SCOTTISH HOSPITALS INQUIRY

Hearings Commencing
03 September 2024

Main
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CONTENTS

THE CHAIR: Good morning. Now, I think we're in a position, Mr Mackintosh, to begin with our witness for the day.

MR MACKINTOSH: Yes, it's Annette Rankin from ARHAI, my Lord.

THE CHAIR: Good morning, Ms Rankin.

THE WITNESS: Good morning.

THE CHAIR: Now, as you will understand, you're about to be asked questions by Mr Mackintosh, who's sitting opposite to you but, first of all, I understand you're willing to affirm. Sitting where you are, would you please repeat these words after me?

Ms Annette Rankin

Affirmed

THE CHAIR: Thank you very much indeed. Something that I'm very conscious of because I'm somewhat hard of hearing is the need to hear a witness and the need to hear the witness is shared by everyone in the room. Now, you have two microphones there which should help, but can I encourage you to maybe speak a little more slowly than you might otherwise and a little bit louder.

A Okay.

Q I anticipate that your evidence will go over the course of the morning and into the afternoon. We take a coffee break at about half past 11, so there will be a break during the morning, but if, for whatever reason, whatever, you wish to take a break at any point in your evidence, just give me that indication, and we can take a break. Mr Mackintosh.

Questioned by Mr Mackintosh

MR MACKINTOSH: Thank you, my Lord. Now, can I ask your full name and your current occupation?

A It's Annette Rankin, and I am Nurse Consultant in Infection Control at ARHAI Scotland.

Q So, you're the Nurse Consultant in Infection Control at ARHAI Scotland, and I understand you worked in NHS GDC until 2009.

A Yes, that's correct.

Q What was the role you had held there?

A I had various roles. I started out as a lead infection control nurse and then I moved to head of nursing for Glasgow and Clyde and then became nurse consultant for a short period before I came to what was HPS, now ARHAI.

Q Now, before I ask you to adopt your statement to the Inquiry, I've received a request that you wish to change part of it.

A Yes.

Q Now, the change I understand relates to page – I wonder if we can put this on the screen – 39 of the statement bundle. The reason I'm putting this up is just to assist everyone in the room, and it relates to the final seven or so lines of that paragraph. Before I ask you to read out what you want to insert, let's just make sure we understand what you want to remove. Working from-- is it from the tenth line from the bottom of the last paragraph?

A One, two, three, four. No, it's not as far down as that. I think it's only-- It's from "in addition."

Q From "in addition"? It's the last five lines.

A Yes.

Q Okay. So, that's not the text you've given us.

A Yes.

Q The text you've given us starts-- the change starts at, "There was a discussion."

A That's here already, is it not?

A No. So, we haven't made the change. So, do you see how it starts 10 lines at the bottom, "tension around the table" and "there was a discussion on the case definition"?

A Yeah.

Q And then do you see the note that you have supplied to the Inquiry that's on the table in front of you?

A Yes. That's there.

Q Yes, so do you want to remove the final 10 lines and replace them with a new phraseology?

A Yes.

Q Yes. Could you explain why you want to do this?

A Because I was looking-- At the time, there was a lot of data and I have completed that with the CLABSI data which was gram-positive and gram-negative combined, and my statement reflects that it gave us false assurance, which is incorrect. It was----

Q So, we'll deal with it when we get to the substance of this but, in essence, in what you've said in the original draft, you've talked about gram-positive and gram-negative when, at the time, actually----

A It was gram-negative.

Q Just gram-negative, right. So, we'll deal with the substance of what that all means when we get to this meeting.

A Yes.

Q But I wonder if you could just read out the replacement text that you want to insert from "there was a discussion".

A Okay:

> "There was discussion on the case definition and the deputy medical director emphasised that

the numbers of bloodstream infections had not increased, as highlighted by Dr Kennedy's epidemiology report. This sparked much discussion, as some members disagreed with this statement, myself included, as not only was there an increase in number, the types of organisms seen were environmental in nature and very unusual. In addition, Dr Kennedy's epidemiology report referred to in the IMT covered only selective gram-negatives and the data were not representative of the unusual nature of the organisms being identified from 2016."

Q Thank you. So, we'll get to the substance of all that later on today, but with that change, are you willing to adopt the statement as your evidence?

A I am.

Q Right. Now, what I'm proposing to do is to not go through your statement line by line but to pick up events as they occur, almost in chronological order. Before we do that, however, I want to ask some basic concepts here, which is-- so you were trained as a lead infection control nurse?

A I was trained as an infection control nurse.

Q Infection control nurse, and you then became a nurse consultant, and then you've come to this job in HPS ARHAI?

A Yes.

Q Do you have any qualifications that are particularly related to water systems in hospitals?

A I don't know if you would consider them academic qualifications, but I have done a number. I've done City & Guilds course. I've done – I'm going to look at my statement because the name escapes me –

a course-- City & Guilds Water and Healthcare Premises, City & Guilds Ventilation and Healthcare Premises, Specialised Ventilation and Healthcare Premises, and Engineering Aspects of Infection Control, and, most recently, Waste and Water Safety in Healthcare, which was run by the Healthcare Infection Society.

Q So, what I wondered is, in respect of water, where do you consider the limit of your knowledge or experience lies?

A From a clinical and an infection control element, there is a lot of technical aspects and I would seek that support from my colleagues in Health Facilities Scotland rather than-- so I'm definitely not technical.

Q So, is this more that you have some experience in the implications of the system, not how it works?

A So, understanding routes of transmission, if there's organisms, yeah.

Q So, it's more to do with the implications of a system rather than how it actually operates?

A Yeah.

Q And would the same apply to ventilation as well?

A Yeah.

Q Right, okay. Well, we'll explore that in more detail when we get to various sections where you express your opinion. Just in terms of the generalities of the Infection Prevention Control Team, what is the role of an Infection Control nurse in contrast with that of an Infection Control doctor?

A Okay. So, probably one of the biggest differences, an Infection Control nurse is a full-time role. An Infection Control doctor tends to be, majority of the time, a consultant microbiologist with time assigned in their job plan, so it's not a full-time role for them. They are probably more the face of Infection Control. They're in and out of the clinical area.

Q So, the nurses are more the face?

A The nurses, yeah. They understand-- They're more doing the investigative work if there's an issue. The Infection Control doctor with a microbiology background has a much more detailed microbiology

understanding. You tend to have-- The Infection Control nurse has any qualification, whereas Infection Control doctors are microbiologists. Some do have a specific qualification, but not all.

Q It's been suggested that Infection Control nurses are more focused on the practical consequences of the issues and microbiologists more focused on the microbiology. Is that a fair comparison, or have I missed something?

A No, I think that's a fair comparison. I think Infection Control nurses are also focused on the microbiology, but not to extent of the microbiologists. They don't have that level of----

Q When it comes to nurse consultants in Infection Control, is it possible to see nurse consultants as all having the same level of-- same sort of experiences, or are they more individual in what experiences they have and what knowledge they have?

A They're more individual. They come with a different background and-- yeah.

Q And how do they come with different backgrounds?

A There's a basic-- So, to become a nurse consultant, you should have a master's level qualification, so-- but also the level of experience. Some have wide-ranging experience across

acute and primary care settings. Some have predominantly acute. So, it also depends which consultant role, because not all consultant roles are-- in ARHAI, they're generic roles and then you lead the programme.

Q So, within ARHAI, you're nurse consultants, you're generic nurse consultants, but you have a programme----

A Yeah.

Q -- you're (inaudible) responsible for. So, Ms Dodd gave evidence she was responsible effectively as the editor of the National Infection Control Manual.

A Yeah. That's correct.

Q What's your programme responsibility?

A What's called the ICBED program, which is Infection Control in the Built Environment and Decontamination.

Q And just because I've actually been wondering over the last few days, in this context, what is decontamination?

A So, decontamination covers cleaning, disinfection, sterilisation of the environment, of reusable medical devices, so it covers that aspect.

Q And Infection Control in the Built Environment, to what extent does that extend to building systems such as ventilation and water systems?

A So, it does in a sense, from a clinical Infection Control, not a technical perspective. So, recently we have, within chapter four, have water systems----

Q So, this is the Infection Control manual?

A Yeah. Literature review and a national manual content, and we're currently working on ventilation. So, we cover very basic-- or not very basic, but incident management. So, something that a ward nurse could go to, but predominantly an Infection Control nurse could seek for further advice, and it also should point them in terms of where the technical support is, technical guidance, so the SHTMs.

Q If we take, just as an example-- and we'll come back to the practical consequences in this hospital of Horne Optitherm taps, and we start with the idea that you need to clean the outside of a tap and its wash-hand basin. Does that lie within your-- the standards of that, does that lie within your project within ARHAI?

A So, we would support-- There's a national cleaning services specification, which is predominantly under the remit from colleagues in HFS. We would provide support into the development of that, but it doesn't lie particularly with us.

Q Okay, I'll try and pick an example that's better then. If we take the

question of cleaning chilled beams, which we'll come to, we've had evidence that requires a HAI-SCRIBE and a longer process, and someone described the process that's involved takes three or four hours to do. How much of that process is within your experience and knowledge, and where do you stop and run out of technical knowledge?

A So, from a chilled beam perspective-- and I guess we'll probably cover that later on, but a chilled beam perspective, I had very little input or remit with chilled beams up until the 2018 Glasgow incident that I supported. We wouldn't necessarily give advice. It's very technical.

Q Well, we'll come back to that then when we get to the chapter, and that's probably the easiest thing.

A Okay.

Q So, the next thing to do is to think about-- There's been some suggestion that in an Infection Control service at a hospital or board level should be a nurse led service. How would you react to that?

A So, I think it's about leadership and who's best to lead the team. It's a team, and it doesn't-- we-- it's not necessarily a nurse or a scientist or a doctor. It's about who's best to lead that team and manage that team. I don't know if I would want to be prescriptive and say it has to be a nurse, nor had it to be a doctor, but it's about leadership and who demonstrates the best skills to lead the team.

Q What would you understand by the expression "a nurse led service" in the health service in general?

