SCOTTISH HOSPITALS INQUIRY

Hearings Commencing
19 August 2025

Day 1
Tuesday, 19 August 2025
Professor Brenda Gibson
Annette Rankin

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10.00

THE CHAIR: Good morning, both to the representatives of core participants who are present in Edinburgh and those who are following our proceedings via the YouTube feed, and welcome to the first of what is planned as an eight-day hearing, which we've designated Glasgow IV, Part 2.

Now, as representatives and core participants are aware, the purpose of this eight-day hearing is to consider a report prepared by Professor Hawkey, Dr Agrawal and Dr Drumright, which was originally instructed by Greater Glasgow and Clyde Health Board.

We will hear from the authors of that report, but we will also hear from some other witnesses who, by reason of their experience and their expertise, are in a position to comment on the terms of the report and its implications.

Now, following this Glasgow IV, Part 2 hearing, there will be what is planned as the final hearing in the Scottish Hospitals Inquiry, which we've designated Glasgow IV, Part 3. Now, that is scheduled to begin on 16 September and to run for four weeks, and legal representatives have been advised of the topics to be dealt with in that hearing.

So with that by way of introduction, I would invite Mr Connal to lead the first of what I understand will be two witnesses today, and that, I think, is Professor Brenda Gibson.

MR CONNAL: That is, indeed, correct, my Lord. As will become apparent, the Inquiry team has also taken the opportunity of the presence of one or two of the witnesses who will be appearing in this session to ask other questions that it's convenient to ask them while they're here, rather than possibly call them again or something of that kind, but Professor Gibson is first up.

THE CHAIR: Please sit down, Professor. Good morning, Professor. Now, this is not the first time you've been asked to give evidence, and I'm grateful that you've come back. I think you previously gave evidence on 12 June 2023.

THE WITNESS: That's correct.

THE CHAIR: Can I ask you to take the oath once again?

Professor BRENDA GIBSON

Sworn

Thank you, Professor. Now, as you may recollect from your last attendance, we would plan to take a coffee break during the course of the morning. I don't know how extensive your evidence will be today, but we will take a coffee break at about half past eleven. But if, at any

stage, you wish to take a break for any reason, just give me an indication and we'll do that.

THE WITNESS: Thank you.

THE CHAIR: Now, Mr Connal.

Questioned by Mr CONNAL

Q Thank you, my Lord. Good morning, Professor.

A Good morning.

Q I add my thanks to those of the Chair for your return, and, as you probably gathered, we've some themes to touch on with you and then one or two what you might call points of detail, where we just want to take the opportunity of you being with us once again to ask.

So if I start with the formal question that we always start with, which is that you have been sent a further questionnaire to which you've sent replies; are you content to adopt that questionnaire and the replies in it as part of your oral evidence?

A I am.

Q Thank you, and for much of what I'm going to say, I may use the kind of structure of that document to sort of guide us through where we are at any particular time. You start your responses in answer to Question 1 by explaining your part in the Schiehallion Unit, or what at one point you call the Schiehallion family. Why do you call it the Schiehallion family?

A Well, you know, we look after very seriously ill children. You need a team to do that. The team is a multidisciplinary professional team, but it also includes the parents, who are very much part of the team, and the children. So we've always regarded ourselves as a very broad team and the Schiehallion family.

I think you know that the Schiehallion-- I named the unit after the Munro Schiehallion because it did represent for me the uphill struggle or the uphill climb that most of these families face with a child with a serious diagnosis who's going to face a very long time of treatment and an unpromised future.

Q Thank you for that. That may not be news to the Chair, but it's news to me, so I'm obliged to you for telling us that. What you explain in your witness statement is that you were the architect – with a small 'a' – in the technical sense of the move or the creation of this unit as a separate freestanding unit. Is that right?

A Yes, that's correct.

Q That was back in 1996, and you were trying to produce a particular result there, you tell us, of sort of pulling everything together into one place, is that right?

A Well, I honestly don't remember when we first started planning it. It

obviously took some time to plan and some time to build, but we moved into what had been the Department of Child Psychiatry because they were relocated to a new build.

You know, for me, history is repeating itself. In the 80s and the early 90s, when we were planning this, we were sharing a general paediatric ward with the professor of paediatrics. So, at that time, one of the commonest reasons for children being brought into a ward were viral infections, so our children were ending-- It was an open ward; it wasn't cubiclized, so our children were being exposed to children coming in with viral infections, and they were very immunosuppressed, and they were very vulnerable.

In particular, in the mid-80s, we saw deaths from measles and chickenpox from children who were brought into hospital and they were in the next bed. So the main aim was to get away from general paediatrics, a large part of which was then viral infections.

Q Also, you mentioned trying to get away from the open ward, is that right?

A Well, you know, yes, into isolation cubicles so that you weren't put into a bed next to somebody who could infect you.

Q So your involvement obviously goes back some considerable time, and I'm going to come and ask you about the way the setup was laid out and so on at Yorkhill slightly later, but you've also set out in Answer 1 what you see as a division, I think-- or at least, if there is a division, where the line is between infection control and your role as the clinician. You say there that you're the clinician, you're not the Infection Control Doctor.

A That's correct.

Q But in terms of being aware of what is happening, would I be right in thinking that in your role in old Schiehallion, Yorkhill-- Let's call it Yorkhill. You would know, for instance, if there was a positive blood culture for some undesirable organism.

A That's true. My main area of the unit that I looked after was children with leukaemia in the Bone Marrow Transplant Unit, which were probably the most vulnerable, because I think this Inquiry has already heard repeatedly that what makes you vulnerable is the depth of your neutropenia, the length of your neutropenia, and what immunosuppression you are on, and those were the children who were the deepest, the longest and the most immunosuppressed.

So, yes, I would have known what positive blood cultures there were, but when you say that I was the clinician and

not the Control of Infection-- and we did have a very, very good working relationship with the microbiologists.

I don't honestly remember how well-organised Control of Infection was, you know, at the early part of that, but we would have met the microbiologists on a daily basis, with a longer meeting once a week where they'd have brought all our positive blood cultures and they would all have been discussed.

Q You're no doubt aware by now that other witnesses, particularly in this session of the hearing, are going to deal with epidemiology and what figures do or do not tell us. That's not your particular specialism, but in terms of impression, you say in your witness statement, still in Answer 1, you don't recall any serious concerns that the environment – that's the Yorkhill environment – was unsafe.

A I don't. I don't ever remember going to an IMT. I don't ever remember going to a PAG. I have asked others on the unit can they remember, and none of us can remember having events like that. That's not to say we didn't occasionally see or see environmental organisms. Yes, we saw children with Stenotrophomonas and we saw them with Pseudomonas, but they were sporadic.

You know, they never raised a red flag to the microbiologists, who were the closest we got to Control of Infection, and you'll always see that, you know, in a unit. We're a transplant centre. We get children sent in from other centres who've had Stenotrophomonas and Pseudomonas, so it was not that unusual, but it was, in our view, sporadic and did not raise any concerns of any serious problem with the environment.

We did close down the parents' kitchen a few times for Rotavirus or Noro, but, you know, we're dealing with a group of small children in nappies that are running about all the time who do not have good hand hygiene, so it's almost inevitable that we will see things like that, but that's the only disruption I ever remember, was kitchens being closed down so there wasn't communal mixing.

Q Well, thank you for that. You probably gathered, a number of your former colleagues or colleagues have been asked similar questions and have given written statements, which the Inquiry has, people like Dr Sastry and Dr-- I'm sure I'm going to get this pronunciation wrong----

A Rongy(?)?

Q Rongy? Right. I'm obliged for the correction. Now, the Inquiry has some material suggesting that the rates of environmentally relevant Bacteraemia were higher in Yorkhill than in the new hospital. Your response to

that in Answer 2, you say, “Well, the data are the data,” and we’ll come back to the data in a moment. You say this would not have been your impression and you’re surprised that’s what the data suggests.

A Yes, that’s correct.

Q Is that your position?

A That is my position, that I thought we saw more environmental organisms or certainly more positive blood cultures when we moved it to the new site than we did when we were at Yorkhill.

I think we have to be clear about the timelines at the new site. You know, we’re not seeing them since we’ve had a refurbished unit and we probably didn’t see them maybe from 2019 onwards. I know there’s quite a lot in the statements about a decline in 2018. I think I would personally put it at 2019. So we had a period from 2017 to 2019 when I think most of us thought there was an increased incidence of positive blood cultures.

Q Can I just make sure I get the point you made at the start of that answer is that, since the unit was refurbished, do you have an issue?

A No, absolutely not.

Q Another statement that was made elsewhere was that there had been a two-fold decrease on the move to Queen Elizabeth. So you’re asked about that in your statement, and I appreciate you’re giving us an impression, you’re not giving us a count, because you weren’t doing the counting, but was that consistent with your impression?

A Not during the period of 2017 to 2019, no. I don’t have access to the raw data, and even if I did, I’m not sure I’m enough of a microbiologist to interpret it correctly, but there have been a lot of challenges, you know, about transcription and how accurate that data is. I’m also not an epidemiologist, so I don’t know if bed days is the proper denominator to use or not. So I, you know, can only look at that data at face value.

THE CHAIR: Professor Gibson, it’s entirely my fault that just my speed of noting is not quite up----

A That’s okay.

THE CHAIR: -- to the speed of your evidence, although your evidence is being recorded, so it’s not critical. But can I just ask you for the way that you first phrased your recollection of the experience in that period of 2017 and 2019, just the form of words you used?

A I can’t honestly remember what I said----

THE CHAIR: Well----

A -- but my clinical experience was that we were seeing more positive blood cultures during that time than we’d previously seen.

THE CHAIR: Sorry, Mr Connal.

MR CONNAL: I ought probably just to check with you precisely what you said in Answer 3, which was:

"The finding of a 3 fold decrease in infection rates at [the new hospital] [that's my translation; I always stumble over QEUH] is not consistent with my impression as a clinician working on these Units."

That's something you would stand by?

A That's correct. Yes.

Q Thank you. Just in terms of impression, because you've explained you're not an epidemiologist, I wonder if I could ask you to look at at least one graph, which is in bundle 44, volume 5, at page 50.

As you may or may not have gathered, there have been lots of exchanges involving epidemiologists and others about how the statistics play out or not. However, this is a document which was produced by what we've started calling the HAD team – the Hawkey, Agrawal and Drumwright team – in response to a further questionnaire from the Inquiry team on which, if you like, a picture appears, illustrated by the pink area and the line.

Now, leave aside exactly where the boundaries of the pink areas are for the moment. That area, when you look to the period from 2016, say, to 2019, does that accord with the kind of impression you have of what was happening?

A Well I think I'm looking at environmental paediatric blood cultures, positive blood cultures. It looks to me as if there is a rise in the number from around 2017 or so up until sometime after 2018, when it starts to fall off. So that probably is in accord with my clinical impression.

Q Sorry, I just didn't quite catch the end of your answer there. That was probably in accord with----?

A My clinical impression.

Q Your clinical impression? Thank you very much.

A But I have to confess to having no experience of GAM models.

Q Yes. Well, I suspect epidemiologists can talk all day about GAM lines, but we won't ask you to do that. I just wanted to see how that related to your impression of what had happened. I think I'll just----

THE CHAIR: So, as I understand what Mr Connal is saying and what you've said in response, if that is presented as a representation of an increase in the incidence of positive blood cultures in the Schiehallion cohort, beginning in about 2016 and going through to 2018, if we are correct in

thinking that that's a representation of an upward curve and then falling away, that would accord with your impression?

A Yes.

THE CHAIR: Thank you.

MR CONNAL: Well, I think we could leave that chart. Thank you very much. Can I ask you another question which you were asked in Question 4 of your questionnaire? This relates to the comparability of adult haemato-oncology patients and Schiehallion haemato-oncology patients and whether the two are different or the same. Now----

THE CHAIR: Mr Connal, when you're putting that question, indeed, is it a comparison between adults with a particular condition?

MR CONNAL: Haemato-- with----

THE CHAIR: Right, so----

MR CONNAL: Who would be found on a haemato-oncology ward similar----

THE CHAIR: Right.

MR CONNAL: -- to the Schiehallion haemato-oncology ward. I'm just looking for a general understanding of the comparability or otherwise between them. Now, a few moments ago, you instanced one of the practical issues, particularly with very young children, which is that they are not of an age where they're operating hand hygiene regimes. I think another witness has talked about they have nappies and so on and so forth.

A Yes.

Q Is that one of the kind of practical distinctions between the younger group and the adult?

A Well, that's a practical distinction in that, you know, they're in nappies, they put their hands in places that adults wouldn't put their hands.

You know, you can't expect them to have any kind of hygiene. They'll crawl, their lines will go on the floor, so there is a very different-- there is a different issue in the behaviour you can expect between a toddler and a 40-year-old, without any doubt, but I think there are other differences which I think I did mention in my statement.

Q Well, let me come to what you've said in your statement just in a moment. I'd just like to kind of fill up the remaining age groups after the infants and toddlers group that you've helpfully described some of the practical issues that arise. What about other, you know, youngish but not yet almost-adult children? Are there any practical issues there?

A Well, I think, you know, they-- I don't think you can have expectations of their behaviour the way that you can have of an adult. You're never going to get them to have the strict kind of sterile-- that you can ask of an adult.

Q Can I just ask what the-- was

there an age limit for treatment on Schiehallion in Yorkhill?

A It's up to the age of 16, but we have many-- we do keep patients if they are-- if they have been our patient, you know, so they've come to us at 15 and they're still being treated if-- and they're 17 if they're still in education, we will keep them up to the age of 18.

Q Right, and was that----

THE CHAIR: Sorry, just so that I understand that, in Yorkhill, you would take children up to the age of 16 at admission?

A We take children up to the age of 16 at admission----

THE CHAIR: Right.

A -- but if they-- if we had them and they were still being treated, we don't transfer them on their 16th birthday. You know, we would keep them until they had finished their education, but we wouldn't-- If they'd gone on to work or something, then they would go to the adult unit, and it wasn't terribly precise. We were very flexible about what we thought was in the best interest of that child and that child's family.

MR CONNAL: When you say being flexible, I take it that's flexible at or around the upper limits?

A Yes, yes.

Q That's the issue here.

A Yes.

Q Just for completeness, was your approach to age the same when you moved into the new hospital?

A My recollection is-- well, and it's definitely up to the age of 16, and then we'll keep them to 18, you know, if it is appropriate. I struggle to remember all the data from Yorkhill.

I think we're probably different as a tertiary centre from what general paediatrics would have been. They would have had an age limit of 13. You know, at some point where if you, for example, had abdominal pain and came in with your appendix, you'd get sent to another hospital if you were over 13, but we didn't have that. You know, we kept them to 16. We had 16 as a limit.

Q Thank you.

THE CHAIR: So just that I'm following that, in the new children's hospital, the-- your----

A Up to 16.

THE CHAIR: -- your practice was also admission up to 16?

A And then-- Yes, but keep them if we had to up to 18.

THE CHAIR: Sorry?

A But they could stay with us until they were 18 if they were still continuing treatment----

THE CHAIR: All right.

A -- and they were still in education.

MR CONNAL: Just so I'm understanding that last point, Professor Gibson, is the reference to education connected in some way to the fact that efforts were made to allow children to continue their education while still being treated?

A Yes. We often had children sitting their exams on the ward.

Q Right, thank you.

A And we had teachers.

Q I wanted then to come to the other point that, as you quite rightly point out, you've made in your witness statement. You say that you think the children may be more susceptible to infection than adults, is that right?

A Well, I think they might have a disease spectrum and a treatment spectrum that makes them more vulnerable. Children tend to have-- well, certainly children with haematological malignancies tend to have acute disease. You know, by that I mean they have disease that requires intensive chemotherapy and so they're generally intensively treated. They're always treated with the intention to cure because their cure rates are very-- are superior to the cure rates in adults.

So you know, any child that comes through the door, whatever their disease and whatever their expected prognosis is, is treated with intention to cure. So they're generally very intensively treated. If you treat somebody intensively, you drop their neutrophil count, you have to put in a central line, you know, to treat them, so you make them very vulnerable.

