I also didn't have any problems working -- with my mental health before I started working in general practice. So I don't know if it's the combination of working in general practice in a post-pandemic world which has resulted in me having now two episodes of depression, mostly from working in isolation, feeling burnt out, feeling that lack of satisfaction in my work that I don't feel I can really help patients when they come asking for help in the NHS these days.

MR MILLS: Dr Tilakkumar, thank you.

My Lady, that's all I ask.

LADY JUSTICE HALLETT: Thank you very much indeed. I'm really sorry to hear about the depression. I hope the physician has tried her best to heal herself but I appreciate it's not something you can heal yourself and I do hope that you do recover from it in the

fullness of time.

A. Thank you.

LADY JUSTICE HALLETT: Thank you very much for what you did and thank you for helping the Inquiry.

A. Thank you.

(The witness withdrew).

(Pause)

PROFESSOR KATHRYN ROWAN (affirmed)

LADY JUSTICE HALLETT: Professor Rowan, I think you may have had to make some rearrangements to come here this afternoon. I am really grateful to you. We try to get everything organised well in advance but sometimes changes are made so thank you for your help.

A. My Lady.

Questions from COUNSEL TO THE INQUIRY

MR FIREMAN: Your full name, please, Professor Rowan.

A. My full name is Kathryn Rowan.

Q. Thank you. You have given a witness statement to Module 3 dated 23 May 2024. That's INQ000480139. Can I check that you are familiar with it and you have a copy available to you?

A. I do.

Q. Professor Rowan, you are the founder of the Intensive Care National Audit and Research Centre known by the acronym ICNARC; that's correct, isn't it?

A. It is.
Q. You were a director of ICNARC from its inception in 1994 until September 2023 and you remain a scientific adviser today?
A. I do.
Q. You are also an honorary professor at the London School of Hygiene and Tropical Medicine?
A. I am.
Q. And you are a programme director at the National Institute for Health and Care Research?
A. I am.
Q. Professor Rowan, today I would like to cover, first of all, a bit about ICNARC. I then want to ask you about some of the work that you have done for the Inquiry, and we're then going to ask about some of the specific analysis within those reports, particularly in relation to patient admissions, critical care transfers, then some of the pressure that was on intensive care units and some of the specific characteristics of patients in intensive care units.

So, hopefully, that's all clear for you.

A. It is, thank you.
Q. You set out in your witness statement that ICNARC is an independent, scientific, not-for-profit organisation which works to facilitate improvements in structure,

process, outcomes, and experiences of critical care and it does so through clinical audit and research programmes; is that right?
A. That's correct.
Q. You also describe something called the Case Mix Programme. Can you tell us briefly what that is and how it works.
A. Sure. So the Case Mix Programme is a national clinical audit of adult intensive care or adult critical care and essentially the purpose of it is to monitor care and the outcomes of care across different critical care units.

So the way it works is that we have specified a dataset to be collected by units, so a mix of electronic data capture and data collection by hand, and those data are sent to us on a monthly or quarterly basis. They are run through a large number of validation checks to get the data as accurate as possible and then we provide quarterly quality reports which contain various indicators around the delivery and outcomes of care to compare units with each other but to actually sort of benchmark across the units with a view to allowing units to sort of look at their practice and also to institute sort of local quality improvement programmes.

We also use the data, the pooled data in the database, to as transparently as possible to try to help

patients, clinical staff, managers, policymakers to understand critical care and sort of inform best management, best sort of operation of critical care.
Q. You've touched on it just now, but just to be clear, who do your reports actually go to?
A. So the reports go back to the critical care units that submit the data but within those reports, they can see and identify their own data or their own outcomes or their own indicators and then they can compare them with all other critical care units but also critical care units that are deemed to be similar to them in operating characteristics.
Q. What about national decision-makers, for example NHS England or the Department of Health and Social Care, do your reports go routinely to those organisations?
A. So the quarterly quality reports don't. We operate a policy whereby once a year we publicly report a sort of global state of intensive care in the UK, critical care in the UK, but we also have a very close working relationship with NHS England and the NHS sort of organisations in the devolved nations and also the Department of Health and Social Care. So it can often be on a sort of an *ad hoc* basis that they may request reports and we will undertake those analyses for them.
Q. One point which is worth clarifying is I understand the