A A nurse-led service is someone who drives the service, who manages the service, who leads the service, but I am conscious Infection Control-- Certainly, from an ARHAI perspective, we're very much a team and we liaise very closely with our technical colleagues. At board level, they're also a team with Infection Control doctors and work very closely.

Q Okay. Before we move on to the procurement of the hospital and your involvement, I want to just check that you-- just a document I didn't put in the documents list, but we're going to talk about. I want to just get you to adopt it effectively as your document. Could you go to bundle 7, document 1, page 3? So, this is a report that we have in our bundles, had for some time, which bears to be from 31 May 2018, described as:

> "Initial report on the findings of NHS Greater Glasgow and Clyde, Queen Elizabeth Hospital, Royal Hospital for Children water contamination incident and

recommendation to NHS Scotland..."

and it's described as report prepared on behalf of HPS/HFS by you. To what extent are you the author of the whole report?

A I was involved in the authorship of it in conjunction with my colleagues, the other colleagues in HPS, and HFS. I would have had final sign-off.

Q Thank you. We'll come back to what it means later on. What I want to do is turn to question 8 in your statement, which is on page 9. So, we're looking back to when you were at NHS GGC, and you see at A, the bottom of the page, it says: "I became a nurse consultant in Infection Control in NHS GGC in 2008."

Now, what you seem to be describing here is your involvement, but I want to connect it to documents, and so, in this section, you-- we need first to look at bundle 14, volume 1, page 75. So this bears to be a meeting of an Infection Control meeting on 18 May 2009 at 1 p.m. You are not-- you are recorded as being present. Now, the first question, which is possibly cruel at this distance is, do you remember this meeting?

A I don't, but I'm recorded as being present, so I have no reason to say I wasn't present----

Q Well, we might learn more by asking you some precise questions about what it might mean, even though you don't remember being present. Firstly, we also got meetings later on, four or five years later, of something called an Infection Control senior management team meeting. Could this be in the same sort of sequence, or is it a different sort of meeting from what it seems to say at the top and in the people who are present?

A So, it doesn't look as if it's stacked up like a senior management team meeting because Fiona McCluskey was part of the project team. I'm not sure who Stephen Gallagher was. Heather Griffin was the project lead for the adult hospital. So, it doesn't look as if it's an Infection Control SMT----

Q Right.

A -- meeting.

Q Well, what I want to do is look down the page. There's a heading, "Isolation Rooms – New South Glasgow Hospital" which I take it ultimately becomes the Queen Elizabeth, and it reports that they reviewed a paper by Dr Redding then later Professor Hood and you. We can't find them. We haven't got access to the paper. Do you have any recollection of producing the paper?

A I have no recollection of the paper at all. I have looked. I don't ever recall co-authoring a paper with Dr Hood. I have worked with Dr Redding quite extensively in the past, and I have

looked-- I don't have access to anything from around about that time, but I do not recall that paper.

Q Well, perhaps the best I can do is to see if we can work out what you think----

A Yeah.

Q -- it might be talking about in the rest of the minute, and that might help us. So, at this point, was there ever any discussion at this point of anything other than a paediatric haemato-oncology unit going into the new hospital, or did that come-- did the adults come later?

A The adults did come later, but reflecting on this, BMT was meant to come later. I think perhaps some haemato-oncology beds were planned to come over, but not the BMT unit, and that----

Q Because I'm wondering, this heading in bold, five paragraphs from the bottom, "haemato-oncology, sealed ward with HEPA filtration"----

A Yeah.

Q -- "positive for the rest of the hospital". Conscious that you don't remember being there and therefore you're just reading this, do you have any view about whether that is talking about what ultimately became ward 2A or something else?

A I don't think it's ward 2A. When I saw this paper in the bundle and I have thought about it and I did initially think it must be the children, because BMT wasn't due to come over until later or wasn't in the original design plan, but I have a-- I think that-- and I think it might be ward 4C that's become the haemato-oncology ward rather than 4B, which was the BMT unit that came from the Beatson. So, it could be referring to this. That's not to say it's not the children, but I'm looking at the membership of the meeting and Mairi MacLeod was project director for the children and Heather Griffin----

Q And she's not there.

A -- was for the adult and she's not there. Although Pamela is there, but I'm not sure in what context----

Q And then on the first big paragraph, it describes this new South Glasgow adult hospital as well.

A Yes.

Q Now, if it is ward 4C, let's talk about what that paragraph might be describing. In a sealed ward with HEPA filtration positive to the rest of the hospital, would there have to be a lobby for the entrance to the ward?

A It would be better if there was a lobby. I think-- This is a one line.

Q It's very hard, I know.

A It's very limited in detail and, you know, it has sealed ward and I don't disagree with the sealed ward with HEPA filtration. I agree with that, but there's no

context or content----

Q No, no, I realise that, and that's why we're slightly flailing around.

A So, I don't actually know what's being discussed.

Q Because the point I wanted just to put to you – and we'll move on afterwards – is there's obviously a question about which ward this eventually becomes that this might be talking about, and you've explained that, and this is only one line, and it doesn't talk about pressure differentials. It doesn't talk about air change rates.

A Yeah.

Q It just says sealed ward with HEPA filtration. Now, if you don't feel you can answer this question, then please say, but to what extent is it possible to seal a whole ward with HEPA filtration----

A I don't want to comment on that.

Q -- and not have a----

A I don't feel I----

Q Fine. Well, we'll move on to somebody else. Now, the next thing is we have evidence that what was eventually built includes a lot of positive pressure ventilation lobby rooms, and I just wanted to ask you, looking at this note, to what extent can you tell us whether, back in 2009 when you're still at Glasgow, there was discussion of positive pressure ventilation lobby rooms being used as isolation rooms in the proposed hospital?

A I don't recall being involved in discussion around----

Q Okay. Well, I'm just going to-- Just can we jump to the next page just in case I don't-- check I'm not missing something. Yes, over the rest of the page, can you assist us about whether there was ever a-- No, I can't ask you that question because you weren't there at the time. So I'm going to move onto-- Could I ask you to look at bundle 17, document 53, page 2202?

THE CHAIR : Sorry, can you give me that again? Bundle 17----?

MR MACKINTOSH : Document 53, page 2202. A bit of luck, here we are. Now, this doesn't make an awful lot of sense but, when we go down into it, we might-- Do you have any recollection of being involved in the competitive dialogue process?

A Yes, I was.

Q Right. Before we look at the documents, could you explain what your role was-- in the competitive dialogue process was in general?

A So, there was a lot of attendees, there were three bidders, and it was going along to presentations on what the hospital would look like, what it would entail. It didn't go into any detail. My remit at the time wasn't that great. It was more if-- around flows and patient

flows and that sort of thing rather than anything detailed but----

Q So it wasn't related to, say, water and ventilation. It's about patient movement?

A Patient movement and maybe room adjacency or clinical adjacencies, like not having a, at that time, maybe an orthopeadic ward next to your respiratory ward, that sort of thing so----

Q Okay, now, what I wanted to do is-- Do you remember which groups you were in? Because I can show you the page that tells us. Let's go to 2703. So, this is technical evaluation groups and you appear to be in the design group----

A And labs.

Q -- and labs. Now, I'm going to focus on the design group. The question I'm looking for the answer is to what discussion do you-- level of discussion do you remember there ever being in a design group about air change rates and ventilation? Can you help us?

A I don't recall any discussion at that level at all.

Q Okay. In your statement, you have discussed being shown 1:200 drawings. Could this have been during this process?

A No.

Q When do you think it was, the 1:200 drawings?

A Sorry----

Q When do you think the 1:200 drawings were shown to you?

A Oh, the 1:200 might have been that process, sorry, I thought you meant about air changes being covered and that. Yes.

Q So, what I want to do is to go to page 2204. Now, this is a meeting on the 7 July 2009 which you're recorded as being present at. Bidder B, we understand, is Brookfield, which eventually becomes Multiplex. If we jump to 2124, which is further in the minute – it takes the form of a longer schedule – we see the subject matters for the various meetings, and it's not a very good scan. That was meeting five, and meeting five is on the right-hand side, and we see various things listed. I'm assuming you don't remember any of this.

A I've certainly never seen this before, no.

Q Right. Okay. Well, in that case, we'll go onto page 2225. Now, the reason I've got this page is it appears to be a minute from meeting five, and do you see at the bottom, the bottom two rows, it records, "M&E summary, schematics were tabled" but, more interestingly perhaps, "BREEAM nothing to report. Energy target work in progress. More emphasis on operational energy rather than design energy." Now, if the minutes

are right, this happened at a meeting you were present at on that date in July 2009. Do you have any recollection of discussion of BREEAM and energy efficiency?

A (No audible response).

Q That'll be a "no". You're shaking your head.

A No, sorry.

Q Right. Okay. Could I ask you just to complete-- get to the end of this one, 2217. This is another meeting the same day, also bidder B. Could we go to-- and you're recorded being present. I'm assuming you don't remember this meeting either in any detail.

A I don't remember the-- I do remember being part and being part of Glynhill but I don't remember this specific----

Q Could we go to 2227? This is another of these minutes, and the reason I wanted to ask you the question – I think I know where this is going – is in this section there appears to be recordings about BREEAM, boundaries and, in the middle row, 537, thermal modelling for the system. Do you have any recollection of issues around thermal modelling for the building?

A There was nothing raised at all that-- where I would have been asked for my input around thermal modelling. There was nothing raised with me.

Q The thing that might trigger – and if it doesn't, that's understandable – is there is discussion in the documentations at meetings you're not present about the target of achieving a maximum temperature of 26 degrees. Does that ring any bells with you?

A No.

Q No, okay. Now, can I ask you to look at something else, which is bundle 17, page 2855? That's document 70. Now, this is an email exchange which you're not sent, and I suspect I know what the answer is going to be, but I'll just ask it anyway and see where we get to. It reports the attachment of a log and seemingly a ventilation strategy for the wards. The ventilation strategy is on the next page.

Now, I ask you to read-- If you go to the next page, please. Next-- Sorry, page 2857. I ask you to read this before giving evidence; is this something you have the technical skills to comment on?

A So, no, I wouldn't be comfortable. I could-- I have been involved, not with this project but with discussion where you're meant to achieve six but the Board's----

Q This is air change rates?