Adults are probably-- well, I don't know what's sitting in the adult unit, but, generally, they see a lot more what might be chronic, you know, malignancies than we would see. So what makes them more vulnerable in part is the intensity of their treatment, and that's----

Q That's what makes the children more vulnerable?

A Yes.

Q Just so I'm not misunderstanding it, but as laypeople, acute and chronic, just tell me the difference. I should know it.

A Okay. So acute really means you've got frank leukaemia. You know, you have a bone marrow full of leukaemia cells and you need very intensive treatment. There are chronic-- and without it, without intensive treatment, your life expectancy is very short.

You can have chronic leukaemias that can smoulder, you know, for a very long time, but we-- there are some chronic leukaemias we never see in children. For example, chronic lymphocytic leukaemias are very common in adults; it's unheard of in children. Myeloma is very common in

adults, rarely, if ever, seen in children.

So we have a different disease spectrum, which dictates the intensity of the treatment, which is not to say some adults don't have very intensive treatment. They do.

Q But again, just so that the Chair gets that last point, clearly, a different disease spectrum in children to what you see in adults, that's the point you're making?

A Yes. There is overlap, there is similarities, but there is a different disease spectrum.

Q Well, that kind of neatly links into a question I was going to ask you. I picked up from another statement, and I confess I've forgotten which one, an answer to the same kind of question I'm asking you, which was to say, "Well, they're not just small adults."

A They're not.

Q There is a distinction. Would you agree with that?

A I would and, you know, they are a spectrum, you know, of age. A toddler is as different from a 15-year-old as a 15-year-old is from a 60-year-old. You know, there's an age spectrum and they will have different vulnerabilities as they go through that age.

I mean, one of the other important differences is children are pretty resilient, you know, even if they get very sick, they bounce back, you know, relatively quickly with the appropriate treatment. Adults have already had a lot of toxicity to organs and they don't bounce back as quickly.

So, for that reason, their treatment is often not as intense, you know, because of concerns that they will not tolerate it.

Q Yes, and I think you finished the passage that you deal with this in Answer 4 of your questionnaire by saying that, "Children are more vulnerable," and then you say, "With the exception of transplant patients where all transplant patients have similar issues."

Well, I don't think that's quite what I said. I think what I said is if you compare the treatments, the intensity of the treatments, bone marrow transplant patients are very intensively treated whether they're children or whether they're adults. So they may have the same vulnerabilities.

Yes, thank you. I'm just probably jumping around a little bit, so apologies for that. You were asked a question in Question 6 about IPC investigations in Yorkhill and whether you've remembered any of these in relation to environmental organisms, and I think your answer is that you can't recall any.

A No, I don't.

Q Now, these are all things that

happened a long time ago. Do you think you would have recalled if there were IPC investigations?

A Well, I think I've said that the only IPC-type thing I remember is the parent's kitchen being closed when there was-- you know, when there was viral gastroenteritis on the ward which is not uncommon in children, you know, at all. I don't remember there being any concerns or any meetings held about positive blood cultures, be they environmental or non-environmental.

Q Yes, thank you. Inevitably, the questioner who drew up the questionnaire has duplicated to some extent some of the questions, because the next question in Question 7 was essentially asking about management and risk of bacteraemia from environmental organisms at the Schiehallion Unit between 2005 and 2015, whether this was a big issue. You've given us a very long answer to that. The first point I think you make is that where the organism came from wasn't your primary focus, is that right?

A Well, I suppose that is true. I think what I was trying to say is that when we heard there was a positive blood culture in a child, our primary focus was to treat that infection. We were the clinicians responsible for treating the infection, so our first thoughts really were, what was the pathogenicity of that organism or how sick could that organism make a child? What----

Q Thank you for the definition; I was about to ask you that. That's very helpful.

A Okay, or was it life-threatening or was it something that antibiotics were very likely to take care of and to see how vulnerable was that individual? So in that assessment, we were-- you're right, we were not thinking that much about where the bug came from. We were thinking of, was this organism that caused a biofilm and we were likely to have to remove the line? You know, because antibiotics were not going to eradicate it. What was the best antibiotics to give?

Because when we would have first heard of a positive culture, we would not have had antibiotic sensitivity. That would have come 24-48 hours later, and how vulnerable was that child? By that I mean we would know from experience how long that child was going to be neutropenic, you know, based on what treatment, what stage of their disease and what treatment they had.

So for some, it was going to be a very, very long time. For some, it would be a very short time. If it was a very short time, we had the option of giving something called GCSF, granulocyte stimulating factor, to try to make the

marrow produce neutrophil----

Q Okay. Just let me ask you to pause because for those of us who are not steeped in the medical terminology, it's sometimes a little difficult to----

A No, I understand that.

Q I think what you were telling us there was if the period of neutropenia that you were expecting in the particular patient might have been relatively short, you had a particular option?

A Yes.

Q Can you just tell us a little more slowly what that option was so we have your evidence?

A Okay, so there is a drug called GCSF, or granulocyte stimulating factor, which will make stem cells in the bone marrow produce neutrophils. Now, it can only work if there are stem cells, so if you have had mild chemotherapy or you're a long way out from chemotherapy, there is a chance that that drug will raise your neutrophil count faster than it would if you just sat and waited for it to happen naturally.

So we would assess the chance of GCFS working in that individual, but if you've had very intensive chemotherapy and you're a long way from the expected time to count recovery, that drug is very unlikely to work. So we would think of, "Does the line need to come out? What antibiotics do we give? How can we shorten that period of neutropenia?"

Q Right.

A Because that's what made the child vulnerable.

Q So that was an option that you were looking at where the period of neutropenia anticipated was relatively short. A different approach if the anticipated period was longer?

A Well, depends how longer it is, you know. You know, for children on the last acute myeloblastic leukaemia trial, the average length of neutropenia was 40 days, so sometimes we were facing very, very long periods of neutropenia. So we were just really trying to assess the vulnerability of that child and what could we do to make them less vulnerable.

THE CHAIR: Just for my education, 40 days would be a long period of----

A Yes, 40 days of neutropenia is a very long----

THE CHAIR: Sorry----

A Yes, a very long time to be neutropenic.

THE CHAIR: A very long time.

MR CONNAL: Can I just come back to your answer and combine it with what you've said in your witness statement so that we're sure we're understanding it? At one point you mentioned biofilm, and in your questionnaire answers, you say:

"I would probably be more concerned by the pathogenicity [that's the point you kindly defined for us] of an organism whether it formed a biofilm, whether it was resistant to frontline antibiotics."

So what was the concern about biofilm here?

A Well, biofilm stops antibiotics-- so it is a sort of a jelly that sits on plastic, so it stops antibiotics penetrating into the bacteria, and you can't really-- and there are organisms that form biofilms that can't really be eradicated by antibiotics because they-- so the line has to be removed.

THE CHAIR: All right, so this is the problem in the physical context of a central line?

A Yes.

THE CHAIR: Right.

MR CONNAL: So, in some cases, antibiotic treatment might deal with the problem, in other cases because what you were dealing with was biofilm forming, you would realise you had to take the line out and put----

A Yes, that's correct.

Q Deal with the matter either by replacement or in some other way, is that right?

A Well, if we had to take the line out, we'd still have to give antibiotics, so we would have to have maintained venous access peripherally through a cannula until we're able to reinsert the line, and we would have to wait a period of time to reinsert a central line till the bacteraemia had been cleared, because if we put back in a line when there's still bugs in the bloodstream, the second line is just going to get infected.

Q So these were the kind of issues that you would encounter in practice at your----

A That's our bread and butter.

Q Okay, and that's what you're focusing on? These are the issues that you're focusing, rather than how has it happened that this bug is present?

A Well, and that's not entirely true or fair. I have said that we had daily contact with the microbiologists. We had a longer meeting once a week on a Friday where they would bring all the positive blood cultures, and that was our opportunity to say, "Where did this come from?" and for us to have some kind of dialogue about them, whether this was coming from the environment, but I never remember them raising any concerns about the environment.

Q Thank you. Now, you were asked a question about central line care and practice, and I don't think I need to ask you about that, but I would like to just pause the narrative that appears in your questionnaire for the moment just to ask

you one or two other issues that have cropped up to see if you can assist us at all. One of the topics that has cropped up is centred on a drug called meropenem, not "meroprenem" as I constantly say. It's meropenem.

A Yes.

Q Now, I take it, first of all, you're familiar with what that is?

A Absolutely.

Q Yes, and just give us a sentence telling us what it is just so we're all on the same wavelength.

A It is an antibiotic, it's a broad-spectrum antibiotic. We use it as our second-line antibiotic or-- We have an antibiotic policy. Our first-line antibiotic policy choice is Tazocin plus or minus gentamicin. Our second line is meropenem, so we would use it when we can't use Tazocin.

THE CHAIR: Sorry, when you can't use----?

A Tazocin.

THE CHAIR: Tazocin.

A Which is another broad-spectrum antibiotic.

MR CONNAL: So first line was another antibiotic?

A Our first line, I think we-- In the bundles I got, we have antibiotic policies from the unit from 2010. Tazocin was our first line, so any child becoming paraxial, if they were neutropenic, or any

child becoming paraxial would have Tazocin as we waited for the blood culture results to come back.

You know, we have a very fast turnaround time to respond to temperatures, so any child with a temperature of over 38-- around two occasions of 38.5 (inaudible) would have had Tazocin. It was our first-line antibiotic plus or minus gentamicin. If we weren't able to give that combination then we would give meropenem.

Q The reason why you wouldn't be able to give that combination is what?

A Several reasons. One reason that is in the witness statements is that there was a worldwide shortage of Tazocin. I think that's probably really what's being asked about here. I don't recall, and that was said to be in 2017/18.

I personally don't ever recall that affecting us. We're usually very protected and very privileged by the pharmacy, and, you know, we will be the last unit not to get any drugs, so we can-- there's-- Times we couldn't give Tazocin would be-- There are some children who have a chemotherapy that-- well, first of all, it's a penicillin, so you can't have it if you've got a penicillin allergy. You'd have to----

THE CHAIR: Sorry. Can we have that again, please?

A Tazocin's a penicillin.

THE CHAIR: Right.

A So you can't have it if you've got a penicillin allergy, okay?

THE CHAIR: Allergy, right.

MR CONNAL: So that's one reason. If you just let his Lordship catch up with the----

A Okay.

Q -- the names here. So not if you've got a penicillin allergy. Another reason?

A Second reason would be that it interacts with high-dose methotrexate, which is a chemotherapeutic agent that we give children. So any child, if they are just about to have high-dose methotrexate or have just had it, can't have Tazocin and have to have meropenem.

Q Okay. Would you mind just spelling that hydromethotrexate (sic) or whatever that word was?

A Sorry? Oh, "high dose". High as in high, dose----

THE CHAIR: Yes, high dose.

A Methotrexate. Methotrexate: M-E-T-H-O-trexate. T-R-E-X-A-T-E. Okay? Some children harbour bacteria in their stool as commensals called ESBL-forming organisms, and they are the-- If that became a frank infection, it would not be sensitive to Tazocin, so they have meropenem. So there are very clear indications when you give meropenem.

The other thing that would drive us to giving meropenem is if we thought we would have to add in gentamicin. Gentamicin is very toxic. It affects your hearing, it affects your kidneys. So children that we are concerned about their kidneys, their renal function, maybe because they've had lots of other nephrotoxic drugs, we would not elect to give gentamicin to, or children who have potentially poor hearing, such as children with Down's syndrome, who are predisposed to poor hearing, we would give meropenem to. So we have very strict criteria who we give it to.

THE CHAIR: Can I double back?

A Yeah.

THE CHAIR: Mr Connal introduced you to, or introduced us to, meropenem, which is a second-level antibiotic, and you were asked to consider the situations when you might choose to use that. Now, I'm particularly interested in the first situation that you identified for us. That is the suggestion that, in 2017, there was a worldwide shortage of, if I'm following you, Tazocin.

A Tazocin.

THE CHAIR: So, step one, I've got that. Now, your recollection is that, whether or not there was a worldwide shortage, it didn't impact on your unit.

A I don't remember it impacting on our unit and I did-- I know that this is

all very confidential, the Inquiry, but I did ask our ward pharmacist if she remembered it.

THE CHAIR: Sorry, could you give me again that----

A I'm saying I appreciate that we're not meant to discuss things at the public inquiry, but I did ask our ward pharmacist if she remembered us not having access to Tazocin, and she didn't.

THE CHAIR: Right.

A Tazocin once came as small vials, which would be suitable for a dose for a child, but it also came as bottles to hang, which would be suitable as an adult dose. The bottles were removed from the system, so that would never have affected us because we only ever used the vials.

THE CHAIR: Right.

A So that may be what's being referred to. I don't know.

THE CHAIR: Right. Presumably the pharmacy would keep records as to----

A Yes. Well, she had no recollection of it, but she did say that she would look into it for us.

THE CHAIR: Right, but I take it-- Well, this may not be your particular sphere of activity, but I take it a hospital pharmacy records drug use and how much is being used by which department?

A They do.

THE CHAIR: Yes, thank you.

MR CONNAL: Now, one of the issues that's been raised about meropenem is that it may be a contributor to infections because it selectively, as it were, edits out some bugs and leaves others. Do you recollect any issue over the impact of meropenem on your patient in Yorkhill arising?

A No. I mean, I think what has been said is that it suppresses some bugs and allows things like Stenotrophomonas.

Q Yes.

A You know, that's the bacteria they're really talking about, but, you know, I think we have time spans at Yorkhill and at the Queen Elizabeth where the patients were probably equally exposed. We'd have had the same number of children having high-dose methotrexate, the same number of children-- Also releasing a population where we would not have given Tazo to, and I don't remember that, there being any problem with meropenem at Yorkhill.

Q I mean, my question was just a general one because it's been a topic that has been discussed----

A I know.

Q -- by a number of witnesses. I was just concerned to ask whether you had any recollection of it being an issue

that had crossed your consciousness, and the answer is no, is that right?

A The answer is no.

Q Okay. Just for completeness, can I ask you to look at another document, bundle 44, volume 1, page 257? Now, this seems to be part of a study into the use of antibiotics. Is this something you've seen before?

A No. I have to be honest, until I read this document, I didn't know what a DDD was. I think it's the defined daily dose. It's something that people who look at antimicrobial stewardships use. I think it stands for a defined daily dose.

It's based on-- What I'm trying to say is I don't know how you adapt that to children. It's really based on a 70 kilo adult. Children are very have a very wide spectrum of weight. I haven't seen this kind of modelling before at all.

Q Okay. Well, I think if you've not seen that study then I won't ask you anything further about it. I just wanted to check whether this was something you were familiar with. Let me ask you another question about Yorkhill and let's go from the drugs to the environment.

Can you help us understand, for those who weren't there, what the layout, the setup, as it were, was of what you would call the Schiehallion unit in Yorkhill? We've seen lots pictures of the Schiehallion unit in the new hospital and the curve and all these discussions about racetrack shapes and so on and so forth, but can you help his Lordship kind of picture of how was the Schiehallion unit set up in Yorkhill?

A Well, it had been the Department of Child Psychiatry, so it was a standalone contained unit. It was composed of an inpatient ward and an outpatient day care unit. The ward was cubicalised with the exception of, I think, two two-bedded bays.

So it was an old-- Old-fashioned is the wrong word, but it was a ward that you could stand at one end and see exactly what was happening down the other end, so it wasn't the real track that you have discussed or described at the new hospital. The corridors were HEPA-filtered. It had a double-door access. The transplant unit was at the far end of it, so it was quite isolated from the other cubicles.

It had facilities for the entire team, so it had a pharmacy which initially had an aseptic element to it, which did disappear over time. It had a classroom, it had office space for the medical staff, it had office space for the social workers, for outreach nurses, for our data managers. It was a self-contained unit.

THE CHAIR: Right. Can I maybe take you through the components? Standalone unit. The double doors are to

the rest of the hospital?