Case Mix Programme applies in England, Wales and Northern Ireland but not in Scotland; is that correct?
A. Yes, I think that's possibly by dint of history. The Scottish Intensive Care Society Audit Group with Public Health Scotland run the Scottish audit, which I think set up the year before us, and it's just sort of by dint of that history that we have a scope or reach for England, Wales and Northern Ireland.
Q. But you and the Scottish Intensive Care Society Audit Group, SICSAG, do almost identical things; is that correct?
A. We do almost identical things, absolutely, but certainly one of the lessons from the pandemic was we don't collect exactly the same data, and I'm pleased to say that one of my new co-directors today is actually up at SICSAG discussing, perhaps, one of the lessons from the pandemic which might be trying to make sure that we collect compatible data going forward.
Q. Focusing, if we can, just on for the moment your data --
A. Yes.
Q. -- is it right that all NHS general critical care units in England, Wales and Northern Ireland providing level 3 care, I think level 3 care is typically care that involves one-to-one critical care nursing, usually with mechanical invasive ventilation; is that right?

A. That is correct.
Q. All of those critical care units, you get all of the relevant information within the case --
A. We have 100% coverage of those.
Q. A very comprehensive picture with respect to those particular critical care units?
A. Yes, indeed, yes.
Q. Did you specifically create Covid-19-related data collection sets during the pandemic?
A. We did not and the reason we did not was really from the lessons that we learnt a decade earlier with the H1N1, sort of, epidemic where we did try to identify a sort of bespoke additional data collection and, of course, at that point the system's not ready to adopt new data sort of systems, new data structures, and the lesson we learnt was to do the best we could with the data that we currently collected rather than to try and burden an already burdened system.
Q. With additional --
A. With additional data collection.
Q. You did, though, collect data on patients with critical care -- sorry, patients with Covid-19 who were admitted to critical care?
A. So, again, one of the learnings from H1N1 was that we created within the new dataset following that sort of

some temporary fields which could identify, should another epidemic or pandemic come along, we would be able to kind of tag those patients, and we opened those fields up -- which I'm sure is not the technical term, I'm not a data or technology person -- at the beginning of the Covid-19 pandemic to make sure that we would be able to identify suspected and confirmed Covid-19.
Q. You also, I think, as a result of that work were able to send, in addition to the reports we spoke about before, daily emails, I understand, to Professor Stephen Powis and Sir Simon Stevens at NHS England updating them with respect to the numbers of patients with Covid-19 admitted to critical care units; is that correct?
A. It is correct. The way that we did that was because we're aware of the burden of data collection we asked the units -- and I really should shout out for the amazing network of audit clerks within the critical care units across England, Wales and Northern Ireland who managed to keep up these data collections throughout the pandemic.

So what we did was sort of stagger the data submission so they could tell us about numbers daily and then they could sort of fill in the first day's data, and then the full stay data at later stages, so it meant we could just keep on top of the numbers that were being

admitted to critical care on a daily basis.
Q. For how long did you continue sending those daily reports to NHS England?
A. Daily throughout the whole pandemic. So clearly as --
Q. That's fine, in terms of --
A. As waves dropped it might have been less frequent.
Q. That's fine. Just to get a sense of the period in which you were doing that.

Did you spend any specific reports similar to this or identical to any of the officials within the devolved nations?
A. No.
Q. Do you recall ever receiving requests from any officials within Northern Ireland or Wales for similar reports?
A. Not for daily reporting but we did produce reports as requested for both Wales and Northern Ireland just as and when they requested them.
Q. Thank you.

To turn now to what the data itself is showing us, ICNARC has very helpfully produced two bespoke reports for the Inquiry. One of those reports was produced solely by ICNARC, a lengthier report, and then a combined report that was compiled alongside SICSAG, who we were just speaking about. I understand you are familiar with both of those reports?

A. I am familiar with both the reports.
Q. Just for clarity, with respect to the joint report, you weren't involved in any of the data collection from ICNARC's perspective with respect to Scotland but that data has now been compared and the relevant checks have taken place to ensure it's compatible with the data you collected for England, Wales and Northern Ireland; is that correct?
A. The two analytical teams worked closely together to ensure that there was consistency and standardisation before that report was produced.
Q. As a result you are able to speak to the joint report?
A. I am happy to speak for the two reports or the combined report.
Q. Thank you. Just -- again, just a precursor to us starting to look at this data, we're going to go to a lot of graphs so I'm just going to headline that.