A Air change rate, four with the additional two being natural ventilation but I'm very reliant on my technical colleagues around that.

Q Well, in that case, we won't ask you anything further. I'm therefore taking it that you've never-- at the time, there was no one asked you about moving to an air rate of 40 litres a second, for example. That wasn't something you were asked?

A No.

Q In that case, we won't go there. What we should, however, do is go to an email in bundle 12, document 104, which is an email from Mr Alan Seaborne on 23 June 2016, which discusses you. So, this is an email we've received from Mr Seaborne, who was part of the Project Team, to a series of people, some of whose names you've already mentioned, Ms Heather Griffin for example, about an SBAR that was then around inside the Health Board about room air changes, and the thing that I want to put to you is over the page, two paragraphs down, second paragraph:

> "We have had a discussion during design process about natural ventilation, which is acceptable in the guidelines, but we asked Infection Control for their approval through Annette and they advised against it [that is natural ventilation]. I think I'm correct in stating the Infection Control person who gave the advice was Penelope Redding. This is typical of the normal approval process we adhered to at all times."

Do you have any recollection of being asked to facilitate the provision of advice about whether it would be appropriate to have natural ventilation in this hospital?

A I definitely wasn't.

Q You definitely weren't asked?

A I definitely weren't-- wasn't. I'm also unsure for-- I know Dr Redding. I thought at that point it was Professor Williams who was the lead Infection Control doctor rather than Dr Redding involved, but I did not have any-- I did not facilitate any discussion, nor was I asked to around ventilation with Dr Redding.

Q In your statement, I won't go to it but you discussed briefly the issue of the sewage works near the hospital site. From your perspective, looking back at it now, what relevance does the sewage works have to the question of whether there should be natural or mechanical ventilation for a hospital on that site?

A I think it-- So, I worked at the Southern, I trained as a nurse at the Southern General when the sewage-- So, the sewage works have been there throughout, and the one thing that stands out is the smell. So if you're relying on natural ventilation and windows, then there is an issue with odour.

In terms of-- I'm guessing you're meaning risk from an infection perspective of risk. I wasn't aware throughout my time working at the Southern of any issues presented by the sewage works other than the smell. I've not seen any evidence since that the sewage works were presenting a risk.

Q So, just picking that up. So, when you worked at the Southern General, you were aware of the smell?

A Oh, yes.

Q But you weren't aware of infections that people working there at the time sought to attribute to the sewage works?

A No, absolutely not.

Q I suppose I should just check, the patient cohort at the Southern General, would that have included haemato-oncology patients and bone marrow transplant patients?

A So, it did actually, because I did work in haemato-oncology, but we're talking quite some time ago when it wasn't a bone marrow transplant room, it wasn't a ventilated room, it was very old fashioned and they were nursed very differently. So, we did have-- You know, I have nursed patients with haemato-oncology issues.

Q And would these be adults or children?

A Adults.

Q And when, roughly, would this have been?

A It was my first staff nurse post, which would have been 1989 to 1991.

Q So, back then in the 80s/early 90s, you were involved as a staff nurse?

A Yeah.

Q Where there was a haemato-oncology facility, albeit it's a different age, and you're not-- you have no recollection of there being infections related to-- other people sought to attribute to the sewage works?

A No.

Q Okay. I want to just, in effect, try and capitalise on it, so if you take that off the screen, please. You appear to have been-- not that you can necessarily remember very much of it, but you can appear to have had some involvement in the procurement specification, to some level, of the hospital, and there may be better records and better evidence than yours, and we will look at that.

I'm about to turn to your involvement in the new building when you worked for HPS and what you thought about various things. What I want to do is just try and understand your reaction to the first time you went to the new hospital and into the various wards. So, when did you first go to the new hospital?

A I think it would have been around 2015. I don't recall going-- Well, it

opened in 2015, so it would have been 2015, going to have a look around BMT.

Q You think there would have been patients in at that point?

A There would have been patients in, yes. I did not go before.

Q So, if we focus-- We'll work through the various wards, and if you didn't go to the wards back in 2015, please tell me. So, we start with the Schiehallion Unit itself. Would you have been to the Schiehallion Unit soon after it opened?

A I didn't go to Schiehallion Unit until around-- I think the first time I was in the Schiehallion Unit was in 2018.

Q Right, that's fine. So, if you look at wards 4C and 4B, would you have visited those wards in 2015?

A I can't say categorically I did, but when we are asked to provide support and we're unsure, quite often we'll go for a visit, a site visit, and have a look. I am sure I have been to ward 4B, maybe just not exactly clear on when that was, but it would have been----

Q Have you been to 4C, or had you been to 4C then?

A No.

Q No.

A I haven't ever been to 4C.

Q Had you been to any other ward in the adult hospital during 2015?

A No.

Q No, okay, right. I get the impression, I think you've just said this to me, that the HPS involvement in ventilation matters in the hospital for the adult BMT ward was relatively soon after it opened. Is that correct?

A Yeah.

Q But the involvement with the Schiehallion Unit came much later.

A Yes.

Q Right, and it might have been in 2017 when----

A It was late 2017.

Q Late 2017. Before we look at the involvement with the adult BMT ward, I want to discuss HAI-SCRIBE in a little bit of detail.

A Okay.

Q So, what sort of expertise and experience do you have in how HAI-SCRIBE should operate?

A I don't have much practical experience in that I wasn't involved with-- HAI-SCRIBE was being developed after I had moved, so I don't actually have a lot of experience physically----

Q So, you haven't created HAI-SCRIBEs because it wasn't there when you were in practice in that sense?

A No, no. I haven't, no.

Q Do you have any experience or knowledge about when it should be used?

A So, I think it's quite clear in the

guidance. There's up to stage 4. So, sanitary fittings, if you're changing sanitary fittings, if there's refurb, if there's any disruption to the ward, they should be created, as well as going on to the bigger projects, but from relatively small projects you should do an HAI-SCRIBE.

Q So, can you help us whether in 2015 an HAI-SCRIBE would have been required when a new hospital opened?

A Yes.

Q And why do you say that?

A Because it's making sure that everything that was in place should have been in place, so yes, it's-- You would do it for refurbs. You would do it-- yeah. You should do it for a new----

Q So, if we think ahead to the significant refurbishment work to the Schiehallion unit after 2018, would that have required----

A Yes.

Q -- on completion, an HAI-SCRIBE?

A Yes.

Q Yes. Would the various pieces of refurbishment work done to Ward 4B have required an HAI-SCRIBE on completion?

A Yes.

Q I don't think you're necessarily-- I think you might have been involved in some of it, but do you-- are you aware that there was a question of whether there should have been suspended ceilings in certain rooms in the Children's Hospital after it opened? Is that something you've come across?

A I wasn't involved in----

Q So, if there was evidence that it was required to remove suspended ceilings or to seal light fittings, would that require HAI-SCRIBE?

A Yes.

Q Yes. Is there anything-- What's the lowest-- the highest level of intervention that doesn't require an HAI-SCRIBE?

A The highest level?

Q Yes, the most complicated thing you can think of that wouldn't require an HAI-SCRIBE?

A Perhaps in a non-clinical, non-patient facing area, but HAI-SCRIBEs are required in a-- in----

Q So, we've heard evidence that, for example, you would require an HAI-SCRIBE to clean chilled beams because of all the disruption involved.

A So, if you're-- if you're moving patients out, if it's fairly significant to clean-- routine cleaning, then depending on the area, you wouldn't-- I don't think you would need an HAI-SCRIBE.

Q Would you need an HAI-SCRIBE to remove wall paneling, to get to pipe work behind paneling and----

A Yes. So, these are-- these are

done often by the teams, and they're familiar with doing them. They don't have to be like, big pieces of work. I think the more involvement, the more detailed, but HAI-SCRIBEs are done commonly across-- across the board.

Q So, we've had evidence from Mr Clarkson, the site manager for the Estates Department at the hospital, about how, firstly, he's got very good at writing HAI-SCRIBEs for small building works, and secondly, it's quite bureaucratic. Would you disagree with his description of the sort of-- and why he might reach that conclusion from his point of view?

A Yeah, I can understand, if-- you why you might find that, and we're not involved in developing that tool, so----

Q Well, I'll move onto-- If we could we could look at your statement, please, to question 13, which is on page 11. This is a section headed, "Early issues with Ventilation (Adult BMT Unit) and drafting of first SBAR." What I want to understand within this section is from whom within NHS GGC did this request for assistance that you describe in paragraph A at the bottom of the page come from?

A Dr Inkster.

Q Dr Inkster. Now, we don't have any PAGs or IMTs in this particular moment. Can you explain to us the nature of the request?

A So, my recollection is we were first contacted earlier in the year around what was an acceptable limit of Aspergillus and-- which was a routine enquiry, and we dealt with that. It was then followed up with a request from Dr Inkster regarding specification, and she had advised that the patients had moved from the Beatson into Ward 4B, but due to high counts-- fungal counts, the patients had moved back and there was a proposal, a specification proposal for a refit, and she was looking for some support around that proposal.

Q Around that proposal.

A Yeah.

Q Right. What I want to look at is Bundle 12, document 77, page 671. So this, if I'm in the right place, it-- I am, appears to be an email thread and I want to look back at the beginning of the email thread, so if we can go back to page 677. It appears initially to be an email from you.

A Yeah.

Q And you've asked a lot of questions. How did you come to write this email on 19 November 2015?

A So----

Q It's the bottom half of the page, thank you.

A Okay. I-- My recollection is that I met-- So, when Dr Inkster had contacted us asking us for some support,

we needed to get some background as to what the current specification was, what the proposed specification was, and I have a recollection I met with Dr Inkster, and I then spoke with my colleagues in HFS, and I believe-- I don't know if I spoke with Peter Hoffmann at that point, but he was-- we did involve him and we asked for a number of documents and evidence to allow us to look at what was-- and what the proposal----

Q Well, let's try and break down this, because-- who was at the meeting from NHS GGC, other than Dr Inkster? Do you remember?

A Perhaps it might have been myself and Dr Inkster. I can't recall.

Q Yes. I notice you didn't copy in anyone else from GGC.

A Yeah, from GGC. No, no one else from GGC was there. It was Dr Inkster.