A We came in through a door. As far as I remember – and you have to forgive me, it is quite a long time ago – it had three entrances.

THE CHAIR: Sorry, it had----?

A It had three entrances, so it had an entrance that we came into which went into a parent area. So we had a parent facility with three bedrooms, a kitchen and a sitting room. They didn't all have en suite facilities; I'm not trying to say that. They had communal toilets and showers, but it was a standalone sort of parent facility that allowed a mother, if they had a very sick child, to go and sleep on the unit when they might not be getting much sleep from nurses going in very regularly to see their sick child.

So there were huge advantages to it for families who were there for a long time with sick children. We then went through a door into a sort of----

THE CHAIR: So with-- Sorry for being so pedestrian.

A It's a complicated setup.

THE CHAIR: I think you said there were three entrances into the ward.

A So there was one entrance into the day care unit.

THE CHAIR: Into the day unit?

A The day unit, which was a ramp to take wheelchairs down. In that day unit, we had-- I can't remember if we had four or six cubicles, but we had cubicles for patients. The data managers had an office there because they are very important in keeping us correct which point of any kind of protocol a child is on.

We had a seminar room for meetings, we had a staff room and then we had some consultant offices. We had an office in the day care unit for our social workers, and we have a team of outreach nurses who visit the children at home and who deliver treatment at home, and they were accommodated in that area. We then went through into another corridor and then there was a double door where we entered the ward, the main ward area.

THE CHAIR: Now, the purpose of the double door----

A Was ventilation.

THE CHAIR: Sorry?

A The ward was filtered, HEPA-filtered. The corridor was HEPA filtered. So it was to protect.

THE CHAIR: Right. I interrupted at that point. You've gone through the double door into----

A I can either enter that by coming in through the parents and going down through the classroom and offices, or I can come through the day care unit. Either way, as I'm entering that ward, I'm going through a double door, a double locked door.

THE CHAIR: Right. I wonder if I

can approach it slightly differently. You said it was cubicalised with the exception of one----

A Two areas that took two beds.

THE CHAIR: Two beds. Now, a cubicle is a single bedroom?

A Single bed.

THE CHAIR: Did you say with an en suite or not?

A With an en suite.

THE CHAIR: With an en suite and a door to the corridor.

A A door to the corridor, yes.

THE CHAIR: Now, is the cubicle pressurised?

A The whole corridor was pressurised, so the whole area was pressurised. I think there's a difference between being pressurised and being HEPA-filtered.

THE CHAIR: Right.

A You know, the transplant cubicles were HEPA-filtered, but the rest of the ward-- the corridor was-- The corridor actually was also HEPA-filtered.

THE CHAIR: Right, and when we talk about corridor being HEPA-filtered, that is that supply air into the corridor off which were the cubicles-- supply air would go through a HEPA filter.

A As far as I remember, yes.

THE CHAIR: I think the level of pressure was a detail that probably----

A I don't remember.

THE CHAIR: -- was not within your knowledge.

A No.

THE CHAIR: And similarly, air change rates.

A I don't remember either.

THE CHAIR: Right.

A But if we exited the ward, for example to take somebody to theatre or something, that was via lift and that was also double-locked to exit the room.

THE CHAIR: Right, thank you.

MR CONNAL: Can I just be quite clear about the three entrances? You have one entrance on the other-- You have the ward, and on the other side of that entrance you have the day care unit. Is that right?

A Yes. They were adjacent, yes.

Q And you have another entrance which takes you into this three-bedded respite area. That is my word, not yours.

A Yes.

Q Now, where's the third entrance?

A It was really an exit, so it was an exit that had a lift but was also double-locked and that we would take children through if they were going to theatre, if they were going to radiology or if they were having to leave the ward for any other reason.

Q And when you say double-

locked, are you meaning double doors?

A Double doors, yes.

Q Are they locked as well?

A No. They're not locked as in with a key. You know, you have to press a button to open them and they will open in sequence. One will open then close and the next will open. So they're sealed.

Q So it's what the untutored of us sometimes call an airlock type system. You open the doors, you come in, then the other door opens so that there's no connection between the outside-- There's no circumstance in which both sets of doors are open.

A No.

Q Is that right?

A That's right.

Q In the course of gathering materials in relation to Yorkhill, we've come across some references to something called Ward 7A. What was Ward 7A?

A Ward 7A was the general paediatric ward which we originally had our beds on before we went to the Schiehallion Unit.

Q Right, so once you moved, this is not an area that you used, is that right?

A For a period of time. However, I honestly can't remember when it happened, but we did convert a part of Ward 7A, maybe after 2010 or something like that, into a TCT facility.

THE CHAIR: Sorry, into a----

A Teenage cancer facility. We didn't have enough space on the Schiehallion Unit to have a specific area for teenagers, so part of the far end of Ward 7A was converted into a number of beds – I think there were four beds – and social space.

MR CONNAL: When you say converted----

A Upgraded, then. Refurbished.

Q You've described an open ward for paediatrics. What was different after you'd done the refurbishment to create the TCT area? Was it separated off? Was it sealed off?

A It was separated off. It wasn't filtered.

THE CHAIR: Wasn't filtered?

A Not that I remember, no.

THE CHAIR: Again, cubicles?

A No. I think there were two lots of two beds, if I remember rightly.

THE CHAIR: Pressurised?

A I don't think so. I honestly cannot remember.

THE CHAIR: Right, and this was some time before 2015, but you can't recollect just when?

A I can't. We appointed a consultant with – I better watch how I say this – an interest in, or who specialised in, teenage cancers, and we appointed him in 2010. So it was roughly around that

time, but I can't remember the exact date.

THE CHAIR: Right.

MR CONNAL: What was to take place in this area, just briefly? What was happening?

A Well, most of the ethos around teenage cancer is driven to give them some social space so they can mix with age-matched peers and do the kind of things teenagers can do without their parents. So, really, teenage cancer units are much about the social ethos, you know, rather than the medical care. They were meant to not have parents sleeping over with them, but that didn't happen. So it's really about the social space.

Q Thank you. Just again, so we have the most complete picture we can, I want to ask you to look at another document, because you may be able to just fill up a few gaps for us. Also in bundle 44, volume 1, at page 97. This is a document which is taken from what we call the HAD report.

A No, I recognise it.

Q The purpose for which it appears in the report doesn't matter for my purposes today. I'm just asking about locations because this is a list of species of environmental concern detected in Schiehallion and in the new hospital, Yorkhill, in both cases-- Yorkhill and the new hospital, apologies.

I just wanted to ask you one or two things about the list just so we can tick them off or otherwise. You see the third item on page 97 says, "Yorkhill 2005 Nov Schiehallion DCU". What's Schiehallion DCU in Yorkhill?

A Day care unit.

Q Sorry?

A The day care unit.

THE CHAIR: The day care unit.

MR CONNAL: Ah, so that's not in the ward? It's the other area that you described?

A That is the unit adjacent to the ward where we would have seen outpatients who came up as day care patients to receive chemotherapy or to receive blood or platelets or just for review.

Q I see, so that reappears further down the list, and there's also one paediatric sample from A&E, which is self-explanatory; the patient is obviously in the emergency unit. Is that something that routinely happened?

A Sorry, where?

Q January 2009. It's about 10 down. It should have a----

A No, I see it.

Q Yes, you've got it?

A Yes.

Q It just says A&E.

A Well, the blood cultures were probably taken. They may have gone to A&E as an emergency, and the blood

cultures would have been taken there.

Q Right.

THE CHAIR: Sorry, just so I pick that up, you would suppose that in the example we're looking at, the reason that it is identified as A&E was that was just where it happened that the blood culture was taken?

A Well, I didn't make the table, but that's how I would read it. That's what I would assume.

MR CONNAL: Then we see other entries marked "Schiehallion Ward", and then we come on to some new hospital entries. More Schiehallion Ward. As we go down the page, Schiehallion DCU again, Schiehallion DCU, and then near the foot of the page, we're at Acinetobacter. We see an entry for Ward 7A, so is that the Teenage Cancer Trust area that you've described to us?

A I would think so, yes. Yes.

Q Then likewise, just near the foot of the page, "Yorkhill OP"?

A Outpatients?

Q Outpatients?

A I imagine.

Q So that's probably the point his Lordship put to you, that it probably just depends where the sample was taken, and for some reason it's been taken in outpatients.

A I would think so, yes.

Q If we just go on to the next page, just to finish this exercise, most of the entries we see there are Schiehallion Ward, occasionally Schiehallion DCU. We have one here, "Yorkhill, 2012, October, Ward 5A". Now, can you help us why 5A would crop up on the list of paediatric----

A That could have been a surgical ward and the patient could have been in a surgical ward, or we didn't always have enough beds in our unit and we did board out. So either they were boarded out to 5A or that might have just been on one of the surgical wards because they were having surgery.

Q All right. Thank you. I think the rest of them we probably already covered. Opposite Chryseobacterium we've got Schiehallion Ward, Yorkhill outpatients, Yorkhill ITU, which will be Intensive Care Unit.

A Intensive Care Unit, yes.

Q Yes. Schiehallion Ward and then Yorkhill outpatients and DCU. We were just wanting to make sure that we had clear understanding of what these locations meant from somebody who was actually there at the time, so I'm obliged to you for your help with that. Can I just ask you then, before we leave the physical discussion about Yorkhill, just to look at one more document which is in bundle 44, volume 6, and it's document 3? That's what I'm told it was anyway.

Just bear with me. Should be a specification that relates to Yorkhill environment. (After a pause) Perhaps we can come back to that. It appears we've not necessarily got the right document on the list. I'll come back to that question, perhaps after our break.

A Okay.

Q It's my fault, no doubt. Let me come back, then, to your witness statement. One of the topics that keeps cropping up is what have been described as unusual gram-negative organisms, and you were asked about that in Question 9 in your questionnaire. Now, let me just read the start of your answer and then we can see if you can help us with that. You say:

> "Early after moving to the QEUH the clinicians did feel that they were seeing an increase in unusual gram-negative bacteraemia. We thought that we were seeing organisms that we hadn't seen before..."

First of all, that's your position. Is that right?

A Yes, I think it was, and I don't think-- I think we went on to say that we didn't know if they were organisms we hadn't seen before or if they were organisms that had changed their names, and there were a number of organisms which had changed their names and we probably had seen them before, but just under a different name.

Q We're talking about "we" there: that's you and the other clinicians----

A Yes.

Q -- on the Schiehallion Ward in the new hospital?

A Yes.

Q So you're not saying no one had ever encountered them, you're simply saying you hadn't come across these?

A We hadn't come across them, yes.

Q Yes. Then you said that there were one or two that turned out not to be new, but just somebody had changed the classification names.

A Yes.

Q Now, you raise another issue in your answer there. You say you had particular concerns in 2017 when you had an outbreak of viral gastroenteritis and fungal infections. Why was that of particular concern?

A Well, I think in 2017 we had an out-- we had concern about fungal infections, we had an outbreak of gastroenteritis, and I think we also had an IMT for gram-negative bacteraemia around about the same time. Fungal infections always cause us concern, mainly because of the clinical impact they

have.

So if you have a-- First of all, they're very difficult to diagnose, and we often diagnose or treat people with fungal infections based on a radiological chest lesion or finding rather than actually on any microbiology. So they are difficult to be sure if you've got a fungal infection or not, but if you have a fungal infection, they're difficult to eradicate.

So you generally have to stop treatment and you have to stop it for quite a prolonged period of time and give quite lengthy anti-fungal therapy, so they're very disruptive, you know, to treat. So I suppose we worry more about them than we worry about bacteria that we hope we've got a good array of antibiotics to treat.

Q What about the viral gastroenteritis that you mentioned in your witness statement that seemed to be of concern to you?

A Well, you know, spreading-- having viral gastroenteritis-- I can't remember if we had Noro, Rota or Astro, but it doesn't-- you're spreading that around a ward, so it is an issue of Control of Infection and we would have had to close down certain areas of the unit to try and minimise that spread, so that would have been very disruptive to families.

Q Was that something you'd come across, viral gastroenteritis, in Yorkhill?

A Yes, I think I said that, that although we didn't have IMTs or PAGs at Yorkhill that I could remember, I do remember the kitchens being closed, and that was because of the same problem.

Q What about fungal infections?

A We've always had sporadic, you know, fungal infections. I think what's difficult to know is if it is just a sporadic fungal infection or if it's more than that and an indication of a problem with the environment. I think even at the Queen Elizabeth, when those cases were looked at, they were felt they were just sporadic, you know, they were what would be a normal variation.

Q That's the fungal infection?

A Yes.

Q You've described an increase in unusual gram-negative bacteraemia. What about gram-positives? Was there an increase in those in the new hospital?

A I think there probably were-- I mean, I cannot remember, but the non-environmentals will nearly all be gram-positives. In the graphs that you've shown, I think we did see that. I honestly can't remember.

Q I think you're referring to the fact that I showed you a graph earlier about environmental----

A Yes.

Q -- and then there was another

one for non----

A Non-environmental.

Q -- -environmental.

A I think the difference is, the environmentals made children much sicker than the non-environmentals.

Q The next question you were asked was focused around the idea that some bloodstream infections can arise from breakthrough from the patient's own----

A Gut, yes.

Q -- gut. So I take it you're familiar with that general proposition.

A Oh, yes.

Q I suppose that the question that you were asked, to which you gave a full explanation in your witness statement that I'll take you to, was, "Well, if it's breakthrough organism, does that mean there's not going to be a PAG or an IMT?" and you said, "Well, that there's no link between that." Is that correct?

A I think what I said – maybe I didn't write it well – was that that is not the decision of the clinicians, if there is a PAG or an IMT. If there is any gram-negatives, then that will be investigated by the Control of Infection nursing staff and the Control of Infection will decide if it's necessary to have a PAG or an IMT, and they will have an SOP which guides them as to which it should be.

THE CHAIR: Right. So it's always a decision for a member of the IPC team, as opposed to the----

A Clinician, yes.

THE CHAIR: -- clinician directly involved with the patient?

A Yes.

MR CONNAL: I think----

A And it will be chaired by the Lead for Control of Infection.

THE CHAIR: All right, yes, but the decision to have an IMT, if I understand you, is an IPC decision?

A It is.

THE CHAIR: Yes.

MR CONNAL: So it's not determined by the source of the infection, whether it's assumed to be endogenous or exogenous, to use those phrases.

A Not determined by it. You know, the rule of an SOP will tell them when it's a PAG and when it's an IMT and how many of everything-- how many different-- of which organisms you need to decide that. The source will be discussed at the IMT----

Q Yes.

A -- but it's not the source that drives the IMT. It is discussed at the IMT.

Q You've put that much better than I did, Professor. In fact, in your witness statement you say:

"Whilst there was discussion around the source of the infection

and clearly that was important, the clinical team focused on whether the infection was line related... or whether there was an alternative source for the infection..."

A Yes.

Q Then you say:

"... the two possible sources [so that's external or from the gut] were not mutually exclusive..."

A Well, there are organisms discussed in the case reports, such as things like Klebsiella, that might be found in the gut, but just because it's been found in the gut doesn't mean it can't go and sit on the line. There are some organisms that are much more likely to be sitting on the line. So they're mutually exclusive, but there will always be a probability that one is more likely than the other.

Q You say that consensus, i.e. consensus presumably as to the source, was not always achieved in these discussions.

A Yes. However, the lead for Control of Infection would have had the final say.

Q In your reply in Answer 10, you focus very much on the decision as to whether the line had to be removed, because presumably that was very important to you as a treating clinician.

A Yes. It was important for many reasons. You know, if the line had to come out, the line had to come out, and the fallback safe position for any microbiologist giving advice is to say, "Take the line out," because it is a focus that infection can sit on, but if you take the line out, you still have to give the antibiotics.

So you have to get venous access to give the antibiotics, and you may have to do that for a number of days. That can be extremely difficult, to put a peripheral cannula into small children. So it's not a small task by any means. I mean, children-- We look at the back of our hands and they're a godsend to a venepuncturist, but that's not what the back of the hand of a two-year-old looks like. They're chubby little hands and chubby little feet, and it can be extremely difficult to cannulate them.