What the graphs will show us, generally speaking, is a period two years or so prior to the pandemic and then our relevant period for the purposes of this module, which is March 2020 to June 2022, and that, as I understand it, was done in order to give us a reasonable comparison period; is that correct?
A. So I think the Inquiry, in discussion with us, agreed on the periods, but, absolutely, it was about a sort of a

stable period of what sort of usual critical care looked like beforehand and then, moving into the period, the relevant period determined by the Inquiry team.

Q. If we can now go to the first graph that I'd like to take us to. That's INQ -- oh, it's already on screen. I will say it anyway: INQ000474239.

What we should see here, I hope, is a graph in relation to mean daily patients admitted to critical care. Are you able to explain what this graph shows us?

A. Yes, absolutely. Let me take you through it. There will be lots like this so maybe I will just take a period sort of -- so along the bottom, along the horizontal are in weeks, so each line represents a week and the data are daily but average daily for the given week, and you can see the period up until the sort of dotted horizontal line around the middle, which is what you might call the pre-pandemic period, it's identified there, and then what we would call the relevant period to the right of that line, which is the period for the Inquiry and obviously the period of the Covid-19 pandemic.

On the vertical axis, you can see it says "Mean daily patients admitted to critical care, United Kingdom", and this is from the, I think joint report.

Q. This is from the joint report.

A. What you can see is usual critical care is about approaching 600 mean daily patients admitted to critical care, and then to the right of the line in the relevant period you can see there's a quite substantial drop in the mean daily patients admitted to critical care.

This feels slightly counter-intuitive because we think about the kind of -- so this is daily admissions, and so what you can see is that because critical care -- sorry, Covid-19 patients in critical care were staying, at the beginning, about 17 days in critical care, it reduced down to about 14 as it, sort of, stabilised and, sort of, treatment became a little more understood, and that compares with all other patients, which is a mix of planned patients, elective patients, and unplanned patients.

Unplanned patients normally stay about seven days and elective and planned patients about four days. So you basically have a lower admission because the beds are full with these very long-staying patients. And, as you can see, after each wave you can see the kind of slight recovery in terms of the numbers of all other patients, and that's sort of the opening up of elective and planned work again, and then when the next pandemic wave hits, that elective and planned work drops off

again.

Q. So focusing just on daily patients admitted to critical care and obviously the emphasis being on patients admitted --

A. Yes.

Q. -- each day --

A. Yes.

Q. -- we can see that there was a drop, as you've touched on. You touch on the lack of elective care potentially impacting on daily admissions. Are there any other reasons that may have impacted on --

A. So just capacity. So there was a decision to, you know, help the Health Service by sort of stopping and people would be aware of operations being cancelled and other sort of planned care perhaps not happening with the same frequency.

The other thing that this graph doesn't show is that there were critically ill patients being managed outside the intensive care units. So these are patients admitted to critical care. These are not patients who are critically ill and there would have been a larger number of patients sort of outside the critical care units who were critically ill and being managed, and you heard -- I watched -- Professor Kevin Fong's testimony and you heard about the challenge of that management of

patients.

Q. Just to pick up on that, those patients who may be in what may sometimes be termed "surge areas"?

A. Yes.

Q. Or areas in which they are receiving high intensity care albeit it is in a general ward or in a non-ICU environment, those patients wouldn't necessarily be picked up by this graph; is that correct?

A. So we had some coverage of surge units but it was really down to the local hospitals and their ability to extend their data collection to those areas.

But as I understand it, there was a lot of delivery of what you call non-invasive respiratory support outside critical care units and a need for invasive respiratory support was obviously a key or other, sort of, complex organ support.

Q. What about patients potentially staying at home and simply not attending ICUs?

A. So in terms of sort of the pool, yes, there's a whole journey you need to think of. So you need to think about the people at home on their own who maybe had unwitnessed heart attacks, who in normal circumstances might be witnessed and make their way to hospital and, hopefully, their way to intensive care. There was some notion that trauma cases reduced during lockdown because

people weren't out about having traumatic injuries.