Q And then, looking at these questions, the thing that strikes me immediately, given your evidence that you don't actually get asked for help about the paediatric until 2017, is the second question.

A So----

Q Why did you ask about paediatric BMT at this point, because it wasn't Dr Inkster's responsibility? She had a particular focus on regional services at this point.

A I think we were trying to benchmark or trying to see if it was-- if there was an issue at the same time. I can't remember if-- I don't think it was raised by Dr Inkster. I'm probably going to be a bit vague on that. I'm not entirely sure.

Q Well, okay. Well, let's-- Did you know at that point that Dr Inkster was the regional IPC consultant rather than, as she later became, clinical lead?

A I'm not sure. I can't remember.

Q You're not sure? Okay. If we scroll up a little bit, top of the page, we see an email from her to her colleagues.

A Yeah.

Q And she says, "I have forwarded the revised specification and validation reports." Did you receive those validation reports?

A I have no reason to think I didn't. I can't remember.

Q You see, we haven't got them.

A I can check.

Q Could you please check them, and if you do have them, would you please provide-- because I think it would help us understand what people thought at the time. If we go to page 676, the bottom of the page, now this is an email where you've been copied in, I think. Yes, you have. Mr Walsh is looking for information from her about meetings, but more importantly the second paragraph--

When do you become aware-- Was this the point you became aware that Geraldine O'Brien at HFS was involved?

A I wasn't aware until that point, but that's not unusual because Estates from-- boards can contact HFS directly and it's not about anything IPC, so that's not unusual.

Q I understand that. Is there anything you took from the next few exchanges between Dr Inkster and Mr Loudon that seem relevant to your work? So, we go up the page on the next email, and then on the page before, the bottom-- no, no. Sorry, page 675, and then the previous page, 674, and the previous page 67—

Yes, we have a long email from Peter Moir, Deputy Project Manager. Can we start-- Go to 672 and we'll look at the whole email, or 671 even? So, if we scroll down, we have an email that you eventually get copied into – you don't originally get sent – from Mr Moir to Dr Inkster, copying in Mr Walsh, Professor Williams, Mr Powrie, and Mr Loudon, and the answer to the questions follow. Now, you don't get it until 20.40-- a little bit later in the following email, but if we read this through, you've got answers to your questions.

So, "What was the original specification for the ventilation in the adult BMT unit..." over the page. Do you remember receiving this email?

A I think we did get that from Dr Inkster, and I'm wondering if that's what I'm thinking around. I will check the specification to see if we actually got it or whether we got just this email.

Q Well, the specification email is slightly earlier on. It's about a day before.

A I'll check.

Q Because the way that I was thrown by this is that-- and I wanted to understand what you would have taken from it, is that the email doesn't describe the specification. It just attaches a series of documents, and there is a clinical output specification, and there is the clinical output. So, at the top page for 4B:

> "This document includes the original COS for 2009 and the COS for the Compensation Event issued to Brookfield Multiplex workplace in 2013 to increase number of in-patient beds in this ward to 24. "

Now, at this point did you know that it was 2013 that ward 4B became a BMT unit, that it was a novel thing since the contract had been signed?

A So, if this is after my meeting with Dr Inkster----

Q It is.

A -- Dr Inkster would have advised that it was a later-- it wasn't a

purpose-built document.

Q Yes, and so what I'm trying to understand is that we obviously haven't got the attachments, and this document doesn't have, for example, a handy table listing air change rates, or the presence of filters, or lobbies, or pressure differentials. And you at the time would have received all the attachments, and so at this point, which is in November of 2015, focusing on ward 4B, did you know what the-- whether there were HEPA filters fitted to the bone marrow treatment rooms, or indeed to the whole ward?

A I can't recall if I knew or not. I'd need to go back and look at the document.

Q Would you have known at this point the air change rate for this ward?

A I think that was where we first learned that the air change rate from there was two-point-something.

Q Two-point-something. What do you think it should have been for a bone marrow treatment ward?

A Ten.

Q And if we go to the previous page, 672-- 671, sorry, we have another email from Mr Moir discussing air permeability tests, and this exchange on the previous-- It ends at this point. So I wanted to understand-- At this point, you seemed to have realised that ward 4B had a lower air change rate than you thought was appropriate. At that point, did you know what the, for example, pressure differentials were between the rooms and the corridor in the ward?

A I'm not sure if we did. There was no patients in the ward, and this was us trying to find what was-- So I'm not sure if I could say exactly what they were at the time.

Q Would you have noticed whether there were what you would have later learned to be chilled beams in the rooms?

A I guess----

Q Or had you even worked out what a chilled beam was at this point?

A No, I don't think chilled beams were discussed at that point.

Q Would you have noticed whether there was a suspended ceiling or a hard ceiling in the wall at the time?

A So I-- Do you mean from this email or----

Q At this time in November ‘15?

A So, at this time, no. Yes, I would needed to have gone in and had a look. So I'm only going on what I've got.

Q So at this point you know the air change rate is less. You don't know some of the other details.

A So I suppose what we're asked for is we're looking at specification for going forward. So we want to know what they've got, but we're perhaps more

interested in what the proposal is for the patients coming back.

Q I appreciate that, but if we can go back to 672, it seems that you're also provided with the specification for the ventilation of the paediatric BMT unit. Now, I realise you haven't been asked for help in respect of the paediatric BMT unit, but if you asked for this question as a benchmark, at this point would you have known what the air change rate was in the paediatric unit?

A I don't think so. It doesn't say. I need to look at the attached document.

Q So if the attached documents contained that information, you would have known it, but if they didn't contain it, you wouldn't have known it. Is that effectively your position?

A Yes. So we were----

Q The-- Sorry, carry on.

A Sorry. So we were focused on ward 4B on adult. My recollection is later on in the process we had listed a few other areas, of which the paediatric BMT was one area we offered support, which-- the offer wasn't taken up on until late 2017.

Q The question that-- I think it's slightly hypothetical, but I'll try and phrase it in a helpful way. The Inquiry understands – and it put it out in a PPP position paper about ventilation – that the clinical output specifications proceed that ventilation strategy document that you didn't feel you were able to comment on and that the change of the air change rate happens after the clinical output specifications are written, and so if you'd received this list, it might not have contained the 40 litres a second air change rate, and I'm wondering to what extent you would assume compliance with the the air change rate of 10 air changes per hour, or would you investigate that at the time?

A For going forward? I mean----

Q Well, you've asked what is the current specification?

Q So that's what it is. So if they'd come back and said it was 10, then that's fine, we don't need to look at what it should be.

Q Yes.

A So that's our reason for asking to understand what their baseline is, to see what they're trying to get to. We wouldn't have commented on what they had, given that we were trying to get them to a place or give advice as to what's acceptable for repatriation of the patients.

Q I understand that, but it occurs to me that if you notice that the adult BMT was running at 2.-something-- air change is 2.5, I think, 2.5 air change to 3 air changes per hour when it should have been 10, and you notice that and it's

something that you're aware of, surely you would have been aware at the same time of the same number in the paediatric BMT unit, and shouldn't that have triggered something?

A Not necessarily because the paediatric BMT unit was a purpose-built unit, and it wasn't being flagged up as an area. So we only know what we know. We're only involved in the areas we're asked. So it wasn't highlighted as an issue, you know, by the board team.

Q Okay, right, what I want to do now is to move on to bundle 13 documents-- document 116. Now, this is a document I suspect you've not seen and they're a sequence of minutes produced internally somewhere within GGC about the relocation of the adult bone marrow treatment unit, and I'd like to look at this page and the fifth paragraph. I wondered if you were told what's in this fifth paragraph at the time you were supporting GGC in respect to the adult bone marrow transplant unit, "With regard to BMT, it was agreed the potential solution would be to increase the air flow and ventilation to ward 4B." Do you remember that being in discussion?

A (inaudible)

Q So, this is the fifth paragraph down, "With regard to BMT, it was agreed that the potential solution would be to increase the air flow and ventilation to ward 4B."

A Yes.

Q Do you remember that being something that was talked about?

A Not at the time, but yes. That was----

Q When was it talked about?

A Well, that would have been part of the ongoing work to try and-- for the refurb, for the----

Q Right, so do you see the next sentence? "The aim of this being to increase the pascal measurement to between 5-10." I'm assuming the pascal measurement is the pressure differentials?

A Yes.

Q "And increase the air exchanges the room to 12 per hour."

A Yes.

Q Do you remember that being something that had either happened before you got involved or you were told about? I don't think it did happen before we got involved. I wasn't aware of it.

Q Well, the reason that it might have done is this document appears to describe something that happens on 1 July 2015, which is four months before you got involved. Were you told they'd tried to get it to 12 air changes now and not been able do so?

A (No audible response).

Q No, okay. Were you told about the four bullet pointed actions that were discussed to be taken?

A No.

Q No, okay. So, we can put that document away. This is a very high level question: as far as you understand it, when did you personally realise that the general wards in the hospital were operating at 2.5 to 3 air changes per hour?

A I can only say with certainty it would have been around 2018 because we had no other-- other than supporting some IMTs over the period and air changes not being raised, it was when I was supporting the incident with Schiehallion that----

Q You see, the reason that I need to press you on that is you've just explained to me that in November 2015 you realised that ward 4B was operating at 2.-something. Now, if ward 4B was operating 2.-something, why wouldn't the rest of the hospital been operating at that level?

A But we're not Infection Control on the site. we're a national organisation that provides support. We weren't asked about any air change issue or rates or providing support anywhere else. So even if they were of a reduced rate, we could presume that the Board-- IPCT were dealing with that or-- We weren't asked for support so----

Q I understand that, but I suppose the problem with that is that – and I accept – if it's the case that the whole-- or the general wards in the hospital were operating at 2.5 to 3 air changes an hour because of some decision made as part of the procurement exercise, the primary cause of that would be the people who made that decision, and that's not HPS or any part of NSS. But HPS is an advice and support organisation for infection control, and you come in independently from the Health board. You, to some extent, investigate and ask questions and, perhaps not in a very formal way, you're almost part of an audit checking system to some degree. Would you accept that?

A We don't have a scrutiny function, but to an extent, we're only there at the invite of the board.