Q So as you say, if the line has to come out, the line has to come out, but you would think very carefully about that.

A As clinicians we would, but if we were told by the Control Infection the line had come out, then we would not argue that. We would arrange for the line to come out, we would hope the anaesthetist would put in a cannula for us when they took the line out, but we might have to wait a day to get the line out and the lines may-- the cannulas may not last

for very long and have to be repeatedly resited.

Q Just for completeness, you told us earlier, I think, that clearly you can't put a new central line in until you've cleared the----

A Yes.

Q -- issue, otherwise it will simply get infected again, as it's no doubt obvious. You then have a little end to that paragraph where you say there were some instances where you knew it would be impossible to get further central access and you had to decide to press on with the existing system?

A Yes.

Q Can you just explain to me what you're saying now?

A Well, line infections, as you must-- as you will see from this public inquiry, are pretty common. So some children will remove-- either the line won't function and the line has to come out because it's not functioning, or the line gets infected and it has to come out because it's infected.

So if you have small children, particularly that are crawling around and the lines are getting infected, some children may have had-- be on to their fourth or fifth line, and getting a sixth line or another line in may be technically, for a surgeon, extremely difficult. So if we're in that scenario, we will take a judgment,

what is the lesser of the two evils: to press on with a line we've got, or take the risk-- or take it out and take the risk we can't get another one in.

Q Thank you. My Lord, I'm going to go on to a slightly different topic, so it might be convenient from my perspective to take the break just five minutes earlier.

THE CHAIR: All right. (To the witness) Well, as you know, we take a coffee break, so can I ask you to be back for-- Now, Mr Connal, you need to find a document.

MR CONNAL: That won't take any time.

THE CHAIR: All right. Well, let's try and be back for about twenty to twelve.

A Okay.

(Short break)

THE CHAIR: Right. I hope you had the offer of coffee.

A I did, and I did. I had coffee, yes.

THE CHAIR: Right. Mr Connal.

MR CONNAL: Thank you. Professor Gibson, I'm going to move on in a moment to ask one or two things about the new hospital, having laboured Yorkhill a bit in the earlier part of your evidence. I just really have a couple of things I want to ask before I do that. One

of them you may, in part, have answered, but if I can ask it in a slightly different way, you can tell me the answer, hopefully. That is, would you say there was the same demographic to your cohort in Yorkhill as there was in the new hospital?

A You mean did we have the same type of patients, the same age group of patients?

Q Yes.

A Yes, I think we did. I mean, we are a tertiary referral centre for childhood malignancy and also for, you know, fairly unbenign disorders. We're also a transplant centre for the whole of Scotland, so none of that changed over that time.

I think there has been changes, whether they affected the period we're interested or not. You know, in the early days of Yorkhill, children had treatment for the malignancy. If they relapsed, they may have had second-line treatment, but children are now coming sicker and sicker because if they were-- You know, they may have third- and fourth-line treatment, so they may be very intensively treated. So, in terms of demographics, that may be a change.

I know some people have highlighted changes in treatment that are less toxic and may make children fitter coming through, but most of those didn't impact. You know, they are of relatively recent years. The one that's been particularly mentioned is blinatumomab, which is a quite specific antibody for acute lymphoblastic leukaemia, which I don't think we gave until we moved back.

You know, so I don't know that they impacted the period that we're really talking about. They will impact the future, hopefully, but I don't know how much they impacted our early move. So I think they probably are pretty (inaudible).

Q Thank you.

A I think it's fair to say that we've tried harder since we've moved to treat more patients at home and as an outpatient. I think that's probably fair, so that may make slight differences.

Q Right, thank you. Now, I tried to ask you a question by reference to a document and then got thrown by the fact that I didn't recognise the document. That was entirely my fault, so we're going to go back to bundle 44, volume 6, document 3, but this time, instead of starting on page 28, which didn't mean a thing to me, we're going to go to page 29.

The only reason for coming here, Professor, is that you've helpfully, interspersed with other questions, been able to explain things about double doors and HEPA filtration and so on, but this is the document that apparently dates to 2013, which, as you can see in the

heading, discusses prevention of microbial contamination in the Schiehallion unit, and then goes on to give a description. Now, first of all, do you recognise this?

A I didn't recognise it. This is a document, if you go back your page, you will see it's neither dated or signed. So it was a document that was never released onto our Q-Pulse system.

Q Right.

A When we moved to the Queen Elizabeth, it was updated and amalgamated with a similar document, so there is a pending document, but this was not released into our Q-Pulse system.

THE CHAIR: Sorry, can I just have that from you again, Professor?

A Go on, you were going to ask.

THE CHAIR: You identify that, I think that it's sort of 2013. I'm not seeing 2013.

A It's not dated.

MR CONNAL: That's simply a date, my Lord, that I have been given from the researchers of the Inquiry team as to when this dates to.

THE CHAIR: Right. I do see it's marked "Draft," so maybe if you could just tell me again its status.

A So it has been written, I think it is 2013, if I'm honest, but it's not got a date on it. Normally, when the-- This is an SOP, so a standard operating procedure----

THE CHAIR: Standing operation----

A Operating procedure.

THE CHAIR: Procedure or policy?

A Policy, sorry.

THE CHAIR: Policy.

A So it has been written by our quality manager, who is Alana McVeigh. When it is agreed, and this is agreed by the whole-- by the clinical government's team, she would sign it off, and I would have signed it off as the designated individual at that time, and this was-- I don't know if it wasn't-- if this didn't happen because it was so to the move, but having said that, the contents of it is accurate.

THE CHAIR: Right, so if we were looking at a snapshot of the service in 2013, we could rely on that?

A Yes, you could, yes.

THE CHAIR: Thank you.

MR CONNAL: So if we just look, while we've got it on page 29, because I see that it has to be signed off, among other things, by the JACIE manager.

A The quality manager for-- yes, for the transplant unit.

Q The only reason for originally putting this in front of you was that it can contained a convenient list of some of the features of the then Yorkhill Schiehallion. For instance, all eight double door cubicles within the Schiehallion ward are

supplied with HEPA filtration.

A Yes.

Q So you see the description there: two rooms dedicated HSCT cubicles with special systems, gauges and so on, other double-door rooms share a separate ventilation system, and then there's some comment about HEPA filtration. Does that description of the various rooms meet your recollection of how they were set up?

A Yes.

Q Yes. We'll just complete this. Let's go on to page 30, and then we see various documents and then we go on to things like cleaning and air sampling and so on.

A Yes.

Q Thank you. Well, I won't delay you on that, so let's leave that one and go to a very different document in bundle 16, page 1599, because we're now going to the new hospital. Now, this Inquiry has heard quite a lot of evidence about clinical output specifications and their place in the contract structure and the build process and so on and so forth. What I wanted to ask you about this was that, in your witness statement, when you were shown it, you said, and I quote:

"I have no recollection of ever having seen this document----"

A No, I don't.

Q

"-- or having been involved in its production and know of no one else being involved."

Now, if I just pause there, it might come as a surprise to some that you as – let's just call you, for the moment – the senior clinician involved in the Schiehallion unit hadn't seen the clinical output specification. Now, is that correct? You hadn't seen it?

A I don't recall having seen it. This document, I think you said, was written in 2009----

Q Yes.

A -- which is 16 years ago. I mean, I don't remember everything I saw 16 years ago. I certainly did not write this document, I'm confident of that. It's not my writing style. I can't be absolutely certain, but I think this is written by a manager with some input, perhaps, from admin or nursing staff.

Q Right. Well, that's really what I wanted to ask, because the impression I got from your answer, and please correct me if my impression is wrong, is that you didn't write it and you weren't aware of one of your senior clinical colleagues having written it, and you think, from looking at it, that it's been written by a manager?

A I think so.

Q With some input from----

A Well, it's not uncommon for them to write documents and ask perhaps their manager from the day care unit, "Just remind me how many cubicles you've got and how many patients you saw," and get that kind of detail and incorporate it.

Q Yes. Do you remember the process going on of creating something called a clinical output specification for the ward in a new hospital?

A Well, there must have been a process. I don't remember the detail of it.

Q One of the issues with this clinical output specification that has been raised by others is that it contains very little discussion of the-- let me call it the protective environment that might be required for the patients in the Schiehallion unit. Where would you expect that information to come from?

A Well, I would take a step back and say there is-- you know, this refers to a national bone marrow transplant unit. This document even doesn't mention how many transplant cubicles there will be, never mind how they will ventilate it. There's no mention of HEPA filtration. I'd like to think that nobody in the transplant unit was involved.

So that's why I don't think we had-- Whether we saw it and it was already a fait accompli, I can't be certain, but, you know, I think if we had been writing it, we'd have certainly said, "There's going to be eight cubicles and they're going to be HEPA-filtered," and said something along that lines. But there's no mention of that at all.

Q Somebody earlier in the Inquiry suggested that you personally designed – I may be paraphrasing – every nut and bolt of the Schiehallion unit in the new hospital. I take it from your answer that that's not correct.

A Could you repeat that? That I-- Sorry.

Q The suggestion that you designed every nut and bolt, every dot and comma of the new unit in the new hospital.

A Well, I don't know who told you that, but it's definitely not true. I think I was probably the most discontented of our department by our move to the new hospital.

Q I'm going to come back and allow you to explain why that is in the not too distant future, but if I can just stick to the clinical output specification, I know it's a long time ago, but I suppose we're trying to understand how it comes to be that a document which we happen now to know had a significant part to play in the construction process that was going on, because it joined other documents in the contract, came to be produced without

senior clinicians apparently being involved. Can you help us at all on that?

A No. I totally agree with you, that's not right. I suspect there's been a template for writing these things and they've all been written in a similar manner.

Q Well, interestingly, the two that we've been concentrating on, which was 2A, which is this one, and 4B, are, to borrow a phrase from a previous witness, night and day. One's full of stuff about the protective environment; the other one, like this, says very little.

Because the only thing we found about protective environment on here was a reference, I think, to double-door entry on a different-- not on that page, probably on the next page, if we can just move on. It may or may not be there. Anyway, there was a provision for double-door entry, which we know wasn't actually built.

But you can't help us as to how-- Sorry, let me restart that question. We know from other parts of your evidence that you were unhappy with what you were being given in the new hospital.

A Yes.

Q In the course of exchanges over that topic, did you come to understand what had been put in the clinical output specifications? Did that crop up?

A No. What was discussed at those meetings was the use of the cubicles or the use of the floor space we were being allocated.

Q Now, you say, so I've got this correctly----

A I mean, I wouldn't write a phrase like, "The majority of patients attending day care and outpatient will require bleeding." I would be much more precise than use a word like bleeding. I would write something like "would require a full blood count." That is not a kind of language that I would use.

Q Right. Ah, yes, I see, in the first box on page 2 of that document.

A Yes.

Q Yes, okay, and in terms of what protective environment you would have expected to be provided in the Schiehallion Unit in the new hospital, you told his Lordship earlier, I think, that things like air change rates weren't particularly a matter that you were knowledgeable about, is that right?

A Well, that is not entirely correct. I think we would have been knowledgeable about what the guidelines were, but we were not involved in that discussion. You know, that discussion went with Estates and with Control of Infection.

THE CHAIR: Right. I mean, I think in the interchange between me and the

professor in relation to air change, I think your evidence was you wouldn't necessarily know what the air change rate was.

A I wouldn't necessarily have known what they gave us as an air exchange. I would know the exchange we should have had.

THE CHAIR: Yes.

MR CONNAL: So if somebody had said to you, "What protections are going to be needed for the various patients within the new Schiehallion Unit?" would you have been able to explain to what extent you needed particular air change rates, HEPA filtration and so on?

A Well, I think it's a little bit more complicated than that. The Schiehallion unit had a transplant unit and it had beds that were not transplant beds. If you, in other documents, look-- The JACIE guidance does not say that you will have HEPA filtration with an air exchange of 10 per hour and pressures of 10. It just says you have to have an environment that will protect those children against airborne infections.

I was a JACIE inspector and I've taught on the JACIE inspecting course in Barcelona. I've also inspected almost every paediatric transplant unit in the UK, with the exception of St George's in Newcastle, and I can tell you there's a huge variation with what they had.

So when we were told this was what was deemed by Control of Infection and Estates to have, it was very difficult to argue it because there are many units who don't have HEPA filtering, who don't have anything or anything like what we were having. So it's not as if-- JACIE does not have a direction that you must have HEPA filtration and the air exchanges must be X, Y and Z. The building guidance tells you how many air exchanges there should be if you have HEPA filtration in, but it's not JACIE that does it.

THE CHAIR: The JACIE recommendations, I think, are directed at existing institutions, essentially. They're not designed as recommendations in relation to new build.

A No, they're written as a guidance to accreditation to existing units and they're particularly careful about their wording. You know, what they do not want to do is make them so rigid that countries of lower income or middle income can't afford to transplant because they can't meet those requirements, so they're deliberately geared towards making almost everybody eligible.

THE CHAIR: Yes, because these are international recommendations----

A Yes, they're European, yes.

THE CHAIR: -- and have to apply to first-world countries and countries that

are not first world.

A Yes, but they do not stipulate that you have to have HEPA filtration, and they do not stipulate what the air exchanges or the pressures should be. So when you have project managers and Estates, it does give them a lot of leeway in what they can justify providing.

THE CHAIR: If he's looking for guidance from the JACIE document.

A Sorry?

THE CHAIR: If he is looking for his guidance from the JACIE document.

A That's correct.

THE CHAIR: As opposed to----

A A building regulation, yes.

THE CHAIR: -- SHTM-0301.

A Yes.

MR CONNAL: I'm just trying to make sure I'm understanding one of the answers that you gave me, so forgive me if I tend to repeat myself a little bit. I think I was trying to understand what would have happened in the theoretical world if somebody had come and been writing the clinical output specification, for instance, and they'd come to a bunch of you and your senior clinicians and said, "I need to put in here something about protective environment. This is a new build. What do I put in?" Would you tell them what to put in, or would you defer them to guidance?

A We would probably give them our opinion and they would then probably go and take the opinion of Control of Infection or Estates. They would not necessarily accept our opinion verbatim.

Q In any event, you can't help us as to how that was done. I do want to ask you a specific question, though, about the point you made about unhappiness with the result, what you were getting in the new 2A, because it seems clear from your witness statement that you did have some involvement in exchanges that were going on about the design and layout and content of the new ward, is that correct?

A I don't think it's fair to use the word "design" because the new ward was already designed. What we were giving an opinion on was how the cubicle-- how the space would be used. I can maybe expand on that. I'm not sure if it's sensible to do so, but I'll do it.

You know, it did go through different stages. When we met with the-- I think she was called the project manager and the nurse who was the lead for Control of Infection, we were shown the floor plan, and it was made very clear to us that this was the metre squared or whatever-you-call-it floor space – I don't know what the right term is – and we were getting no more.

I felt that it was inadequate for our needs. It did not meet the needs of our

team, and by that I mean space and accommodation. I do not mean water and ventilation. It never dawned on me there'd be a problem with the water and the ventilation. I thought that was safe in the hands of infection control and Estates and the numerous building guidelines that were referred to.

So I refused to sign off the floor plan. We had a number of meetings, which I would say were unhelpful and not constructive. I did read in one of the many bundles you sent me that Mairi Macleod, who was the project manager, was instructed when our unit hadn't been signed off to go and get me to sign it off or get another clinician or a manager to sign it off. I have no recollection of ever signing it off, but we were under enormous pressure to do so. So could have caved in, I don't know, but I don't think it was signed off.

I do know that the architect, when they gave their witness statement, gave the most detailed witness statement I read with massive references, and she said she could not find the sign-off. So this was not about the designing; it was already designed. We're only told how much space you're getting and, "These are where the cubicles are going. You can decide how you use those cubicles." That was our input.

Q In your witness statement, you say at one point that you were told you were getting like for like.