As I say, there was a reduction in sort of stopped elective surgery and other sort of more planned procedures. So the pool is changing.

And then there was hesitancy and this is just, I believe, in terms of, you know, seeking access to hospital, you know, there was a sort of a stay at home, help the NHS, or -- and that may have changed healthcare-seeking behaviour.

Q. So a variety factors, some of which we can't see from the data alone?

A. Not from intensive care data *per se*.

Q. That can come down for the moment.

We don't need to go to it but you have also included in your report messages about all of the individual nations of the UK and how they were affected. The headline message, I think, is that there were similar patterns in terms of mean daily admissions?

A. Patterns were incredibly similar across all four nations.

Q. We do now need to go to another graph, though, which is INQ000474239, page 9, and this is figure 3.

What we're going to look at now is the daily number of patients actually in critical care as opposed to the number of patients who were admitted.

So if we could get that up, please.

Yes, so we should see here what I was just talking about. Can you now explain -- I think you touched on it a little bit before --

A. So we can remember from the last graph that pre-pandemic there were 600 patients admitted, mean daily patients admitted, and this now translates to, in the pre-pandemic, in more normal times, about 3,000 admissions in intensive care on any, sort of, given day or averaged over days into the week.

And I think this probably now feels a little more familiar, if that makes sense. So as we move -- I'm not going to explain the axes again, in that the graphs are so similar, but do ask me if you want me to.

So what you can see here is again that line moving into the relevant period, and that initial drop-off is actually probably the stopping of elective work, and then you see the peaks of the waves of -- in orange -- of the patients admitted for Covid-19 and you can see it is more than half the case load in critical care in both the first and the second wave.

The third wave, as you sort of got to Delta and Omicron, the other thing to just bear in mind around February '21 vaccination starts to kick in and, you know, one of the thankful things about the vaccination

policy and roll-out was it did reduce the numbers getting really sick with Covid-19 and, therefore, the demand on critical care did reduce in those later waves.

Q. Tying together what you told us before and you touched on it briefly, are we correct to draw from these two graphs that in fact the pressure on intensive care units was not caused by a significant increase in the number of admissions and individual patients coming into ICU on a daily basis but, as you said, patients spending a lot longer in ICU and, during peaks --

A. It was the --

(Unclear: simultaneous speakers)

Q. -- many of them doing that?

A. It was the numbers in critical care. So the reduced admission rate is because the -- sort of, no free bed to put them in. And, again, you've heard that a bed is not a bed, a bed is a skilled nursing colleague and other allied health professionals, and there simply -- you heard how stretched they were. And you can see how much they have increased their capacity. There was a lot of sort of stretching to try to deliver care to as many people as possible.

Q. Even with the caveats that you provided before about not covering all surge areas, you can see significant increases during the peak, can't you?

A. Massive, yes, and the numbers are not accurately known for the numbers who were critically ill and managed in surge areas that we didn't cover.

Q. Can I ask you -- that can come down for the moment.

Can I ask you, Professor Rowan, about something you say in your witness statement at paragraph 7.3 and I'll just read it out. You say this:

"Overall, approximately 24% fewer patients were admitted to critical care for reasons other than COVID-19 across England, Wales and Northern Ireland than would have been expected based on pre-pandemic rates of admission."

You then go on to say it is impossible to determine exactly the causes for that.

Sorry, I will bear with you. It is paragraph 7.3.

A. Yes.

Q. Did you hear what I read out?

A. I'm sorry?

Q. Did you hear what I read out?

A. Could you just repeat that for me. I am sorry, I got a bit distracted about finding the page.

Q. That's okay. You said:

"Overall, approximately 24% fewer patients were admitted to critical care for reasons other than COVID-19 across England, Wales and Northern Ireland than

would have been expected based on pre-pandemic rates of admission."

So we've obviously just looked at admissions, both in terms of the number of patients coming into ICU and the number of patients actually in ICU.

Given what you say about there being approximately 24% fewer patients for non-Covid reasons, are we correct to assume that there are potentially number of patients with non-Covid conditions who we would normally have expected to come to ICU who simply didn't for one reason or another?