Q I appreciate you're only there at the invite of the Board, but, once you've been invited, how do you respond to the suggestion that you collectively, the team supporting from HPS, should have put two and two together and worked out that every ward, potentially, was like this?

Q Perhaps on reflection, we could have had a conversation with the Board's team to ask if they were concerned or what the air change rate was, but I certainly didn't have that

conversation.

Q Okay, now, what I want to do is to move to your SBAR, which is bundle 3, document 4, page 36, which I understand is December ‘15. Now, it's a long SBAR and there's lots of these, but I'm just sort of slightly dipping in and out of them. I wonder if we can go to page 39 in your recommendations, and you set out a list of recommendations.

A Yes.

Q Now, the first one is that the rooms be positively pressured at 10 pascals, and the eighth was that bedroom air changes to be 10 air changes per hour. Now, this is December ‘15. It's therefore five months after that test that we've seen in the previous document from the first July when someone tried to increase the air change rate and the pressure and didn't succeed. When you gave these recommendations, did you know that they couldn't achieve them with the current ventilation system? You're shaking your head?

A No.

Q No. So why were you making the recommendations?

A Did we know you couldn't achieve them?

Q Yes. I think I'll rephrase the question. I'll rephrase the question. When you made the recommendations, were you aware that the system that was then in place couldn't achieve these outputs?

A I don't believe we were, no.

Q So what was it that you thought you needed to change in this ward?

A I'm not sure I'm understanding where you're going with this, so----

Q So, you got involved in 24th November-- 20th November for the meeting with Dr Inkster, and within a month you've produced an SBAR?

A Yes.

Q We've seen some emails, and you've had a meeting or possibly more than one meeting. I take it you've probably been on a site visit by this point? Yes, you're nodding.

A Yes.

Q Do say things because there's a transcript being recorded.

A I know, sorry.

Q Whilst I appreciate we can read what you're recommending, I'm quite interested to know whether at the time you thought the system that was then in place could achieve, without physical changes, 10 air changes per hour.

A So, I suppose we're given recommendations as to what we would deem to be acceptable to allow these patients to move back rather than what the Board can achieve, or what the current situation----

Q Right.

A So this is what – in conjunction with my colleagues in HFS and Peter from Public Health England – we have agreed is what would be required to allow the patients to come back to that unit.

Q So this is a standard as opposed to a compromise, "We can get there"?

A Yes.

Q Right, and you explain in your statement that GGC didn't follow this SBAR's recommendations.

A So that's my understanding because we continued with some dialogue through, and it wasn't until 2017 again that we were asked to revisit the SBAR. From two purposes, we were asked to revisit the SBAR to clarify whether anything had changed and whether our recommendations would change as a result of guidance, which they didn't. We were also asked to consider the environmental sampling. So I think Dr Jones had asked for some support around what sampling would be required prior the patients being moved and for the first period of time during the move. So the 2017 SBAR accompanied the 2015 SBAR, and thereafter the patients moved.

Q Can we look at the 2017 SBAR, which is document 7, page 57? So this is, in a sense, the replacement SBAR.

A It goes along with.

Q Along with it.

A I don't think it replaces. It goes along with.

Q Right. What I'd look-- look at page 58----

A Because I think----

Q -- which is the recommendations.

A -- from memory, the recommendations are predominantly on microbiological testing.

Q Yes, but there is a section in the assessment, which I'm intrigued at. See this list here? We have the bullet points, which are----

A Yeah.

Q -- as you say, are substantially the same, and then we have a-- this is in October '17, a paragraph:

> " NHS GGC have confirmed that the rooms met 10 PA, however fall short on air changes, six air changes per hour instead of the recommended 10."

And then there's a discussion of dilution.

A Yeah.

Q And so, firstly, are you content with the-- Well, firstly, when did you become aware that that the system could only achieve six air changes per hour?

A I can't be specific on that. I

don't know. I'd need to look.

Q Might it have been at the time of the creation of the document or sometime before?

A Before the 2017 document?

Q Yes.

A Yeah. It would have been till I was to write this.

Q Because did you see, have a set out-- here-- or you have set out here an analysis of the primary focus of protection is by HEPA filtration.

A Yes.

Q Do you see the fourth sentence:

> "The main focus from protection of the immune compromised patient is to ensure protection is provided from an outdoor contamination by HEPA filtration. "

A Yes.

Q This paragraph and that particular sentence, has that come to you from GGC, or is it that your-- you and your team's conclusion?

A I think that's our team's conclusion. I think what's come from GGC would be information on the air changes, but that looks-- yeah.

Q Because I'm reading this, I don't know whether I'm right, and I must check, that this is almost a reluctant justification/acceptance of six air changes an hour because of the presence of HEPA filters. Was that fair?

A Yeah. Yeah, that's fair.

Q To what extent do you think this sentence about:

> " the main focus from protection of the immune compromised patient is to ensure protection is provided from outdoor contamination by HEPA filter..."

Has application outside ward 4B to other patients in other wards who are immunocompromised?

A So, yeah, that would apply.

Q So, if, for example, there were immunocompromised patients in a general ward in the hospital without HEPA filtration, would that cause you any concern?

A So, you don't have HEPA filters in routine standard wards. I think it would be around patient placement and where you would place your patients----

Q Yes, so just if we think hypothetically-- or not even hypothetically. We know that later on in 2018 patients who were-- who had previously been in the cohort that would have been accommodated in ward 2A----

A Yeah.

Q -- were moved to ward 6A, and we're also aware that at various points

non-BMT haemato-oncology patients from ward 2A and some non-BMT haemato-oncology patients in the adult population were placed in wards in the general hospital in the tower and that those wards didn't have HEPA filtration. Would this sentence apply to them and the need to have HEPA filtration?

A So, yes, it would, but that was a very different set of circumstances and I'm sure we'll come on to it, but----

Q Well, I want to come on to it and talk about risk and how risk works and the idea that there's more than just absolute risk. So I will come back to that when we get to that particular scenario.

I think this is-- the question is going to be, "No I don't remember," but if we look at this SBAR and this section here and we look back to what you knew when you were working at GGC, were you at the time aware of any contrast or any change that had happened between 2009 and 2017, or is it you just don't remember what was being talked about in 2009?

A I left in 2009, so, I-- what----

Q So, remember we talked about your involvement in the competitive dialogue. In 2017, did you have any memory of what had happened about ventilation in the competitive dialogue?

A Yeah.

Q Right. Now, I want to look at the involvement – if we could take that off the screen, please – involvement of HPS in ward 2A in November 2017. So, again, you've explained in your statement that HPS were not asked to provide assistance until November '17. Who made the request for assistance?

A It was Sandra Devine, I think, who contacted me. I met with Sandra Devine and Brian Jones at Glasgow Infirmary. I do recall meeting them there to discuss.

Q So, you mention that on page 14 of your statement. So, if we get to page 14, that would be really wonderful. Yes. Now, paragraph 17, I want to start to, sort of, see if we can expand this a little bit. So, you've described in the statement that you were contacted by Sandra Devine seeking advice and specification about the ventilation in four rooms for patients who required bone marrow transplant. Now, at this point was there any discussion of the ventilation in the rest of the ward?

A No. No. This was a request from Sandra Devine and Brian Jones. I understand that they had been contacted by Dr Peters around the non-compliance with the unit, and they were seeking some support around that. That's----

Q Well, let's look at your SBAR.

A Okay.

Q It might help to prompt. So, bundle 3, document 8, page 62. So, this

is an SBAR in January 2018. Were you involved in producing that?

A Yes.

Q Yes. Now, would it be fair to say that this is a SBAR about the eight positive pressure ventilated lobby rooms in the Schiehallion ward?

A Yes, that's correct.

Q It's not an SBAR about the whole of the ward.

A No.

Q And if we go to page 64, you're discussing how the-- the standards that you would like to see for each of these rooms.

A Yeah.

Q And it's not that dissimilar to the previous SBAR except this is just about rooms, not the whole ward. Is that right?

A Yeah, that's correct.

Q You're nodding, yes. So, the thing that occurs to me is that we've heard some evidence in the previous hearing for Glasgow about how the Schiehallion patients used various facilities in the ward, for example, the Teenage Cancer Trust rooms in and around the ward, and whilst I appreciate that, at times, patients would have stayed solely in their room when there was a clinical requirement for that to be done. Is there any issue here that-- Is the context of where the rooms are located and what the ventilation standards are immediately outside them relevant to the safety or otherwise of the patients who are being treated there? So, if you have a patient in one of these eight rooms or one of the four rooms that's eventually fitted, and in that room they had the benefit from HEPA filters, 10 pascals positive pressure, it's a sealed room, they have a high air change rate and that's all good, but immediately outside in the corridor, if they go anywhere else in the ward, they're in a different environment-- Were you asked to provide any support about the ventilation in the rest of the ward?

A No, it was only these eight rooms.

Q And so to return to my point – I think I know what the answer is going to be – given that you knew there was a problem with the air change rate in the adult hospital in ward 4B, would it not have been appropriate to think, well, what's the air change rate and the HEPA filter situation in the rest of this ward?

A So, yes, on reflection, absolutely, but we were only asked about the eight rooms, and given that we had offered support previously to look at the Schiehallion unit, these were the only rooms, so----

Q This is all you were asked to look at?

A Yeah.

Q Right. Okay. Now, in question 23, almost at the break, 23A of your statement on page 19-- Now, this is in the context of a 2016 report. I think it's a (inaudible) amber in respect of Aspergillus in the Schiehallion unit, and you're being asked to comment on this. You weren't involved, but you're reporting something which struck me as might just justify a question. Do you see in the answer you've gone-- you discussed events on 5 August '16 and then four lines down:

> "These were non bone marrow transplant patients in the early stages of treatment for haematological malignancy..."

Are you able to tell me – and if it's not your experience, then please do tell me – about where those patients fit into the concept of a neutropenic patient in terms of SHTM 03-01?

A In terms of where they would be positioned in the ward?

Q So, are they neutropenic patients in terms of SHTM 03-01?

A So, I would guess they were neutropenic.

Q Well, it's not the guessing I'm looking for. It's whether you have experience of this.