A We were. We were told we're going to a state-of-the-art building, like for like. So "like for like" would have included accommodation for the parents, it would have included an on-site pharmacy, it would have included room for research nurses, for the data managers, for all our staff. That is not what we got.

Q Who told you you were getting that?

A I think our managers told us.

Q Well, you just described meetings with Mairi Macleod as "not constructive". What do you mean by that? Can you just help us understand what the issue was?

A Well, I think, to be fair to her, she was probably told, "They're not going to like this, so just hold the line," and I suspect that's what she tried to do. But, you know, we were being shoehorned into-- much less that we were leaving a space that we'd had no problems with, that accommodated our entire team, made us a Schiehallion family, and now there was going to be no parent accommodation, pharmacy were given very poor accommodation, and pharmacies are very important in a paediatric-- This is not an adult where we assume everybody's 70 kilos. You

know, you're working out doses on a vast array of weights so they're very, very important.

The medical staff are all put in an office block a 10-minute walk away. Nurses who we'd accommodate in the unit were put into the office block. So we lost, in terms the facilities we had, far more than we gained, and that's why we were unhappy with it.

Q What you say at one point in your witness statement – this was where I was starting with my question, and I'll come to it eventually – is you say you were under great pressure to sign off and you may have relented under duress and "some inappropriate behaviour". That's what the witness statement says, so I'm keen to make sure we understand what it is that you're telling his Lordship about what happened. What do you mean by duress and inappropriate behaviour?

A Well, I think the first thing we didn't have that was most important was the parent accommodation. So we tried to resolve that by-- the then CLIC Sargent was building accommodation for the families close to the grounds of the hospital. Out of our endowment funds, our charity money, we paid for two rooms, two extra rooms, so there would be more accommodation for the parents, and we paid for the-- it's not the cleaner, the housekeeper for a number of years.

We were able-- or I was able, with the aim of some mothers, to persuade management to give them accommodation for a kitchen so they could make themselves a cup of coffee, and that really left the thing that I found difficult, that the trained-- or the experienced medical staff are all going to be 10 minutes away, you know, from where children were critically ill. I thought that was wrong and that we should be accommodated close-- or at least really some accommodated closer to the ward than that.

So when we did argue, we were just told, "You're just annoyed and upset because you don't have an office." So that was the kind of duress we were under, and that was very hard to argue because that's a very minimal thing compared to many of the other things that we lost. But I do think that is inappropriate.

Q Let me just move on to one or two points of detail that are not unconnected, but we'll just touch fairly briefly on them. You were asked a number of questions in your witness statement about particular exchanges about isolation rooms, and you deal with this in paragraphs 13 and 14 of your answers. So if we can just touch briefly on these so that we deal with it orally as well.

If we look at bundle 46, volume 3, 716. I suspect we may need to start at 717 because the exchanges will run, in the usual annoying way, backwards. Now, you've been shown these series of exchanges, and you were explaining in your witness statement that Coral Brady was your business manager. Now, just so we're clear, what was your business manager's role? What did she do, roughly?

A Well, she managed the business in the unit. She was the line manager for the data managers, all the admin staff. She dealt with-- You know, she attended many of our unit meetings, she dealt with any complaints within the unit, that type of thing.

Q Alanna McVeigh, her name cropped up on the form we looked at earlier----

A Yes.

Q -- because she was a quality manager for JACIE.

A She's a quality manager for the Transplant Unit.

Q Quality manager for the Transplant Unit?

A JACIE is an accreditation body.

Q Yes.

A Yes.

Q Now, what you say is happening in this exchange is that Ms McVeigh is asking for information on HEPA filtration. Is that right?

A Yes, she's asking about the Transplant Units, as the transplant quality manager. She would have had quite a close relationship with the Estates people who looked after the units on Yorkhill, Schiehallion, and I think she was asking them for it-- When you move site, you have to send to JACIE a number of documents and-- not quite re-apply for accreditation, but make sure they're happy for you to hold your accreditation, and she was asking for the information to do that.

Q Now, Mairi MacLeod, the project manager for the Children's Hospital – or assistant project manager; the difference doesn't matter for the purpose of my question – goes back to Coral Brady, who was asking for Alanna McVeigh----

A Coral Brady would have been Alanna's line manager.

Q Right. So she's saying:

> "The plans for the Haemato-oncology area in the NCH include Hepa filter and pressure as necessary. When we are further in the design [so this is 2011] we will contact staff as and when required. We do however have a full NHS technical team supported by

external Technical advisers who are aware of the building requirements for the unit."

Now, first of all, do you know who the "full NHS technical team" were in 2011?

A No.

Q Or the "external Technical advisers"?

A No.

Q So, you're simply being told, "Well, we've got people who know about these things"----

A "And we don't need your opinion."

Q Right. Is that how that was understood? That you were being told----

A Yes, we felt it was dismissive.

Q Mm-hmm. Do you remember any follow-up with anybody technical coming back to you and saying, "This is what we're suggesting, what do you think?"?

A No, but I would say that I would have thought it might have been appropriate, rather than to answer those emails, to pass them to the Technical Team and ask them, you know, to answer them or to make an approach.

Q The issue we've got at this remove is that you're being told, "Well, we've got technical people who know what's required," but there's no follow-up to that. Is that what you're saying? At least with you?

A No, no.

Q And when I say "you", I mean you and your team----

A I mean, I know what you mean, yes.

Q Do you remember you and your team having any direct communications with an external technical adviser or an NHS Technical Team on these topics?

A No.

Q Okay. Well, just let me go to the other document that we have on this, if I may, which is in the same bundle and volume, but is at 713 to 715. Now, you've seen this exchange----

A Yes.

Q -- and this seems to be about isolation rooms and operational policy. Is that right?

A Well, it is about, I think, everything, isn't it? It's about the single cubicles, which would have been the non-HEPA-- you know, the non-transplant rooms. It's about the transplant rooms, and then other rooms within the unit.

Q Yes, so who's Janis Hughes?

A Well, she's the planning manager.

Q So the first item on this exchange, which appears on 715, seems to have a note to Mairi MacLeod.

"We have not yet had a response to our question whether these are the rooms which should be used for stem cell transplant and their specification - positive pressure, monitoring and HEPA filtration."

So, Janis Hughes seems to be asking something about that. Do you remember this happening at all?

A Well, I'm not included in the email. I don't know.

Q If we just move on to 714, Mairi MacLeod replies, "There are 8 Hepa filtered isolation rooms..."

A Yes, and she lists them, yes.

Q And she lists them, and these are positive pressure with separate air handling units for each individual room. Ah, yes. What you were also raising there, was it not, was the possibility of whether you could have as well a room with negative pressure, is that correct?

A Yes. We would use that for children with, perhaps-- who had been transplanted but had had a virus, you know? So if you have a positive pressure room, well, the air now is vented out through grilles, but it is to prevent a virus getting into the corridor. So if you have a negative pressure room, the air will not go into the corridor, so it's to protect the staff and other patients within the unit. Actually, when COVID came, it was a godsend. We did get one of those rooms at the refurbish.

THE CHAIR: When you're talking about the refurbishment, that was the----

A 2022, when we----

THE CHAIR: Yes, all right.

A -- moved back into our 2022 refurbishment.

MR CONNAL: Mairi MacLeod seems to have been the communication source.

A Well, she was the project manager, was she?

Q Yes.

A Yes.

Q Yes. Do you think it would have been helpful to have your team talk directly to somebody more technical?

A Yes. (After a pause) No, not necessarily on our own, but with-- you know, we would have respected the views of Control of Infection. We could have done it as a joint-- You know, we're not saying it should have been an isolated meeting.

Q One of the suggestions made by a previous witness, a witness from the contractors, was that one possible solution to some of the issues that may have arisen was to have what he described as a loop back, whereby you go through a process of designing things and so on and so forth, putting in what you think you need as protections in a

particular area, and then before you start, as it were, pouring the concrete, you go back to a group which includes clinicians and no doubt Infection Control, and say, "Have we got this right?" Do you think that would be helpful?

A I think it would be. I think we have to accept that we had major, major issues with the move that probably go further than that. I'm sure you've read in the documents that we moved in the middle of June, and in May, it was noted that the HEPA filtration hadn't been installed.

It is very hard for us, as a clinical team who place so much faith on Estates and Control of Infection-- You know, to forget to put the HEPA filtration in, it's not a small thing. It's not like forgetting a socket or something, you know-- It didn't exactly fill us with confidence. For me, it is unbelievable that a unit could have been validated and signed off when the HEPA filtration was not in place. I don't see how you can validate something you haven't installed.

THE CHAIR: There may be questions about validation.

MR CONNAL: Yes. There may be a question as to whether there was any validation, but I understand the point you're trying to make, Professor. Am I right in thinking, if you are presented with premises which don't have HEPA filtration in the right place, you can't do transplants?

A Well, you obviously can because JACIE doesn't say you have to have HEPA filtration, it says that you have to have a protective environment. So, yes, you can, but if you have told the bidder and the Construction Team that that's what you want, that's what you expect to get. You don't expect to get no HEPA filtration, and it is impossible to validate something that was never installed.

Q Can I ask a couple of things then about what happened when you arrived, in these early days in the new building? First of all – this has cropped up when the epidemiologists have been exchanging materials – was there a reduction in activity within your unit on arrival in the new hospital?

A Well, I think we didn't transplant-- I can't-- I have to be fair and say that I was away for some time after we first moved, but we would have wanted to know that the transplant units were safe, microbiologically safe, before we started transplanting. So we might have-- we would have reduced non-emergency or non-absolutely essential activity, but most of our activity is essential, an emergency. There's not a lot that you can reduce.

THE CHAIR: Could I maybe just

ask a little bit about this? At the time of moving from Yorkhill to the new Children's Hospital, which I think is June 2015----

A Yes.

THE CHAIR: -- was there any formal plan to in some way reduce activity for a particular period of time?

A I don't-- You know, I don't remember any plan. I think we did try to reduce the transplants, because they are reducible. You know, we can't turn away a child that comes with acute leukaemia or a brain tumour. You can't reduce that; that's an emergency attendance and you can't just send them to Edinburgh or send them to Aberdeen. You can't reduce that.

So we're very limited on what we're able to reduce. This isn't like an elective surgical ward that you can decide not to admit any hips to for six months, you know? That's not the kind of medicine we practice. Most of our medicine is acute; it's either new presentations which you cannot delay their treatment, or they're on protocols that there is no risk to delaying the next block of treatment, so it's hard to reduce.

THE CHAIR: The reason I sort of press you on this is that there has been a fairly recently presented suggestion which, as I interpret it – and, of course, I may be entirely wrong about this – that would indicate that there was some positive policy or decision to have a reduced period of activity in the new hospital when compared with the Yorkhill hospital. So if I'm understanding you, you're saying, well, you're not aware of any decision or policy.

A We looked carefully at who had to be transplanted and who could wait, but outside of that, you know, the reduction may have been outwith our unit, you know, when you've heard that there was a policy it may have been within the surgical unit not to, you know, to halt surgery-- elective surgery, but most of our treatment is emergency, you know, or driven by protocol.

THE CHAIR: Yes, you have to respond to demand.

A We're responding to demand, yes. Well, we either did it or we sent them somewhere else but, you know, they couldn't not be treated.

THE CHAIR: If we take the example of bone marrow transplant, I think we know that you had-- maybe Dr Euans(?) had at least one case that she wanted to proceed with in June, I think.

A Yes. Yes.

THE CHAIR: Thank you.

MR CONNAL: Can I just ask two connected questions? One follows on from an answer that you gave a moment or two ago. Did you say you were away for a while at the time of the move?

A Yes. I was in Australia for two weeks, but it was after the move. I think it was in July. That's my recollection.

Q Right, thank you, because the other question I wanted to ask you was that we know from other evidence that fairly early on in the move into 2A, I mean, there's the HEPA filter not being there, we've heard about that, but questions started to arise as to whether the environment had been correctly set up for the cohort that you were bringing in. Do you remember discussing that or following it up?

A Well, the bit that I remember the most, when you say there was a problem with the environment that was spotted, was within the transplant units, you know, rather than in the rest of the ward. I don't remember there being any sort of-- Well, there's always going to be snagging things with a new hospital, but I don't remember anything major with the transplant unit, but I think it's very clear from the evidence you've circulated when they were inspected there was holes in the wall, lights were not sealed, plugs were not sealed so the air was not going necessarily in the-- there was leakage of air back in. So, yes, I do remember that.

That was all discussed with microbiology, with Craig Williams, who was the lead for control of infection and advice was taken. Well, he would have

discussed that with Estates, what they could remedy was remedied, and we had to take advice from him whether it was safe to carry on or not to carry on. I have to say, an enormous amount happened. You know, there was always one thing after another and it's very hard to remember the exact sequence.

Q The only add-on question to that that I have is that we heard from you earlier and you mentioned it in your witness statement that fairly early after the move, you started to the increase in the unusual gram-negatives, do you remember what was done to follow that up? Presumably, you didn't just go, "Oh, these are unusual," and then ignore it, there would have been some discussion.

A No, we would-- we discussed them with microbiology. You know, we have a very close relationship with microbiology. We would have seen them every day. We'd have had a Friday meeting with them and we'd have raised these issues with them.

Most of the microbiology doctors are control-- working control of infection. So that would have been discussed, "Is this, as we've previously said, something very unusual? Or is this a renamed organism? Is this something to worry about?" Just because you have an increased incidence doesn't mean that there is a real problem. You do get

natural fluctuations, and it is for our control of infection to guide us whether we were seeing something really concerning or were we seeing a natural fluctuation.

Q The only other question at the moment that I want to ask you, just to make sure I've got it all, is that the end of your questionnaire, a question is asked which is often asked of witnesses, which basically says, "Anything else you want to tell us while we've got the opportunity of asking you again?" and what you then do is you set out your unhappiness with what you were being given at the new hospital.

Do I understand correctly from what you've set out there, because much of the detail you've actually already given us at different points of your evidence, that part of this was that you had been behind the proposition of bringing everybody into the one place, whether it was social work or pharmacy or whatever it was, everybody in the one place conveniently located for the ill children and you didn't see you getting that in the new hospital in the same way?

A I didn't, but I think was more than that. I do think a new hospital, a state of the art, however many hundreds of millions it cost, should have some parent accommodation. So I think it was more than just keeping a team together. I don't think that's an unreasonable expectation. I don't think we should have had to campaign so hard to have a kitchen for the parent-- we did get it, and now, after the refurbishment, much of the things that we highlighted as being particularly unhappy with were rectified.

So management must have agreed with us or they wouldn't have rectified it. So you know, we did have a parent's kitchen. The nurses did get a staff room. Pharmacy had a cubicle converted so that they had much better accommodation than they had previously.

It was recognised that you needed to have senior medical staff very close to the ward and the transplant team were given accommodation which had previously been used for admin staff adjacent to the ward. So if anything happened, a nurse just had to run around and say, "We're in trouble, can somebody come?" You know, and that was probably the most important thing. So if management-- if this was given in the refurbishment, I have to assume that how much they disagreed with us at the time of the move, they came round.

Q Thank you. Now, am I right in thinking that the specific points you wanted to make about pharmacy and adjacency and so on, you have made in the course of earlier answers to me on that topic?

A Yes.

Q In that case, my Lord, I have no further questions at this stage for this witness. A brief pause might be appropriate.

THE CHAIR: Yes, we'll do that.

Questioned by THE CHAIR

THE CHAIR: Can I just ask you about two things at this stage, Professor? The Schiehallion Unit, both at Yorkhill and in the new Royal Hospital for Children is, as you describe it, a tertiary centre. Do you have a geographical catchment or do you have a sort of----

A Yes.

THE CHAIR: Or is that too simplified?

A We do have a geographical catchment. So we've all of Greater Glasgow, we have Lanarkshire, we have Ayrshire, sometimes we have Forth Valley and we will have some patients that will come down from Highlands.

So, I mean, there are three centres and we are the biggest, you know, centre so we will take transplants from all over Scotland, we will take-- this year we have taken all the Irish transplants, we'll occasionally take them from England because there's never enough transplant beds in the UK.