A. So I -- without the information, without the data on, if you like, the pool of patients in hospital -- so what we do know, very early on in the pandemic we did a report that was part of my witness statement around what kind of gains could there be made in capacity in critical care by the cancellation of elective and planned work, and that amounted, I think, from my memory, to about sort of 20/22% of bed days that would not be occupied, and therefore some of this will be the cancellation of elective, sort of, and planned work.

But I think it wouldn't account for all of it. I think if we look across the whole pandemic period there was probably about, if you cover all the waves, probably about 9 to 12 months of stopped or cancelled

elective work because obviously it recovered between the waves.

So that would have been some of it but probably not all of it.

Q. That's very clear, thank you.

Touching on -- well, you touched on earlier the fact that there was a considerable difference in terms of the average length of stay of a patient with Covid-19 and a patient for all other reasons. I think you said something like 17 days in the beginning for a Covid-19 patient.

We heard yesterday from Dr McConnell, who is the former medical director at the Western Health and Social Care Trust in Northern Ireland, and she spoke about some very lengthy stays in ICU in Northern Ireland, particularly in her trust, in, I think, the Omicron period. I'm not sure entirely. But we have a particular graph which ICNARC has produced in relation to length of stays in Northern Ireland.

So if we could just go to that, please. It's INQ000480138, and we're looking at figure 96, please.

So if we're just looking at this graph, it looks as if -- you mentioned before something to the effect of 17 days in the beginning, and then a reduction in the length of stay of Covid-19 patients, but if we look at

January 2022 here, it looks as if in Northern Ireland there is a significant increase, is that right, in January 2022, so almost double what it was even at the beginning on average?

A. So you can see that there are gaps in the orange line because we don't report for small numbers, so for those sort of months where there were fewer than ten admissions, and the numbers are smaller in Northern Ireland and also less were going into intensive care in those later waves.

But there's no two ways about it that when you do an average -- obviously you're doing an average, but it's very skewed by longer-staying patients, and that will have a bigger impact on a smaller number of patients in the sum, if that makes sense.

Q. Sorry. So is the explanation for this that there were a few -- as it sort of says in the headline, there were a few patients who were spending significant --

A. Yes, who will have dragged the average up.

That doesn't mean that those patients did not have those considerable long stays but it means that it may have dragged the figure higher than what would be the, sort of, what we might call more normal stay for those patients. Does that make sense?

Q. I think it does but it makes it very clear that there

were some patients having --

A. Absolutely.

Q. -- extraordinarily long stays in ICU, particularly in Northern Ireland, in January 2022, which may be quite surprising.

A. So the other thing to just bear in mind is when we get to Omicron, the population is more vaccinated, let's say, more highly vaccinated, than in those earlier waves. So the patients now getting into intensive care come with much greater other sort of advanced chronic conditions. So these are people who, despite vaccination, Covid is a significant hit and requires their admission to critical care; so sort of a much more complex and a much different patient to earlier pre-vaccination where it was a disease that in its own in isolation would bring you into critical care.

Q. I appreciate that you necessarily have to caveat things in terms of only being able to infer what the data says, but would that also coincide perhaps with the fact that those patients may have been shielding previously?

A. That I don't know.

Q. Okay. That can come down.

I want to ask you about critical care transfers.

A. Yes.

Q. So this is INQ000474239 --

LADY JUSTICE HALLETT: Before we move on --
MR FIREMAN: Sorry, would you like to take a break?
LADY JUSTICE HALLETT: I was just thinking that might be --
MR FIREMAN: -- a convenient time, yes --
LADY JUSTICE HALLETT: -- if you are going to a different subject.
MR FIREMAN: No, no, definitely.
LADY JUSTICE HALLETT: We take regular breaks, Professor Rowan. So I shall return at 3.25, all being well.
(3.09 pm)
(A short break)
(3.24 pm)
LADY JUSTICE HALLETT: Mr Fireman.
MR FIREMAN: Thank you, my Lady.

As mentioned, we're going to move to critical care transfers and look at INQ000474239.

We're looking at figure 9 here. A similar sort of graph to the ones we were looking at before. Can I hand over to you to explain a bit about what we can see here?

A. Sure, absolutely.

So, again, you've got that pre-pandemic and then the relevant period and then you've got the mean daily transfers between critical care units.

Q. Sorry, can I just pause you in fact to just explain what

critical care transfer is?