A That would be-- I would rely on the clinical staff to tell me whether they were immunosuppressed at that stage or not. I could not comment on that.

Q So, from your point of view, are you able to help me about whether the Inquiry should be taking the view that all the patients in the haemato-oncology group in the Schiehallion unit were to be seen as neutropenic for the purposes of SHTM 03-01 or is it more complicated than that?

A So, I think it's more complicated because I don't think they are all-- It's haemato-oncology and I think there are some patients who aren't immunosuppressed as such from an oncology perspective.

Q Right. So there would be-- some would be, some wouldn't be.

A Yeah. That would be my understanding.

Q And then it becomes a question of whether there are sufficient rooms at the highest standard.

A Yeah.

Q I see, right. You're nodding, right. The question 29, I think we'll pick this up just briefly, on page 22-- 23, sorry. You're asked about-- Sorry, question 30 actually on that page. You're asked about positive pressure ventilated lobby rooms, and you refer to HPN 04-01 supplement 1 and SHPN 04 supplement 1, and it-- you quoted:

"This supplement does not describe the specialist facilities required in infectious disease units or on wards where severely immunocompromised patients are nursed. Guidance for these facilities will follow in a further supplement to HBN4. "

Now, there hasn't been one at that point. What I wanted to understand is you've clearly done an SBAR around these eight rooms as positive pressure ventilated lobby rooms. To what extent was there any discussion about whether those rooms were appropriate for those patients who were receiving bone marrow transplants who might be described as severely immunocompromised.

A So, my understanding was that was what the plan was from the board to have rather than-- because it wasn't a new fit ward that was-- they were trying to work with the fit of the ward that they had. We didn't have any discussion as to whether they should be not PPVL rooms but isolation rooms.

Q There's a lot in there. I'll try and break it down.

A Okay.

Q You seem to be saying that the board was trying to work with what it had.

A Yes.

Q But this was a new hospital.

A That's my understanding-- Yeah, but it wasn't in the build stage that the patients were in, so we hadn't been asked for input at the build stage. This was in the current fit of the ward.

Q But you appear from the SBAR to be saying that it would be appropriate for this group of patients to be in a positive pressure ventilated lobby room, and yet you're telling me in this response to the statement that the guidance doesn't describe facilities for this group of patients. So, why do you think it's appropriate to have these patients in the PPVL room?

A Because it's a room that would offer them some protection. HPN 04-01 from England has been updated recently, and the exclusion for severely immunocompromised patients has been removed.

Q It's been removed. So, if there was an issue----

A That doesn't apply to Scotland.

Q Doesn't apply to Scotland?

A Not yet.

Q Not yet. So, the position would be that now there is some evidence that this qualification has been removed in England, but back then, when the SBAR is being produced, you're attempting to make maximum use of the facilities you've already got.

A Yeah.

Q Right. I think, probably, my

Lord, this might be an appropriate time to have a short break.

THE CHAIR: Very well. We're at 25-past. Ms Rankin, could I ask you to be-- We'll take a coffee break as I indicated earlier, and could I ask you to be back for a quarter to 12?

THE WITNESS: Sure.

THE CHAIR: Thank you.

(Short break)

THE CHAIR: Mr Mackintosh.

MR MACKINTOSH: Thank you, my Lord. Now, Ms Rankin, I'm going to have to go back and just check a few things with you. In one case, I might have misspoken, and I want to check something else with you. Can we go to bundle 3, document 8, page 62? So, this is the SBAR that we were looking at. 62. No, 62. Which we looked at a moment ago, which is for the eight positive pressure ventilated lobby rooms.

Now, the only minor point to mention here is that this SBAR, and we've discussed it, is about the eight positive pressure ventilated lobby rooms. Would they actually have been in ward 2A, not 2B?

A They're 2A. That's----

Q So that's an error at the top of the document?

A Yes.

Q Had you been asked for any help about 2B?

A No.

Q Now, if we could go back to the moment where-- In fact, if we go back to your SBAR for the children's-- for the adult bone marrow, which is page 36, when we were just talking about this document, you described, and the email preceded it, and the email of Mr Moir, you said that the air change rate was "2.-something" and I then put to you that it was 2.5 to 3. Now, in the break, I've had the opportunity of looking at our original position paper, working through the chronology, and I want to just put an alternative to you. Could it be that the rate in ward 4B, at this point, was in fact 6?

A I can't remember.

Q And, if it was in fact six, where would you have got the idea that there was some ventilation at "2.-something" from?

A So, I don't know if that's because I know now that I'm making the presumption that it was two-- I would need to review. I cannot-- Because the focus was on what we were trying to get to, so that could be my error.

Q So, in a sense it was you're recommending to the Health Board to get to a higher standard which, in this case, is 10, how they get there is a technical problem?

A Yes, absolutely.

Q Very much for----

A Glasgow.

Q The Technical Team to do and, in a sense, it doesn't very much matter what it was at the time other than the fact it needs to get better. Is that a fair point?

A Yeah. Yeah.

Q Right. Well, why don't we take the opportunity to-- Also, I think I might have put words into your mouth as well in respect of chilled beam units. I think I asked you a question about chilled beam units in ward 4B in 2015. Could it be the case that there were in fact no chilled beam units in ward 4B, it was the only ward in the hospital that didn't have them?

A I genuinely can't remember.

Q Now, I think this would be a good opportunity to ask you about something I said I would come back to, which is risk and how risk works in the context of the fitting out of a hospital ward which is in one condition where you have a set of aspirations as you do in these SBARs. When you're considering whether it's appropriate to treat a particular cohort of patients in a particular ward, is it a question of an absolute no-no if it doesn't meet these standards or is there something more sophisticated going on when a risk is assessed?

A So, there can be a risk assessment. It's a facility that needs to provide care and if there is someone requiring care and you don't have that facility then there could be a balance of risk, there could be a risk assessment. I don't know if you're asking me something more specific than that, I'm sorry.

Q No, I'm not at the moment, just exploring the idea. So, could you, for example, have a scenario where a particular ward or room doesn't quite meet a particular standard that's provided for in some guidance but you have a patient in the hospital who requires to be treated for whom that is the best available room and you might decide to treat them there because there is no alternative other than perhaps sending them a long way away? Is that the sort of thing you're discussing?

A Yeah, you can have that because, if that patient needs care and that's the only place that they can get care-- but it could be more compound than that and another patient might be moved out and they're moved into a better room and, you know----

Q So you might cascade patients through the hospital?

A Yes, yes.

Q And when you move away from the level of a particular patient or a particular moment in time and you start

thinking about the procurement of new facilities, where does-- or retrofitted facilities, how does risk relate to the-- Well, actually, I'll ask a specific question. When you did the SBAR for the adult bone marrow transplant, the second one, you're told you can't get to 10 air changes an hour and your text that we looked at discusses the importance of HEPA filters. Is that an exercise of you effectively balancing risks to what is achievable in a space?

A Yes, you try and get it as safe as you can to allow the patients to come back.

Q Is there any difference in the way you should approach this between a retrofit of an existing facility and the building a new one? Should you always try and achieve the standard new one or are you allowed to compromise?

A You should always build a standard new one.

Q Okay. What I want to do now is to turn to-- go back in time to 2015 and start looking at healthcare-- potentially healthcare acquired infections that you and HPS are involved in the hospital. I'm conscious that you weren't involved in all the reported cases, and I'm conscious that the Health Board doesn't have to report every potential healthcare acquired infection to HPS now (inaudible), and so what I'll try and do is focus on the events

that you were directly involved in----

A Okay.

Q -- unless I'm looking at a sort of practical policy-type question about-- arising from it. What I want to do is-- you've through-- In your statement, you've gone through in detail; we ask you about a particular infection. Sometimes, you say, "I wasn't involved but I can tell you this..." and I'm assuming that comes from the records of ARHAI----

A Yes, that's correct.

Q I'd like to go to question 13 (c) in your statement, which is on page 12, and this is about Aspergillus. Is it Aspergillus or Aspergillus?

A Aspergillus.

Q Aspergillus, and it's a request for help on 13 November 2015. Sorry, I'm in the wrong place. Question 23 (a), so at page 19, so this is an incident on 5 August 2016, when NHS GGC report increased incidence of Aspergillus in patients in Ward 2A, and there were two cases, one confirmed, one probable. Now, you weren't involved in this case.

A No.

Q But you also described, in question 29, a-- on page 26, that there was a-- sorry, 27. There was a report for another Aspergillus report in 2017 on 7 March 2017, and I don't think you were directly involved in that.

A I'm not seeing that, sorry.

Q Sorry, page 27, third bullet point from the bottom.

A One, two, yeah, got it.

Q Yes. Were you directly involved in that?

A No. That looks as if it's-- because it's a bullet point, it looks as if it's been a HIIAT Green, where we would have very minimal information. It's just reported in as part of the HIIAT Green. So, that's all we must have on it, in that it's Neonatal Intensive Care Unit with a probable invasive fungal infection.

Q The reason I'm going through these is because I'm looking through a document that the HPS has provided, which is in Bundle 27, volume 3, document 25, which is a spreadsheet. I wonder if that can be put on the screen, yes? So, it's document 25 page-- or page 482 is the spreadsheet. Now, if I understand this correctly, this is a report of all potentially environmental infections reported to HPS, yes, over the period from October 2015 to November 2019.

A Yeah.

Q And what I want to explore with you is with-- in respect of two different infections, is the sort of issues that arise about-- from the fact that a health board doesn't always have to report infections to HPS, and so I had noticed from this spreadsheet that Aspergillus was reported on three occasions. Once, the one we looked at, on 5 August 2016, as you can see six rows down. Another one on 7 March 2017, which was a red, on 7 March '17, and a further one much further down the page, almost at the bottom, seven from the bottom, which was on 20 July 2018. Now, it seems there were other infections in that period of time. I'm conscious that the-- is it fair to say that the National Infection Prevention Control Manual doesn't require every infection to be reported?

A Correct.

Q And, in fact, there's an assessment exercise to be carried out by the Health Board, by its Infection Prevention Control team, and this is this HIIAT system.

A Yes.

Q And before a date in 2016, greens didn't require to be reported.

A That's correct.

Q Right. Does that not create a risk that you will have an imperfect understanding of infections in a hospital?