Increasingly, we are taking more and more patients from outwith what would be our catchment, you know, area. By that, all the radiotherapy in children is coming to Glasgow. So we'll take those cases from Aberdeen, Edinburgh and the other centres. All the new agents, so children who have had standard chemotherapy and relapsed and are looking at trials for new agents is delivered out of Glasgow.

We ran our fundraising campaign, I forget which year ago, but it was certainly when we were in the new building and raised one million and built a unit for that. So a lot of things are increasingly getting centralised.

THE CHAIR: Right, so there's something-- so if I'm understanding this correctly, Edinburgh and Aberdeen can also be described as tertiary centres?

A Yes, yes.

THE CHAIR: However, Glasgow is and has done things which the other tertiary centres have not. In other words, you're somewhat more than a territory centre?

A Yes, but we're the territory centre for the west of Scotland.

THE CHAIR: Right.

A I think that's what I meant, but we are the national transplant unit.

THE CHAIR: Right. Now, the other question I wanted to ask you about, and I apologise for being unable really to focus

the question very well. I've noted you as saying, "Environmental microorganisms make children sicker than non-environmental." Now, I don't know how far you would wish to take that. It sounds a bit of a generalisation, but I would invite you to sort of tease that out a little, if you wish to do so.

A Well, I'll try to. So environmental organisms, the commonest ones that you will have seen, you know, here are Pseudomonas and Stenotrophomonas, they can-- untreated, you know, they can make children very, very ill, so we would be very worried about those organisms.

Some of the non-environmental, the gram-positives, are almost commensal organisms. They may be sticking on your skin and they've got into the line, you know, via your skin, and it's not that you don't have a bacteraemia, but, you know, they're very sensitive to antibiotic treatment and you're very unlikely to get very, very sick with them.

THE CHAIR: Well, as Mr Connal proposed, we'll take perhaps 10 minutes to allow him to check with the other legal representatives if there are any further questions, and then we'll ask you to come back either for any further questions or to confirm that there are none.

(Short break)

MR CONNAL: I have one further question, a fairly short one, my Lord.

THE CHAIR: Thank you. I understand, Professor, that Mr Connal has one more question.

A Okay. Make it easy.

MR CONNAL: One of the issues which the Inquiry has been asked to look at is not just what happened the past, but are things okay now? Are things safe? Are there any current problems in the ward for which you are responsible, the Schiehallion ward, that you feel you should draw to our attention?

A No, I don't think so. We are not seeing the infections we previously saw, and we haven't seen them since we moved back in. There will always be something wrong with the building, intermittently, but there has been-- No, I think we are feeling very confident with the environment we're back in.

Q Thank you very much. I have nothing further, my Lord.

THE CHAIR: Thank you very much, Professor, and you have attended not once but twice, and I'm grateful for that, but you are now free to go and you leave with my thanks.

A Okay, thanks.

(The witness withdrew)

THE CHAIR: Well, we will reconvene at two o'clock, and I think-- is it Ms Annette Rankin?

MR CONNAL: It is, my Lord.

THE CHAIR: All right.

(Adjourned for a short time)

THE CHAIR: Now, Ms Rankin? Yes, apologies for the slightly late start. Good afternoon, Ms Rankin. You have, of course, given evidence before. Nearly a year ago, if I recollect.

THE WITNESS: Yes, almost a year.

THE CHAIR: In September of last year. Now, I understand that you're prepared to take the oath?

A I am.

Ms ANNETTE RANKIN
Sworn

THE CHAIR: Thank you very much, Ms Rankin. Now, you have previously seen the way that we conduct proceedings. I don't know how long your evidence is going to be this afternoon, but if, at any stage, you want to take a break, just give me an indication. Now, Mr Connal.

Questioned by Mr CONNAL

Q Thanks, my Lord. Ms Rankin, I'm going to use your response to-- I was about to call it a witness statement, but it's in the form of a response to a questionnaire-- from time to time as a sort of guide to where we've got to in the questions I'd like to take from you, and I'm going to take some of the material in there from you in some detail. Can I ask you, first of all, the formal question, which is, are you content to adopt your answers in that questionnaire as part of your oral evidence?

A Yes, I am.

Q Thank you. Now, as you'll have gathered, we've been asking some people who were in Yorkhill, or had experience of Yorkhill, to be precise, to assist with their impressions on a number of issues, and you fall into that category. Just to give the background to that for the purpose of the oral evidence, I'd just like to start at the beginning of your answers, where you explain the way in which you connected to Yorkhill, if I can use that as a neutral term. Because, in 2006, you say you became the Head of Nursing for Infection Control Acute Sector at the Board, and Yorkhill was one of the areas within that, is that right?

A That's correct.

Q Now, you describe it as a

strategic role with no direct operational IPC responsibility. Does that mean you knew what was going on or you didn't?

A So I wasn't operational at a hospital-site level. I would have had oversight of issues. I wouldn't have had oversight of a day-to-day routine, but oversight of issues. So I would like to think I knew what was going on, but I was very reliant on the teams, and there was a number of teams across the different sites.

Q Sure. No doubt, if they're reporting to you, you're largely reliant on the quality of the reports that you get.

A Yeah.

Q But assuming these are accurate, what you say here is that you met weekly with the lead Infection Prevention and Control nurses, is that right?

A That's correct.

Q You say you were updated about any significant issues or outbreaks or IMTs that they had.

A Yeah, so there was a variety of ways in which we were updated. To take you back, the teams worked on a hospital site, but the Greater Glasgow and Clyde at that point worked on a directorate basis, so to provide meaningful information to your general managers, your directors, we looked at pulling together directorate reports. So although there were directorate reports, they were informed by the hospital-level information.

At the lead nurse meeting, we didn't go into detail of every single issue, but if the lead nurses brought any challenges, if they were seeing an increase of a certain thing or if they had an ongoing issue, then it was around informing, but also peer support from the other lead nurses.

Q Right. You then go on to explain in the next paragraph that you reconfigured the structure to align with the directorate.

A Yeah. I've jumped ahead.

Q And you say this widened the remit of the lead infection prevention and control nurses. Could you explain what the point here is?

A So if I use perhaps Yorkhill as an example, the lead nurse would have covered Yorkhill. We widened it to a directorate response, so it was women and children's, so they had oversight of the maternity units, which was the women on the other sites, so what would have been the Southern General site, the Glasgow Royal, so it was so it was a women and children's directorate. So although we had an infectious control team on site at Yorkhill, the lead had a wider remit for women and children's.

Q Right. So their jurisdiction, as it were, was expanded to include other areas.

A Yeah.

Q You go on to explain that you established directorate reports, and you set out in some detail what these were. Now, we're jumping ahead a little bit, as it happens, but I'll do it because that's the way you've approached it in your answer.

On the second page of your witness statement, page 114 of the electronic version, still in answer 1, you say, "Any unusual organisms reported to IPCT at Yorkhill Schiehallion would have been included within these reports." So that's your position.

A Yes.

Q Other people have been asked a similar question. You go on to be asked, in effect, "Do you remember any unusual organisms being reported from Yorkhill?"

A I don't.

Q Then you go on to back that up, I think, by mentioning specific organisms that you'd never come across until you came across them in the new hospital. Is that right?

A That's right.

Q I have them listed here, and I'll get the pronunciation probably incorrect: Cupriavidus, Achromobacter, Burkholderia. Near?

A Near. Burkholderia, but yeah.

Q Okay.

THE CHAIR: Can you give me the second one again?

A Achromobacter.

THE CHAIR: Thank you.

MR CONNAL: So these are the three you've listed?

A Yeah. These were examples of unusual. I could probably have given-- You know, there's Elizabethkingia, there are other ones that I hadn't dealt with, certainly, as part of these directorate reports and I hadn't dealt with prior to this.

Q Right, and you go on to say that nothing had been reported on these, and you mentioned other meetings, such as the AICC and the BICC, both of which we've heard about. Were you involved in these committees?

A Yes, I was. So the Acute Infection Control Committee, we would drill down into the hospital level, if there was any issues. The lead nurses also attended, and they would give an update. My recollection is not only the lead nurses would attend but the infection control doctors were part of that, and there was an agenda for each site.

I can't remember if it was done in directorate level or hospital level, but they definitely had an opportunity, and that was where some-- if there was any outbreaks or any issues, that would be reported in, and then the higher level, the Acute Infection Control Committee fed

into the Board Infection Control Committee.

Q Right, so you hadn't come across them and you're pretty sure they weren't referred to in any of these committees?

A I don't recall them ever being discussed.

Q Now, you're then in a slightly different position, because in 2009 you then leave – the board, anyway – to join HPS, which is now ARHAI, and then you sort of come back at this, in a way, in 2017. Is that correct?

A Yeah, 2017 but mainly 2018. I did provide some support in 2017 with the stenotrophomonas issue, but it wasn't myself that was the nurse consultant from HPS involved. I think it was just covering during leave. But in 2018 it was myself that represented HPS.

Q Thank you. Now, as you know, I think, we've been looking at epidemiological charts and so on, and I'm going to ask you to look at one or two of these just to see if you have any comments that might assist the Inquiry. But you make the point in answer to question 2 that you're not an epidemiologist specifically, but you did touch on that when you were doing a Master's degree. Is that right?

A Yeah. S in infection control, the qualification covers epidemiology to help you, you know, for an assessment for an outbreak around time, place, person, et cetera. So yeah, I would say every infection control nurse has epidemiology training to a degree.

Q The reason you're being-- You've answered-- The question, essentially, in question 2 is do you accept there were a higher number of environmentally-based bacteraemia cases in Yorkhill compared to the new hospital; and you say, "Well, subject to the qualifications, I'm not an epidemiologist"-- You basically say no, you don't accept that. Because it doesn't match what you knew.

A It doesn't match what I knew.

Q So unless somebody was ignoring significant environmentally sourced infections and not telling you and not discussing it in your meetings or going on to the other meetings, you weren't aware of anything in Yorkhill?

A No. And perhaps I'm jumping on too much, but in 2018, when we were seeing a lot of the unusual ones, no one ever said, "We've seen this before." In fact, quite the opposite. The clinical team in particular springs to mind, Professor Gibson and Dr Murphy. Both were very concerned that they hadn't seen some of these infections before, or even an individual with numerous bacteria.

The infection control team, my

colleague, Susie Dodd, hadn't-- You know, she took over as lead nurse. My understanding is she was seeing and feeling something slightly different or unusual. So my dealings in 2018 predominantly were at the IMT where I, you know, engaged with Professor Gibson and her colleagues, and also Dr Inkster and Ms Dodd.

THE CHAIR: Now, probably my fault for not picking up. Towards the beginning of what you've just answered, you said, "Going forward to 2018, nobody mentioned"-- Now, what I heard was "this", and my question is what were you referring to by "this"?

A Unusual organisms, I'm guessing.

THE CHAIR: I mean, we don't need to go back over the exact words. It's just the meaning that I'm trying to----

A So, in 2018, what I was hearing was the situation with the different types of organisms was unusual and clinically hadn't been experienced before.

THE CHAIR: Right.

A And the clinical team remained stable throughout, so----

THE CHAIR: Thank you.

MR CONNAL: Just so we make sure we get all of the points that you're making in your answer clearly, if I can-- Have you got your witness statement there?

A I have, yeah.

Q Yes. Well, I'm looking at electronic page 115. I'm still in answer 2, and there's a long paragraph that starts, "Furthermore...". Do you see that? Third paragraph on the page, in effect. You're trying to make a point there that it's not just numbers that matter. So what's your point, just so we're clear, we understand it?

A So it's around clinical cases and it's around looking at each individual case, looking at considering all routes of transmission. The reason it's not specific numbers is what we were seeing-- If you take each organism, we were perhaps seeing a low level of some of the organisms because they were very unusual, and if you just take a numbers game, you could say, "Well, we've only had one of that. What's the significance?"

But the significance of that in comparison-- You need to take it with the clinical presentation as well as the potential source, as well as comparing with all the other-- perhaps one, two numbers. So rather than taking each organism as a number, there's a bit more.

And certainly, at the IMT, these were discussed in great detail, each case. As they came through the clinicians gave their background, and

there was always a discussion as to whether it would be included as a case, because you had a case definition.

So it wasn't just a case of, "Well, we've got another two positives." At the IMT you would go through the two positives to see whether they fitted a case definition, were they a previous positive. So, it's not quite, from my perspective, as straightforward as numbers.

Q What you go on to say is the cases presented in the data and those identified from 2015 onwards in the new hospital are not comparable, as many of the cases identified have been unusual organisms – which is the point you've made already – not previously reported in this clinical cohort. That's the point you made about the consistency of the clinicians.

Now, just pausing there, was the appearance of a number of different unusual organisms a matter of concern?

A Absolutely.

Q And why was that?

A Because they all had-- They were gram-negative, predominantly, that were being reported in, and in the background, very early on when we looked at the water system, was because we were seeing-- Perhaps if I take you back to when we first got the call around-- or the reporting on the Cupriavidus in

2018. Whilst we'd had one reported in in 2016, I wasn't involved in that.

The '17 I don't think came to us, and then the 2018 case, it was my colleague that took the call from Dr Inkster. She called me, and I can remember the call, and we were like, "All right, okay. What is that? Let's have a good look and see what the source is." So it's not something that had been reported in, and then, from there on, there was a number of other unusual ones, but----

Q The other point that you make there-- and I just want again to make sure I have your evidence in a way that we can't always get it off the page precisely. You say:

> "... many samples have been polyclonal, which would be suggestive of an environmental source."

Now, why do you say that?

A Because normally if you have person-to-person spread, it's unusual to have multiple organism spread, so it tends to be an environmental source. Therefore, if you take the water as an example, if the infection route is via the water and the water is contaminated with multi-organisms, then the contamination is occurring at that time.

If it's not an environmental source, if it's a person-to-person spread, the

likelihood of transferring or transmitting person-to-person or staff is incredibly unlikely. It can happen, but for it to happen for more than one child is when you would start to think it points more towards an environmental source.

Q Can I try and get my head around what you've just told me and see if I understand it? You can correct me. The reason you say that the polyclonal results suggest an environmental source is that it would be unusual for, as it were, multiple organisms to be transferred from one human source to another human source, whereas they could come from water or some other environmental source. Is that the point you're trying to make?

A It's more about-- So coming from a person, the person would need to have all these organisms, so for one person to have on more one occasion-- Because I think there was more than one child. It was polyclonal. The chances of that are-- And it didn't all happen at the one time. You would perhaps have a case and you would discuss it at the IMT, and then maybe a week later they would have repeat blood cultures done for clinical indications or--

You would then get the report of that organism and then you would realise, actually, although it's a different organism, it's in a child you already know, the point being that, at the IMT, we did discuss every single case in great detail, and the importance of the Clinical Team from that perspective was huge. That's why, when you're listening to your clinical team telling you, "This is unusual, this doesn't feel like something we've had before," then you have to pick up on that.

Q Thank you. Well in fact, in the next paragraph of your answer, you set out materially what you've actually just told us about the team remaining the same, not having seen these before, and then you end that answer by dealing with, as it were, the position of you and your colleagues in HPS, and you said you hadn't seen them before either.

A No, I hadn't seen----

Q You say----

A The 2018 report of Cupriavidus was the first one I'd ever-- but there was a number we had never had reported in.

Q Can I just check, when you say that in that sentence, the one that starts:

> "From an IPC perspective, the types of organisms and polyclonal episodes... were those that neither I nor my colleagues within HPS had seen or had reported before."

Is that from anywhere, or is that just from Yorkhill?

A No, that's from anywhere.

Q Right.

THE CHAIR: Sorry, that's from?

A Anywhere. From a national perspective, we hadn't had those reported into us before.

MR CONNAL: So this is not specific to the Yorkhill new hospital issue?

A No, from anywhere.

Q It's just from anywhere?

A Yes. Because as a consultant working from ARHAI or HPS, you go along to an IMT and you provide national support, often you come back and you discuss with your colleagues and-- you know, "Am I missing anything or what?", so there was a lot of discussion around this. So that's why I can say with a degree of confidence that none of colleagues had experienced this before.