A. I'm sorry, yes, absolutely, forgive me.

So these are the transfer of patients between critical care units in different hospitals, so they don't include, sort of, movements within the same hospital, which was about managing care, you know, under stress and whatever, but this is where patients have to be put in a transport vehicle with a team and taken to another critical care unit.

Q. Thank you.

We can go back to what the graph shows us.

A. Okay. So I think, as others have indicated, that the provision of critical care beds in the UK relative to similar OECD countries is low. So we have, you know, capacity issues and therefore there are transfers between critical care units.

At the bottom there, the repatriation, that's very often where perhaps you'll move to another critical care unit further away, sometimes for good reasons, for more specialist care, sometimes for not so good reasons, which is being moved because there's no room and for capacity issues or comparable care. But repatriation is coming back to a critical care unit sort of near where you live, so some of those can be thought for good reasons --

Q. Sorry, just to clarify, repatriation is going back to somewhere that is closer to perhaps where you live --

(Unclear: simultaneous speakers)

A. So if you have been moved from your original critical care unit, it is a return to the critical care unit. And as I say, that move may have been for more specialist care or it may have been because of capacity issues and therefore for just comparable care in a unit with space.

Q. Sorry, just to be absolutely clear, I think because we're getting a bit confused in terms of the words, I think -- am I right to think that it's the other reasons that might be for comparable care --

A. So those are in the orange, yes.

Q. And the repatriation --

A. Yes.

Q. -- is for care that would be closer to your home, for example?

A. Yes, absolutely.

So what you can see here is there's about 20 mean daily transfers between critical care units in the pre-pandemic period. And then during the first two waves you can see this threefold and fourfold increase in the number of inter-hospital transfers during the first and second wave and, because of the

differences between the Case Mix Programme and the SICSAG data, we weren't able to sort of --

Q. Break down further.

A. -- break down the other reasons further.

As I say, patients were being transferred for ECMO and very specialist services that are centralised, but a number of these were, as we heard from Kevin Fong, around helping units manage, particular units manage an overburden of patients and moving them to units that --

Q. May have had capacity.

A. -- had space.

Q. As you touched on, you couldn't, for data comparison reasons, get this data in terms of the breakdown of those other reasons for the whole of there UK but you can for those in the Case Mix Programme --

A. Indeed.

Q. -- in England, Wales and Northern Ireland. So I would like to look at those so we can see some of the breakdowns for the reasons for critical care transfers.

A. Indeed.

Q. This is in your own report, figure 13, it's INQ000480138.

A. So, again, you can see consistency between these because -- the dominance of England, Wales and Northern Ireland, the Scottish data only bring a few more

numbers, but you can see that pre-pandemic there's about 20 mean daily transfers.

And, again, now what we've split here is you're worried about the orange ones, that's just being transferred for comparable care. More specialised care is because for certain techniques that are not needed all the time it's quite right to centralise those, so something like ECMO, where skills are actually enhanced in delivering that care and patients would be transferred for more specialist care, that's in the sort of bluey-grey, and then, again, you can see the repatriation.

I guess the alarming bit for me is you can see that the big uptick in the inter-hospital transfers between critical care units is predominantly in that sort of comparable care. And while, you know, a transfer, when it's necessary, can be done safely, it does come with a risk to move a critically ill patient, and it comes with a burden of resources that, as we know, were probably needed back in the original transferring unit.

And there were sort of specialised transfer services, sort of, established during the pandemic to try to meet some of this demand, but again, you can just see these huge increases.

Q. So just to tie up what you were saying, are we right to conclude, generally speaking, that transfers for either of the two blue reasons, repatriation or more specialised care, may be clinically appropriate, whereas transfers for the orange comparable care reason would indicate that was driven by capacity concerns rather than clinical need?

A. Yes, and ideally you would like to see none of those pre-pandemic and certainly not be forced into the situation we found ourselves in during the relevant period of the pandemic.

Q. We should recognise that there are some transfers for comparable care pre-pandemic, though, aren't there?

A. Indeed, but you can see the large increases in the relevant period of the pandemic.

Q. That can come down now, thank you.

I want to ask you about, within the context of pressure that's been put on critical care units having looked at admissions, both number of patient admissions on a daily basis and also patients in critical care and critical care transfers, you talk about a concept in your witness statement at paragraph 6.1 which you have termed "ICU capacity strain". Are you able to explain what that term is and where it comes from?