A Yes, it does.

Q And how do you deal with that as an organisation?

A So, going forward, the HIIAT is being reviewed, so that it's clearer when boards should be assessing and when they should report in. When we first-- Greens became mandatory around 2016

for----

Q This is mandatory to report?

A To report the greens. You always had to report amber and red. You didn't always have to report greens. Initially, when greens were reported, they were reported by the board on a weekly basis, and they gave you very limited information and that's why sometimes they're just-- when I've given you my response, it's just a line. We very quickly realised that there was a risk in that we're getting weekly summaries without any detail, so we now review the greens as well as the amber and the red, and look at them a bit closer, but going forward from the HIIAT assessment, on top of the HIIAT, there's-- It's not as straightforward when it's an environmental link, so when you look at your categories as to how to assess etc., it's not always as clear-cut with environment. So, we're looking at how we can----

Q Because it occurred to me – and I wondered what you thought about it – that if it's the case and it seems to be the case that there are more PAGs and IMTs and discussions about Aspergillus in the hospital in this period when there are reports, that-- you can take this off the screen for the moment-- that there's a risk that HPS won't understand, as it were, the trend----

A Yes.

Q -- or the context, and what sort of changes do you imagine might address that, other than simply being-- having to be told everything, which just doesn't solve the problem because then you're the ones with too much data?

A I think we have a minimum data set for reporting in, but if we are unsure, particularly more so over recent years, we will go back to the board and seek clarity. Sometimes, that's not always welcomed, because there's a-- you know, there's-- I wouldn't say a lack of clarity in our role around this, but sometimes when you go back to a board to question, they don't like you questioning for a better understanding.

Q Because with this particular----

THE CHAIR : Sorry. Can I encourage you to----

A Sorry, yes.

Q It's-- I mean, it's very difficult, and I recognise entirely that it's largely due to me. It's not that I'm not necessarily hearing you, it's-- I think sometimes you're speaking to the screen.

A Right, okay, okay.

Q So, if you can just sort of, as I say, bear in mind that I'm very anxious to hear what you say and I'm not always just getting it.

A Yeah.

MR MACKINTOSH: So, if we think about this particular micro-organism,

Aspergillus, which I understand is often airborne.

A Yeah.

Q You, as an organisation, get brought in to look at the haemato-oncology isolation rooms in November 2017. By this point, there have been three reports through the system. Is it unreasonable not to suggest that beyond simply providing advice about the appropriate standard for those isolation rooms, that there's not some dots to be joined between the fact that you are getting reports from the Health Board through the HIIAT system in respect Aspergillus, and now you've got a-- to some degree, subpar ventilation system? Should you not have, as an organisation, HPS, not the Health Board, HPS, have started to widen your interest at that point?

A So, perhaps and on reflection, yes, maybe we'd have considered that, but if we can look at timing of that, my recollection is the SBAR was given. We were involved from November. The SBAR was given to Glasgow in January, and their involvement with the water incident took over in the area from March. So, we were very much involved with the Board around the water incident rather than the-- and there was no more Aspergillus at that point being reported.

Q Well, yes, and so I'm wondering whether, because the water incident sort of took off, and we'll get to it in a moment, that it could be that concerns about the ventilation systems, as it were, lost attention in 2018?

A So, I would agree that, but we hand over the SBAR. We don't follow up. We have no remit or role to follow up an SBAR, so we've given the recommendations to the board and I suppose, if you like, that's it almost closed, and it's over to the board. So, did we pick up again around what was happening with the SBAR as part of the water incident from 2018 onwards? No, because that was myself that did that and I did not pick up and----

Q But you said you don't have a remit to follow up.

A Yes, that's correct.

Q Right. What I want to do is to look at a particular bacteria that arises and is discussed at some length in '19, but which might have some earlier roots, which is Mycobacterium Chelonae. Now, from your point of view, to what extent is Mycobacterium Chelonae unusual? Is that the wrong way of putting it, or is there----

A No. So, maybe to put it into context, I've been an Infection Control nurse for quite a number of years and I've never had a referral of a Mycobacterium Chelonae. So, it's-- I would class that as

an unusual organism.

Q Because if we go back to the table that I was looking at before, which is page 482, and it seems a shame-- seems a shame to reduce patients down to a spreadsheet, but I suppose it's what I'm doing here. If we look on to the second page, the next page, we see an entry on 20 June 2019, as a Red reported for the Temporary Paediatric and Haemato-Oncology Ward, for GNB and Mycobacterium Chelonae. What will GNB be in that----

A Yeah, gram-negative bacteria.

Q Gram-negative, and the Mycobacterium is not a gram-negative?

A No.

Q It's a gram-positive.

A Yes.

Q And as you say, it's a little bit unusual.

A Yes.

Q Now, the Inquiry has some evidence that there was a case of Microbacterium Chelonae in the early months of 2016, which we found in the bloods, BSI, in some data that the Inquiry's experts have been provided with. I take it you wouldn't have known about that.

A It wasn't reported into us.

Q No, and in the IMT notes for the summer of 2019 – I can go to it if necessary – there is discussion of how there'd been an earlier case in February 2018 in a paediatric patient. Do you remember that case being discussed in 2019?

A No I don't.

Q But that case doesn't appear. In fact, neither case appears in the reporting list on the spreadsheet we've got on that screen at the moment. Now, we've got to work through the evidence of whether this is entirely correct over the rest of the hearing, but I want just to put to you some thoughts I've had.

A Okay.

Q And some questions: if it's the case that there were three Mycobacterium Chelonae infections; one in '16, one in '18, one in '19, and it's only the one in '19 that gets reported, what does that say about the efficacy of the rules and guidance about reporting infections, because is there ever a time you shouldn't report Mycobacterium Chelonae?

A It's an unusual organism, and you should be reporting-- you should be assessing and reporting.

Q Because people talk about unusual organisms a lot in this-- in the material. What do you mean by an unusual organism?

A One that you don't see commonly. I don't really like to use the word commonly, but unusual is one

perhaps that differs slightly, that's not reported, or you don't see regularly, and there is a number-- Mycobacteria Chelonae is one. There's a number of gram-negative-- Cupriavidus was another, that as an Infection Control nurse, never mind as a clinician, that you don't see on a-- I don't like to use the word routine, but as part of a gram-negative results.

Q Because how, from your perspective, should an Infection Prevention Control Team react to a single case of Mycrobaterium Chelonae if they come across one? Should they be triggering it to HPS ARHAI?

A So, they should be doing an assessment. So they might trigger it, and they might consider it a green.

THE CHAIR : Sorry, they should be doing a?

A An assessment, HIIAT assessment, but they should be-- I don't think it just comes down to-- HIIAT assessment's a bit of a reporting tool. As long as they're investigating it, they're managing it, they're looking at the case, they're looking at whether it was acquired or potentially acquired within the unit and what kind of controls do they need to put in place, all of that should be going on in the background. The assessment and the reporting in is just part of that, but you tend to have some level of assurance

that, if it's been reported in, that it's actually been dealt with and looked at.

MR MACKINTOSH: If it's the case – and we still need to explore it was other witnesses – that these 2016 and 2018 cases didn't prompt PAGs or IMTs, would that-- and they weren't reported in as greens or anything else, does that put into-- does that rather challenge the efficacy of the system, both in Glasgow as an organisation but also of reporting because people aren't reacting to unusual infections?

A Yes.

Q I appreciate that HIIAT is being reviewed within ARHAI.

A Yes.

Q How would a health board-- an Infection Prevention Control Team set itself up so that it can spot unusual infections like Mycobacterium Chelonae when they occur?

A So you would rely very much on the laboratory and laboratory reporting to you and that's maybe where your microbiologist comes in to play, if it's reported via the microbiologist or your Infection Control doctor. No, but it's the laboratory that would pick it up. You might-- On occasion, the clinical staff, if the laboratory haven't identified it and it's reported to the clinical staff, the clinical staff might liaise with Infection Control Team to say, "we've had an unusual

blood culture" or----

Q Because the thing that confuses me, albeit as a lawyer not as anybody that has any understanding of this subject other than what I've learned, is how do you identify something that is unusual? What's the definition that triggers the response?

A I think it just fits with anything-- It's something you don't see in a regular basis.

Q And that's reliant on the microbiologists in the labs?

A Yes, because boards will have surveillance systems set up. You can't set it up for every single organism, so you're reliant on the labs because the labs will report it to the clinical team. So you're reliant on the labs perhaps when to report it to the clinical team who could report it to the Infection Control team.

Q How does the relationship-- or the working relationship and the team structure connecting the labs to the rest of the Infection Prevention Control Team-- how important is that to this process?

A It's very important.

Q In what way?

A Because you need to have two-way dialogue. You need to have the ability to report, but it doesn't have to be-- So, if your Infection Control doctor is part of your Infection Control team, it doesn't have to be your Infection Control doctor that you're relying on to report these to you. It can be your laboratory staff. I mean, perhaps digressing, but several years ago when I worked as an ICM when I first started, we used to visit a laboratory daily, and that was the old-fashioned surveillance system, and we interacted with the laboratory then. That was how you got your patient referrals, as such, but the interface between the microbiology staff and the Infection Control Team is very important.

Q What knowledge do you have about the-- We can take this off the screen. What knowledge do you have about the systems that were in place in NHS GGC in '15 to '19 for instructing the bac lab what to report?

A I couldn't comment on that. I don't----

Q Well, then I won't ask you. Right. What I'd like to do now is to move on to the water technical group and your involvement in that.

A Okay.

Q You've explained in your statement how you were asked to join the water technical group when it was set up by Dr Inkster in March 2018. Can you remember how the need for it was explained to you by her?

A My recollection is it was almost like a subgroup of the IMT. It was set up as-- as we were attending the IMT, we

were getting-- there was lots more testing going on, there was lots more results coming in, there was a lot of discussion on where do you put point of use filters that-- My recollection is that it was felt it was perhaps more Estates led, this part of the dialogue. So we would have a separate group looking at this and looking at the remedial measures such as chlorine dioxide dosing and give consideration to all of that.