THE CHAIR: Can I just clarify this? When you speak about a "polyclonal episode", "polyclonal", as I understand it-- Well, a clone is a family of micro-organisms, I assume.

A Yes.

THE CHAIR: When you talk about a "polyclonal episode" is that in one patient----

A Yes.

THE CHAIR: -- exhibiting infection from a number of micro-organisms?

A Yes.

THE CHAIR: If I can go back to the logic, and if you were considering the probability of the source of such an infection of an individual, you've told us that it seems more probable that these multi-sources will come from, for example, the water system as opposed to another patient.

Now, it has been put to us that possibly more infections arise from the patient's own microbiome than from the environment. Now, does your observation about likelihood of the source being environmental take into account the consideration that possibly a more common source is not an infection from another human being, but from the patient's own gut, as I think it was put?

A So that's the importance of when you have an IMT and you look at each case. It's going through each case, because each one would have been considered and the clinical input was important there.

The other thing, though, is this was what we felt unusual from a national perspective, but also being reported from the team as unusual. I'm not sure I would understand why, when nothing had really changed, that we would be seeing what we were seeing over that period of time, why we hadn't experienced that before, because I don't believe treatments had changed that much and the population was relatively stable, why, if it was an endogenous source, this was happening

at this particular time, in addition to positive water results.

At the IMT, we didn't just assume each case was an environmental case. Each case, you know-- There's a lot of talk about root cause analysis and all sorts. At a good IMT, when you discuss your case, you're almost doing a mini root cause analysis, because you're going through each case and you're exploring whatever hypothesis, and sometimes, when you have three or four new cases-- and that can be quite challenging, but that was what happened, and whichever clinician was there, they would feed in-- or sometimes it was the nursing staff. Emma Somerville or Angela Howat were very good at, you know, feeding back on clinical.

THE CHAIR: Thank you.

MR CONNAL: Just to finish that section, I've just asked you about your last part of Answer 2, does that answer also cover gram-positives such as Mycobacterium chelonae, which we've had to touch on on several occasions in this Inquiry, or is this all gram-negatives you're talking about?

A At this time it was gram-negatives.

Q Does that mean you came across Mycobacterium chelonae on a different occasion?

A No. So over the 2018, my recollection was there was two chelonae reported in. One I think was around May '18, and then one in '19. A t the time of the report in 2018-- I hope I've got the dates correct. At the time of '18, it was unusual, but it wasn't something we saw, and perhaps – and this is where we didn't jump to the environment for every case – there could have been other reasons. I don't-- My recollection is the water wasn't tested at that time for chelonae, so it was gram-negatives.

Q Gram-negatives? Thank you. The next question you're asked is about the proposition that there was a two-fold decrease in environmentally relevant organisms between Yorkhill and the new hospital. Your response we can find on page 116, so that's at the top, and your first response is simply to say, "No, I don't agree." That's your position, is that right?

A Yes, that's correct.

Q You say at the end of that paragraph it doesn't align with your experience working in the Board or in HPS.

A Yes.

Q What you then go on to point out is that there was a decline initially, and then that changed particularly in 2017.

A Yes, so this is me looking at-- I think I was asked to look at a chart, and that was the two-fold decrease. We

didn't have anything reported in. In my experience of Yorkhill, there wasn't unusual organisms and there was nothing reported into HPS. So, from that point of view, if we don't look at charts, would I have said there was a decrease? There was certainly not a decrease in what was reported to us at that time.

Q So, whatever the position is, Yorkhill, nothing of worry is reported, start to get into 2017, issues of concern are being reported in the new hospital. Is that the distinction?

A Yes, I do-- I mean, reflecting back and looking back at as much notes as I was able, the only thing of significance from Yorkhill through my time there was a one-off incident in the paediatric intensive care related to Pseudomonas, which happens from time to time in intensive care settings, but that's the only-- None of the unusual organisms at all.

Q We move in Question 4 onto a slightly different question which has cropped up in a variety of formats, but it's essentially about comparing adult haemato-oncology patients with child haemato-oncology patients, and different witnesses have given us slightly different explanations on this. I'd like to get yours. First of all, the general idea of comparing one to the other, do you think that's a valid thing to do?

A Not particularly. I think even treatments are different from adults and the level of immuno-- Bear in mind, I'm not a haemato-oncologist, nor do I profess to have any of their knowledge, but the level of immunosuppression varies. I suppose depending on the age, their immunity, their immune system and even just children being children. Whilst they are all in single rooms, they are much more mobile about and I don't believe it is fair to compare.

Q Thank you. I think the other thing you mentioned in your answer to that – which is on page 117, if you want to look at it – is the prophylaxis regime differing.

A Yeah, I believe they were. I believe that, from-- Picking up from discussions just in some of the IMTs were that adults were more routinely given things like ciprofloxacin, antifungal, and I don't think the children got that as routinely.

Q In question 6-- sorry, question 5, you were asked about various tables. I'm going to ask you to look at some tables shortly, but you make the point in the middle of your answer there that, "Reporting to HPS has changed over the years," is that right?

A Yeah, that's correct.

Q What you're saying is you can't see anything having been reported to

HPS 2005 to 2015?

A Nothing.

Q Now, can I just ask you, while we're talking about sort of processes, have the arrangements for surveillance for organisms changed over the years?

A I don't know if they've changed as such. They-- We have the National Infection Prevention and Control Manual, which was first published with Chapter 1 in 2012. From an outbreak perspective, Chapter 3 was first published in 2016, but from an alert organism surveillance perspective, that's national guidance, but that's-- alert organism surveillance is the absolute bread and butter of an infection prevention and control nurse and that was just-- I mean, I've been in infection control for a long, long time and we've always done alert organ-- The alert organisms might change, but you're always mindful of, you know, emerging pathogens and new--

But a way-- You know, a way back, there was a big focus on MRSA, but-- so you had surveillance systems in place. Otherwise, how would you know what was going on in your area, what was going on in your wards, what was, you know, a reflection of infection control practices? So-- But the national response has emerged for-- over the years.

I mean, a way back, in 2000, maybe

2002, there was Codes of Practice, there was the Carey Report – it all mentioned surveillance. SCIEH, which was-- became HPS before it became ARHAI, produced a document on a pilot of surveillance of outbreak of incidents, and this was post the Watt Report, which was 2002. Around 2007, the chief executives got a letter from-- I'm sure it was the chief nursing officer's directorate detailing the procedure for reporting incidents.

So, in terms of reporting incidents, you obviously have to have a local surveillance process in place to identify you have an incident, but this went on and in 2009 HPS produced their first guidance on local surveillance, which was then updated in 2014, and I can say with a degree of confidence that the 2014 version, which-- went into great detail on local surveillance processes and procedures and gave examples of alert organisms.

Now, bearing in mind these are only examples and locally, but they did include things like Burkholderia and Stenotrophomonas, so they were first, I think, listed as-- around 2014.

Going back a bit before that, I've missed out the bit around the Clinical Standards Board for Scotland and I think that would have been around 2002 also, and Standard 4 was around surveillance.

So, whilst, perhaps, the national

guidance in terms of Chapter 3 was only published in 2016, there's been a lot of work prior to that nationally and at government level and local. You know, every board had their local infection control manual before the national manual, so there's always been a requirement for surveillance.

Q I have a reference here to something called ICNet.

A Yeah.

Q What's that?

A So ICNet was an electronic system and I am sure trialled-- one of the first hospitals to trial it was in Glasgow. I worked in Glasgow, as I've mentioned, and this is an electronic system where it's tied into a laboratory, and it's an alert system, so you can set triggers, etc. It's just an electronic system for reporting.

In the old-fashioned days, we used to go to the laboratory every day and you had a book and, you know, all the patient's work within that, so I think this is what was emerging. it was just an electronic system for reporting, but I suppose, with any electronic system, a lot of times, it's only as good as what you ask it to do, so I think you have to set what the alert organisms are for it to then tell you what you've got.

Q I'm told that one of the organisms you might want to use as an example is Serratia or----

A Serratia.

Q Serratia.

A Yeah, so-- So yeah, I mean, if we go back-- if we use Glasgow as an example, we've had Serratia outbreaks reported in their neonatal intensive care unit, I think, round about – I'm testing my memory here – 2014, perhaps, maybe slightly later, so there was obviously a local surveillance procedure in place to identify an incident and report it as so.

Q Yes, so there's always been some kind of mechanism for reporting?

A Yeah, absolutely. I mean, when I worked in Glasgow, there was definitely, and if we go back to the directorate reports that I mentioned earlier, then they were populated with the local team giving you the data on alert organisms, and I'm sure also, at the time, we started a data team and I think they did an electronic database-- an alert organism database.

I'd need to just double-check exactly what that was called in the details, but-- so the alert organisms were reported into our data team and they held that. This was the ones that the ICT knew or were reporting, not a lab-based one.

Q I'm going to take you to something called a situational assessment that you had at least some involvement with shortly, but I'd just like, since we have you here and you've

expressed some views on these matters based on your experience, to ask you to have a look at some charts.

So, if we go, first of all, to something we've looked at already, which is what we are calling the HAD 2 report, which is a response to reviews of HAD 1 by the authors, Professor Hawkey, Dr Drumright and Dr Agrawal, which is in bundle 44, volume five at page 50, so this is therefore a slightly later document than the original HAD report.

Now, you've explained your involvement both originally at NHS GGC and subsequently at ARHAI. This graph that appears on page 51 of the bundle-- 50 of the bundle, 31 of the document, appears to show, at least to a lay reader, a graphical indication of an increase in infections in-- well, I'll say starting to go up sometime in 2016 and then going up to a peak somewhere around 2018 before dropping off again. Now, can you help us at all as to whether that accords with the information that you were getting?

A Yeah, the rise in-- So, from-- clinically, the rise in 2008 or upwards from 2016 and then the decline from 2020 onwards fits with the 2018/2019 and the previous reported 2017 instance, yeah. I mean, I couldn't comment on the difference in lines, the linear and smooth and GAM fit.

I'm not-- From an epidemiology point of view, that's outwith my remit of understanding, but looking at this from a clinical perspective then, that rise in the chart absolutely fits with what we were supporting Glasgow with.

THE CHAIR: Right, so if the proposition is that the pink-- It's not quite a line.

A Yeah.

THE CHAIR: It's a bit broader than a line, but if that represents, to begin with, a declining rate of bloodstream infections during the time that the Schiehallion unit is in Yorkhill, and then from about 2016, when the Schiehallion unit is in the Royal Hospital for Children, that rate rises until a date maybe sometime in 2018 and then falls away and continues to fall away to 2022, assuming that that is what the representation is, that would accord with your understanding?

A Yeah, so I'm reading that as the dip-- if the children moved in 2015, then there's a dip, and then it starts to rise from 2016, more mid-2016, right through-- Yeah, that's what that says to me.

THE CHAIR: Mr Connal.

MR CONNAL: Well, can I ask you to look at one other document while we're doing this exercise, if you wouldn't mind, which is in bundle 44, volume 7 at page 56? Because there have been further

discussions.

Now, let's go on to 57 and 58. Now, what's been happening is that there have been exchanges involving epidemiologists to which you've not been a party, so you don't need to worry about that too much, but if you just take it from me that this is a document that's subsequently been produced following these discussions, involving, in particular, Mr Mookerjee and Dr Drumright, and this particular graph that we're looking at on page 58 just deals with the period from 2015 to somewhere in 2019, falls off the other end, that appears to show to a lay person that there's an increasing event happening. Would that match your understanding?

A Yeah, that's how I would view that and that would fit with what the clinical presentation was, yeah.

Q Yes, thank you. I'll just check 59 while we're here – no, we'll not worry about that – and 60. Right, so I'm just really looking at that, sticking to the one graph, that that matches your understanding. Now, what I was going to ask you to do now was to go to something that your organisation was involved in, which is something called a situational assessment. First of all, what's a situational assessment anyway?

A We often do a situational assessment when the framework's been

invoked, which, in this case, it wasn't. It was the Scottish Government that invoked a framework where we are then provide-- asked to provide support, albeit we were, but produce an update. So, quite often, we'd produce situational assessments, which really is-- as it says, it's just assessing the situation as we see it at the time and reflecting on what we've found.

Q Now, I'd like you to look at bundle 7, page 205. Now, what we'll find when we look through this document is a narrative section and then an appendix with some charts at the back. Can you help us understand, given your-- we've got you here, so you can't get away while I ask you the question, how would your organisation go about creating a document like this?

A So my recollection of this, we'd done a couple reports beforehand which summarised what we were dealing with at the time. This one, I think, is the one, yes, that was written in December '18 but actually published in June '19 – yeah, that's correct – where we, in addition to our epidemiology and data team looking at figures and data, we did a review of the ward and one of my colleagues did several walkarounds of the ward so that we weren't just focusing on an environmental-- Was there any other issues that we found? I'm sorry, I've

completely forgotten what you asked me.

Q So that if his Lordship looks at this document, he has in his head, you know, what it was and how it was prepared, I think you were explaining that you weren't just looking at figures but you actually arranged-- some colleagues visited the ward, is that right?

A Yes, so it was my colleague, Hayley Cain, who did a walkaround and met with several of the staff. She actually did it, I think, on three occasions.

She went back to the ward and interacted with staff, had a look, so she was looking at a whole variety of things, looking at anything-- any practice that she observed, any hand hygiene practice, was the environment clean? And my recollection is that she felt that practice was very good.

There was, I think as I recall-- I can't remember if she actually witnessed some condensate from chilled beams or whether that had been reported to her. I'd need to just go back and double check that. So it was a wider than, "Just look at data," it was, "Let's look at the whole to see-- the whole environment that the children were in to see if there was anything else."

Q What this appendix does is it sets out what it's trying to do. It sets out the definitions and it sets out what – sorry, my layman's term – "bugs" you were looking for.

A Yes, yes.

Q So if we go on to 206, just so we can see how it's done. There's non-environmental species, analytical methods explained. Go on to 7, and there's tabular result, and then what we then find is a series of charts, is that right?

A Yeah.

Q Now, what was the idea in producing these charts? What were you trying to achieve, your organisation?

A The chart on page 2007, is it?

Q Yeah, let's move on to 208.

A Yeah.

Q I think there's some that follow, but just if we pause on page 208 so we can understand what it was that you were trying to do.

A So this was-- would be done by the data team and my recollection is that they looked in an electronic system called ECOS and pulled out the blood cultures within the patient group of 2A/2B, and then a comparator for all other areas in the RHC with a list of environmental-- I don't think it was gram-negatives, I think it was environmental organisms that had been identified from within the water samples. I think they are positive -- I'm sure it says, the bit before that, what the criteria was.

Q What's the significance of the

upper warning limit, UWL?

A So this is-- a statistical process chart gives you where you are breaching and where you should be concerned, if you like, from an upper warning line. There are a lot of limitations with statistical process charts, and perhaps I would be looking at the variation rather than the warning line and the reason for if you have a higher background rate or a higher number then your warning line can be pushed up and you might not breach it so readily. (Inaudible).

Q There were two things, there's the upper warning limit and the upper control limit.

A Yes.

Q So can you help us as to what the point of these lines is?

A I would rather defer to-- we can look at an SPC, but I don't know if I could be able to give you-- my colleague, Shona, tomorrow, might help you with SPC, although it was our data team that did this chart.

Q So the RH-- you know, there's the 2A/B group, so that's the-- we'll call it Schiehallion for the moment, and then there's the other group. Are they intended to be looking for the same-- charts to be displaying the same things? Because the other group chart just bobbles along the bottom of the page. It's not showing this kind of movement at all.

A Because there's not the kind of variation, etc., so therefore it's a relatively flat line and, I mean, if you just glance at it from a layman perspective, the activity is 2A/2B rather than everywhere else.

Q Yes, and with the limitations that you've explained, if you look at 2014, so that's you still in Yorkhill for that cohort?

A Yes.

Q You've got some variations.