A. Okay. So even during normal times critical care,

particularly over the winter season of flu and other pressures, sees situations where demand outstrips supply. Demand being -- let me just make sure I've got this right -- the number of patients who you want to provide critical care for, and supply being the available beds to deliver that care.

So we wanted to look at that, and we did look at it some years back, and we showed that -- we created a sort of concept of the number of patients in the unit as you are admitted sort of tells you how busy the unit was as you were admitted. So for every patient in every unit you can get the -- sort of a concept of were they admitted on a typical day or were they admitted on a day that was lower than typical in terms of number of other patients in unit or higher than typical, sort of, type thing.

So the notion being that your first day in intensive care is very important in terms of setting up your care, and I'm talking now pre-pandemic, equally so post -- during the pandemic, but pre-pandemic, and what we showed, with careful analysis and adjusting for the confounding factors of the types of patients and that kind of thing, was that patients who were admitted in periods of higher capacity strain were less likely to survive.

Q. That was work that you started pre-pandemic?

A. That we did pre-pandemic.

Q. Am I right you then did some further work to adapt that model for the pandemic?

A. So then we found ourselves in the situation where during the pandemic we hadn't seen such strain on intensive care units. So not unlike the comparisons here, we took a period for each intensive care unit to understand their typical, you know, sort of, numbers of admissions daily and then we took the period of the pandemic and we identified each patient as being admitted, again, at the normal or typical, sort of, number of patients in the unit, lower than that, higher than that, but then we created this, sort of, pandemic high and pandemic extreme.

Pandemic high was you were admitted at a period that was 10 to 50% higher; pandemic extreme was the unit was greater than 50% fuller than normal.

In that situation, again, we carried out a very careful analysis, adjusting for the types of patients, and what we showed was -- and I just will read this to get it absolutely correct.

Q. Yes. I wonder, Professor Rowan, if we have on screen, perhaps, your paragraph 6.4, it might help.

A. Yes, that would help, thank you.

Thank you.

So the bit I will read from is:

"For COVID-19 patients admitted during periods of 'pandemic high' [that's where the unit is sort of anything greater than 10% but less than 50% fuller than typically] or 'pandemic extreme' [greater than] ICU capacity strain during the first wave, we found no difference in hospital mortality ..."

For Covid-19 patients.

In the second wave, we found a 17% increase in the likelihood of dying for pandemic extreme -- sorry, pandemic high, and pandemic extreme was about 15%. They are quite similar figures.

For non-Covid patients -- so alongside the Covid patients at this time there are patients being admitted not for Covid reasons -- there was a 16% increase for pandemic high and a 30% increase for pandemic extreme for -- this is a 16% increase in not surviving to leave hospital alive or a 30% higher overall odds of acute hospital mortality when compared with typical capacity strain.

So what this sort of suggests to me was the reason maybe that we didn't see it for Covid patients during the first wave was all the attention that was being placed on, you know, the delivery of care to Covid

patients, you know, and I felt -- you know, we've all heard what our clinical teams were under in terms of that but then the kind of more balancing in the second wave and subsequently, whereas to be a non-Covid patient in that first wave or in that second wave, which were the two waves that we studied, there was a notion in which, once again, with careful adjustment, that that strain did impact on survival.

Q. So to take the headline message if we can from that, certainly in the second wave, the peak within January 2021 onwards --

A. Which is that very high one.

Q. -- it was the highest peak of the pandemic, for both Covid and non-Covid patients, if you were admitted to ICU during that period, you had a greater likelihood of dying than if you were admitted during any other period; is that correct?

A. So if you were admitted on a day where the strain was higher, yes, but that's likely during the wave, absolutely. And that's sort of done doing the most careful adjustment that we can for other patient characteristics. It's the best statistical methods that we have to study this phenomenon.

LADY JUSTICE HALLETT: I'm afraid we're going to have to call it a day.

MR FIREMAN: Yes, I'm sorry.

LADY JUSTICE HALLETT: I'm terribly sorry, Professor Rowan.

I'll see everybody at 10.00 tomorrow.

(3.37 pm)

(Adjourned until 10.00 am the following day)

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