A Yes.

Q I think I've been told that the mean line is the Yorkhill line, but it doesn't matter for present purposes. In any event, there's a drop-off between 2015/2016, and then it starts basically to go up again with spikes.

A That's correct. Yes.

Q Can we just look at the next page, please, just in case it helps us? This is gram-positive blood cultures. Again, in comparison with the non-2A group, as it were, which is a relatively quiet line if I can call it that, down below. Again we see a rise, 2014, up and down a bit, 2015, then up in 2016 and some other ones as well.

A Yes. So gram-positive can be very indicative of practice, and I know that there was a lot of work done in central line associated bloodstream infections and which brought the rates

down, a very separate piece of work but led by one of the chief nurses and a clinician and did a lot of work around central and associated bloodstream infections to (inaudible).

Q Is this CLABSI?

A Yes, CLABSI.

Q Where there was a target-- so there was a rate that was regarded as not good enough----

A Yes.

Q -- and I'm forgetting the rate, and that's my fault, and then a lot of work put into it----

A Yes.

Q -- and it ended up with a rate which was, if not world-beating, certainly heading that way, is that right?

A Yes. Yes, that's my understanding.

Q Yes, thank you. Now, the way these charts have been put together, and I know you're not the principal author of these charts, the approach seems to have been to start, if I'm picking this up correctly, about the start of 2014 and then run through to, well, where you'd reached at the time, which was the end of 2018, albeit the report wasn't published until June of the next year.

A Yes.

Q Is there any suggestion you should have gone back further beyond 2014 into the earlier history of Yorkhill?

A I suppose, and I'm going to go back to the clinical point of view, we were being told that this was unusual, this was different, that even had we gone back, I suppose it's around-- we were dealing at the time with an incident and what had happened before, perhaps to look back at some point.

But at that particular time, you wanted to know how did that compare probably more recently, but I keep going back that it felt differently, it looked differently, and the clinical staff were expressing we hadn't seen this before.

Q Thank you. Well, let's leave that bunch of charts. Thank you. Let me ask you a broader question. One of the issues that the Inquiry has been asked to look at is, basically, are things okay now? That's a very colloquial way of describing one of the Inquiry's terms of reference, but that's the essence of it.

To some extent that you look at that in your response to Question 9 where you're asked if you have anything else to add on page 119 of your questionnaire response. You say:

> "Since the refurbishment of Wards 2a/b and the repatriation of patients to the wards, there has been a significant reduction in the number of gram negative organism associated incidents reported to

ARHAI Scotland."

So, assuming they're reporting it properly, this looks positive news, is that right?

A Yes, absolutely.

Q Okay.

A I don't-- There was one incident reported and that I am aware of from 2A, but since then, I'm not aware of from a gram-negative perspective. It's significantly reduced.

Q Thank you. Let me go on to one or two other topics, if I may.

A Yes.

Q Slightly off the slope we've been on, or the rise we've been on, depending on the interpretation. Can I ask you to look at a minute of a meeting in 2009? Now, we're stretching back, and I think you may have been asked about this before, but our level of knowledge has changed. We're looking at bundle 23, page 46.

Now, the reason that we're asking about this now is that in the course of the evidence Inquiry has heard, it has become apparent that the-- let me just call it the "specification", for want of a better word, for isolation rooms was included in a document called the "Employer's requirements," which is the document that the contractor essentially follows.

We've had evidence from the designer who said, "Well, I go to the employer's requirements and see what it says for isolation rooms and that's what I do." The isolation rooms were all to be essentially PPVL rooms, and there's some debate around the edges, but that's the essence of it.

Now, this appears to be a meeting that you were present at in 2009 when, to cut to the chase, there was discussion about various types of isolation rooms which might be suitable in different locations for different purposes. Is that fair?

A Yes.

Q I suppose that the question really is that here you have a reasonable number of people, all with a variety of qualifications – including, as it happens, one of the assistant project managers from the project, Heather Griffin – discussing the possibility of a whole range of different isolation rooms.

But can you help us at all as to what happened after that? Because you have a sort of mismatch. The employer's requirements say PPVL rooms. Here, you have a meeting only a matter of a month or so afterwards saying, "Oh, range of rooms." Can you help us at all as what was done after that to make sure that those concerned, whether it was contractors or project team or whatever,

knew that position had been agreed on isolation rooms?

A I don't think I'm going to be able to help you much with this because I don't recall this meeting. I'm not disputing I was there, I don't recall-- I don't-- I don't recall seeing those notes or it would be helpful if there was any email that was associated with the notes that was sent. I do note that the paper-- the notes refer to a paper produced by myself, Dr Reading and Dr Hood.

And that's why I struggle as to why I don't remember this meeting, because I did not produce a paper with Dr Redding or Dr Hood, and the reason I can categorically say that is, I worked very closely with Dr Redding when we worked at the Victoria Infirmary, and I would recall if we produced a paper as far back as then, but I had never worked with Dr Hood.

Up until we did the-- worked in the short-life working group for Cryptococcus, whilst I knew who Dr Hood was and had perhaps spoken to him, to produce a paper would require some interaction and some degree of working, and I have never worked directly with Dr Hood.

So I'm not understanding the purpose of this meeting to discuss a paper, and prior to the Inquiry bundles, I had never seen this paper before, the notes. So I don't know how helpful----

Q Because the note is simply a note-- Sorry, I'm interrupting. The note is simply a note of the meeting. I don't think we have the paper, but we only have the notes of the meeting.

A Yeah, but the meeting was to discuss a paper that I did not author and don't ever recall. I had had conversations and there were conversations – they were nothing formal – with Dr Redding before because we obviously worked at the Victoria, and the Victoria had, you know, been a new building and we worked together on that, and Dr Redding was of the view of the isolation rooms being in a stack at the side of the ward.

But that was conversations. There was nothing put down on paper. There was nothing discussing whether they were PPVL rooms or ventilated rooms or anything like that. I also noticed that, if we go to the first one, it's:

"Isolation rooms for the new South Glasgow Hospital are as follows: haemato-oncology…"

And it talks about a sealed ward, so it doesn't talk about isolation rooms; it talks about a ward. So the paper, without any context, I don't know if I could give any more to it other than I can only tell you what I'm reading on a piece of paper.

Q Were you involved in any of the discussions later in 2009 with

contractors who were bidding for the project thing called “Competitive dialogue”?

A I was.

Q Do you remember any discussions about isolation rooms?

A I don’t.

Q Thank you anyway.

A I mean, if there is a-- I notice from Ms Devine’s latest supplementary statements, she says she recalls this meeting, so I do not recall the meeting or the paper.

Q No, the question is not so much directed at anybody being at fault for anything. It’s more just a question of saying, “Well, here we had a team, got together, appeared to have discussed a whole lot of things, you know, in some detail and come to a view,” and then we don’t know what happened after that. Thank you for your help in any event.

Can I ask you about another oddity, if I may? You were asked in Question 7 about the appearance of your name on a HAI-SCRIBE, or HAI-SCRIBE document, which you seem to be given the credit for or blamed for, depending on your view, a document, but you say you weren’t involved, is that right?

A I wasn’t.

Q So you----

A So I think my name is down on two separate documents, or it’s down twice----

Q Right.

A -- from what I’ve seen from the bundles, and I was never asked to do a SCRIBE, I was never part of under-- Because it-- I wouldn’t undertake it. You wouldn’t undertake a SCRIBE on your own; it’s part of a team. So, no, I did not do any SCRIBE at all for the new hospital.

Q You say in your answer that no one’s ever really approached you about----

A I have never done it, actually. So, prior to coming to HPS, my operational remit was a strategic remit, so I didn’t have an operational remit, so, at that point, HAI-SCRIBE was relatively new. My recollection is it was 2007 it came out, so boards would be getting used to doing HAI-SCRIBEs for projects, but I have never undertaken any HAI-SCRIBEs, so I can say with absolute conviction I did not do an HAI-SCRIBE for the new hospital.

Q Do you now have a knowledge of what they’re meant to do?

A I have a knowledge of it. I’ve never actually done one or taken part, so I have a knowledge of it, and the Stage 1 SCRIBE would-- it covers things like the positioning of the hospital in terms of the risk to the existing hospital, the environment round about, so I know

there's been a lot of talk around sewage, being close to a sewage works.

That would have all been discussed as part of Stage 1 but prior to the site location being agreed. Otherwise, if you've agreed the site location, why would you then look at risk? So that should all have been undertaken then, but my name on these two documents should not be there.

Q One of the questions I've been asked to raise with you, given that you're an ARHAI person and you're here, is the use of this SCRIBE as a means of identifying IPC risk. I don't mean this one but the use of it generally. Is it still a good system?

A Yeah, it's evolved. It's changed and, yes, it's one that's in place and it does help guide, and what is very good is that it's a multidisciplinary approach and it's not left to IPC and you can have a discussion.

Q So when you say it's a multidisciplinary approach not left to IPC, who else would be involved?

A So you would have your facilities team, predominantly, so your facilities and IPC. You might have your clinical team at some stage.

Q Have you any view as to whether the way the SCRIBEs were dealt with at the hospital was a problem?

A No, I had no involvement. No one had spoken to me about a SCRIBE, so----

Q But your position is, in principle, it's quite a good system.

A Yeah.

THE CHAIR: I mean, its purpose is to identify risks and ask the question, "Have they been considered?"

A Yes.

THE CHAIR: You say it has evolved. I'm open to correction, but as you say----

A Sorry, it's changed slightly.

THE CHAIR: -- the underlying document is the 2007 document

A Yeah.

THE CHAIR: -- which is HBN 30 or----?

A It's SHFN 30.

THE CHAIR: I should know this, but I'll check.

A I should know it, too.

THE CHAIR: But the 2007 document has not been replaced, I don't think.

A I think it's been-- I'm sure it's been updated.

THE CHAIR: Okay, right.

MR CONNAL: The other question I've been asked to put to you, I think, is more about phraseology and risk. If you can't help me with this, then please just say, because I've been asked to raise this with you.

If you're designing something in a hospital and you're thinking about risk, particularly IPC risk, my question is around whether there's a difference between saying, "Oh, there's a risk of not complying with guidance number such and such" and saying, "There's a risk of not having the protective environment that will keep ill people safe from disease."

That's a very general point, but you see the distinction I'm making between people getting together and saying, "Oh, there might be a risk of not complying with the guidance" and people getting together and saying, "There might be a risk of creating an environment which isn't going to save people from-- or protect people potentially from illness."

Do you have any view as to whether that type of debate should go in one particular direction or another?

A I'm not entirely sure what you're asking me, but-- so stop me if I'm going wrong. So I think what you're asking me is if there's an IPC risk identified versus perhaps a corporate risk, or no?

Q I think what I'm trying to get at is, well, is there a question of how you identify what the risk is? Is it a risk of not complying with your guidance note, something-or-other paragraph, something or other, or is it a risk which should properly be described by looking at the potential consequence of not complying with that guidance?

So, if you don't, for instance, have a protective ventilation environment, you may be not complying with some paragraph of SHTM 0301, but you may also be creating an environment which potentially creates a risk to the health of the patients who are going to be in that ward.

A If you're not compliant with guidance?

Q Yes.

A So if you're not compliant with guidance, you can do what's called a derogation, but to do a derogation, there should be certainly a discussion with IPC – amongst, perhaps, others – around--

So one of the key things is, what is the derogation and the associated risks, but predominantly what is the area? So is it a high-risk area, is it a low risk? Because you can derogate and perhaps put some other remedial measures in, therefore the risk isn't great, but if you're derogating in a high-risk area with vulnerable patients, then the discussion has to be had and IPC need to give their view.

THE CHAIR: Before maybe mine, Mr Connal, I'm not quite sure what you're putting to the witness here. I mean----

MR CONNAL: What I'm trying to get at----

THE CHAIR: Just pause for a moment. We started with the H-SCRIBE technique----

MR CONNAL: Well, we've moved on from H-SCRIBE.

THE CHAIR: -- and having thought about it, Ms Rankin is absolutely correct: the 2007 structure, I think, has been revised. But what we still have is a list of-- quite a long list of specific questions. Now, are you contrasting that as a technique, or have I got lost?

MR CONNAL: No, I'm not looking at the SCRIBE process at all.

THE CHAIR: Right, okay.

MR CONNAL: I've moved on from that to a more general question, which is-- I mean, I could describe in the context of writing something in a risk register. Do you write down, you know, "X happens, risk, possible non-compliance with SHTM 0301 paragraph something or other," or do you write down, "Event, risk, possible health risk to seriously ill patients in Ward X"?

The inference is that there may be a tendency for people to look at risks as being risks of not complying with some point of guidance, as opposed to a risk of the consequence that may flow from that, which then may therefore divert you from thinking about the consequences. Maybe it can----

A But surely, if you're looking at the risk of not complying, you automatically have to consider the consequence of that risk to be able to do a proper risk assessment?

Q Well, that's the question that I have. You would agree that you need to identify the consequences----

A Absolutely.

Q -- of the failure to comply with whatever it is you're looking at, the guidance or whatever.

A How else would you quantify that risk? Because not everything is the same risk. So you would need to look at that, "If we don't do X, what is the impact on----?"

Q I'm content with that last answer and I understand that answer. That, for the moment at least, is my last question for this witness, my Lord.

THE CHAIR: Right.

Questioned by THE CHAIR

THE CHAIR: Could I ask you to go back to your question 5 response, which is on 117 of your responses to questions? Now, the question is headed, "IPC practice in the Schiehallion unit."

Now, you were asked a question, as I recollect, by Mr Connal about national surveillance, and you gave quite a full

answer, which I would distil as being, "There have been different mechanisms for national surveillance, perhaps, at least, since 2002."

A Yeah, so it's local, so there's been national guidance towards local surveillance.

THE CHAIR: Right.

A Local surveillance is key, absolutely. So national can give an overarching picture and-- but local surveillance is key to see what's going on in that, you know, with the patient demographic, etc.

THE CHAIR: Right, and the source of guidance is now the National Infection Prevention and Control Manual?

A Yes.

THE CHAIR: Now, could I just ask you to look at your final sentence under the Q5 response?

> "Having reviewed the incidents reported to HPS, no HAI gram negative bacteraemia within the Schiehallion Unit was reported to HPS within the timeframe of 2005-2015."

Can I invite you just to sort of expand on that? First of all, what did you do and what conclusion would you invite us to draw from what you have in that sentence?

A So this is in response to part (c) of that question which asked about, "Were they reported to HPS?" and we hold a database going back and there is nothing on it around gram-negative bacteraemia from Schiehallion----

THE CHAIR: Right.

A -- in that time frame, so----

THE CHAIR: So you're responding to----

A Part (c).

THE CHAIR: -- question (c), you have carried out that exercise----

A Yeah, had all the-- Yeah.

THE CHAIR: -- and that's the result. Now, as you may recollect, at the end, I give an opportunity to legal representatives to suggest any further questions to Mr Connal, so could I invite you to return to the witness room for what I hope will be no more than 10 minutes?

A Okay, thank you.

(<u>Short break</u>)

THE CHAIR: Mr Connal?

MR CONNAL: I've not been told of any further questions, my Lord.

THE CHAIR: (After a pause) No more questions, I understand.

A That's great.

THE CHAIR: Now, this is the second time you've come to give evidence and I'm very grateful for you

having done that, but you're now free to go but with my thanks. Thank you very much.

A Thank you very much. Thank you.

(The witness withdrew)

THE CHAIR: Now, we resume tomorrow at ten o'clock, and then are you----

MR CONNAL: I'm back again, I'm afraid, yes.

THE CHAIR: You're back in the morning and the afternoon?

MR CONNAL: The much-awaited return of Mr Mackintosh takes place tomorrow morning, so after that highlight I return in the afternoon.

THE CHAIR: Right, so we'll have Mr Mackintosh tomorrow morning and you in the afternoon?

MR CONNAL: Yes.

THE CHAIR: All right. Well, can I wish everyone a good afternoon? We'll see each other tomorrow morning.

(Session ends)

15.37