So, that's my recollection as to why the group was set up, and it was to take-- partly to take the pressure off the IMT from a results point of view, but also to consider the control and remedial measures required for the water system, which fell slightly outwith the remit of the IMT, given that you had a lot of clinical staff present, etc.

Q And so what were the sorts of microorganisms that were the focus of the attention of the IMT and the water technical group at that time from what you remember?

A At that time, which would have been around March 2018, Cupriavidus was the main-- Although there was the case in '16/'17 and then the one in '18, it was Cupriavidus that was the trigger within the water system. There was Stenotrophomonas. I think there was Acinetobacter. I don't think in 2018 there was such a wide reporting of such unusual-- like the Delftia or Elizabethkingia. I think that perhaps came later on.

Q Would it be fair to say that most of these were gram-negative bacteria?

A They were gram negatives.

Q I'm not proposing to go through meeting after meeting with you.

A Okay.

Q You described it in your statement in some detail. What were the principal actions that were taken during 2018 to impact on the water system of the hospital?

A So, there was quite a number. When we became involved, there had been a number of IMTs, and I think there was a PAG and a number of IMTs, and it was at the point-- my involvement came at the request of Mary Ann Kane, who had called to say that they were having an IMT that afternoon and would myself and HFS attend, and that was following the identification of wider positive samples. So my recollection is that they had got positive samples in ward 2A, and they had been looking at perhaps moving some patients over to ward 4B.

Q I think we should look at this if it's going to go into detail.

A Okay.

Q So can we go to bundle 1, page 70? So this is an IMT from 19

March. Are we at the right place, as it were, in your narrative here, or is it a little bit later than this? This is the fifth meeting of the IMT on water.

Q No, I was there. I don't know whether I was at one before. I can't remember. That might have been the first.

Q I think this is the first you would've been at.

A Right, okay, yes.

Q So, can you give us what you recollect about this meeting at the time?

A So, at this point, there was issue or concern because they had wider positive samples over in ward 4B which they had been looking at because they were talking about potentially moving some patients over and, at that point, they were putting point of use filters on-- or considering putting point of use filters. I think at this point the control measure was to limit access with the water for the children.

Q So, we can see that actually on page 68. So, do we have some control measures being listed?

A Yes.

Q The fifth paragraph is fit point of use filters.

A Yes.

Q So, please continue.

A So, fitting point use filters, limiting-- There was staff dosing of the water which had been underway. I think that was all the control measures at that point, with some wider testing.

Q In the water technical group, was there ever a point when the condition of the water – sorry, I'm looking at the wrong bundle – prompted some realisations about where the problems were in the building? Do you remember there being a sort of realisation there was some issues?

A So, I do recall that we-- there seemed to-- So, initially the concern was, was the water positive at the tank coming through the system, or was it positive at the tap and going backwards? I remember going to various water technical groups, and there was sampling getting done. It would appear that further and further back was becoming more positive-- or more positive results like as far back as the risers, which----

A So let's go into that in more detail. We do have a minute we can take you to, which is a water technical group minute on bundle 10, page 9. So, bundle 10, page 9, is this a minute of a water technical group meeting, although it's called "The Water Review" meeting at the top, or is it something else?

A So, it looks like it, yes. I don't know why it's called water review.

Q It's from 13 April 2018. So it's about a month after you first went to an

IMT.

A Yes.

Q What I want to take you to, in case this is what you're talking about, is the next page. Do you see in the middle it says, "The group asks: 'where has already been tested?'" Do you see that section there? And:

> "It was confirmed that not all taps and showers tested, but there had been some random tests carried out in all areas of the hospital. These were noted at as 0 to 3 in Children's Hospital and 4 to 11 in adults."

A Yes.

"It was noted that every floor had positive and negative readings whereby this could indicate a widespread water infection." Is this the point you've just been talking about when there's a realisation it goes back in the system?

A Yes. There also came a point where we decided we would pull back on the testing because we knew there was an issue, and the focus had to be on remedial. So you would test to see the efficacy of control measures, but it was an acceptance that there was a widespread water issue, and it would be treated as a widespread water issue rather than targeting floors or levels.

Q From your knowledge and from your experience, when you say a widespread water issue, what do you mean?

A Throughout the entire new building site-- the new campus site of both hospitals, the RHC and QEUH.

Q And what sort of-- This is described in the document we're looking at as a "widespread water infection". What form does that take physically in the system? What will you find in the water if you have this sort of-- this sort of problem?

A I'm not sure what you mean----

Q So, is it going to be things floating in the water? Is it going to be----

A No, not necessarily. It's positive samples. So, if you have biofilm that's causing it, you might not have something floating.

Q Right, and where will the biofilm be in the system?

A It can be in the pipes. It can be in the pipe work. It's just a build up of of muck really, and sometimes when you-- sorry, I may be digressing slightly----

Q No, keep going.

A -- but sometimes when you dose or you put chemicals down, sometimes that can exacerbate the problem because it basically can sort of kill off the weak bacteria in the biofilm so the stronger survive and gets stronger and replicate. So, sometimes there's a

downside if you've done a lot of biocide.

Q So, when you've got in April to this point when you realise there's a widespread water infection as a group, are you involved in selecting what steps are going to be taken to address this?

A In terms of the chlorine dioxide plan?

Q That sort of thing. Were you involved in----

A So, I was part of the water technical group where it was discussed, yes.

Q Yes, and so what were the steps that were taken, as you saw, the most important ones to address the problems that have been found?

A So, there was the point of use filters, which were a short-term measure to make sure that, at the point of use, the water was safe, but they can't go on forever. That's not dealing with the issue. So, the initial proposal was to look at chlorine dioxide of the water and putting a chlorine plant in.

Q Were there any other steps that you're aware of taken to upgrade or improve or affect the water system? So----

A So, I know that ward 2A and 2B had their wash hand basins etc. replaced, but I don't think that was at that particular time that was agreed. There was also discussion-- and again my time's maybe not great, my time frame, but we spoke about----

Q Well, before we----

A Sorry.

Q Let's try and get some dates.

A No, I was just going to say the flow straighteners and the decontamination of the flow straighteners was another thing that was discussed, but again I'm not-- I couldn't pin to a day as to what----

Q Right, I think I'll just deal with that now. When you say flow straighteners and the decontamination of flow straighteners, does this involve a particular sort of tap?

A That was the Horne Optitherm tap, which I think were in place throughout the whole of the new----

Q And you can't help us when steps were taken to clean them and maintain them. You can't help us with timing on that.

A Well, it was definitely after 2018.

Q Right.

A It wasn't before. My understanding is there was nothing in place prior to that or nothing routine. There might have been an ad hoc, but there wasn't a routine plan.

Q I suppose what I can do now is take you to a meeting you were at that might help to wrap the section up, which

is the water incident debrief meeting, which is bundle 14, volume 2, page 211. Do you remember this meeting on----

A Yes, I do.

Q -- 15 May and your colleague Ms Imrie chaired it?

A Yes, that's correct.

Q We can obviously read the minutes, and we have done. What was the purpose as you understood it of this debrief meeting?

A So, it's very good to have a debrief after an incident, even if it's just a small debrief for lessons learned and what went well/what didn't go so well, but when you've had a fairly significant incident, then we would always recommend you had a debrief and it's better to have an external chair that's not been involved in the meetings. So, the purpose of that was to review what happened, the efficacy of the control measures and lessons learned.

Q From your recollection, what was the mood of this debrief meeting?

A So, I don't have a recollection of it being anything. So, it would have been okay. I don't think there was any tension or----

Q You think you'd have remembered tension?

A Yes.

Q Right, because it occurs to me that if we look at the date, May 2018, it's roughly halfway between the start of the water incident and the ultimate decant.

A Yes.

Q So, in a sense it's not the end of, from some people's point of view, issues with the water. Why do you think the debrief was held then?

A So, at that point, we felt that it wasn't the end of the incident as such, but it was the end of the acute part of the incident whereby the control measures have been put in place, the point of use filters were on, the chlorine dioxide to sanitise the system was being procured or underway, I can't remember, therefore, it was managed as business as usual.

Q Okay. What I want to do is I think I want to show you a document which I haven't given you advance notice of because it's in a volume that wasn't in existence on Monday when you got your list or on Friday when you got your list, which is bundle 27, volume 5 and it's document 19, at page 46. Now, I don't know whether you've ever seen this before, so I'm, sort of, slightly taking a bit of a punt here. This bears to be a full Incident Management Team report from June of 2018, and the reason I thought I might show it to you is you see at the top, it reports the lead of the chair is Dr Inkster----

A Yes.

Q -- but that your organisation is

present.

A Yes.

Q It then has dates of IMTs. It has the guidance, and if you go onto the page, a long way down through the document, you'll see page 54, and do you see there's actions arising from it and one of them is target-- a couple of them are targeted at you.

A Yeah.

Q So, is this a document you've seen before?

A I think I have seen it, yes.

Q All right. Well, maybe we'll go back to the beginning, back to page 46, and we'll just have a look at what's in there.

A I'm sure this is a summary from the debrief.

Q Well, that's what I'm hoping to find out.

A I think that's what it is.

Q So----

THE CHAIR: Sorry. Summary from the?

A The debrief meeting.

Q From the debrief.

MR MACKINTOSH : So, if we look at the bottom of this page, we have "type of incident" and then the causative organisms are described as environmental ground natives and fungi from biofilm and the main presenting illness as bacteremia.

A Yes.

Q And then there's a first of a list of primary exposures.

A I think that's an error.

Q Well, go over the next page you might see some other ones.

A Ah, so, it's not an error. Apologies.

Q There's a list.

A Yes.

Q So, we've got a list of "food, water, air, general environment, person to person," and, well, other doesn't seem to be described, and then the source of exposure describes contaminated water supply, and the duration of incident is given, and then in the-- you see what it says in, "Please note any other points on the type of incident" ----

A Yeah.

Q -- and it describes they're complex incidents, contaminated water supply. Now, what I'm wondering here is-- it's not immediately obvious to the reader of the document-- If we go to the very end, page 55, we have the Chair completing it, or not quite completing it. It's not got a signature, but it's got her name, Dr Inkster, on 5 June, and it's got a series of action points, and what I don't yet know is who wrote it, whether it's Dr Inkster or somebody else, and I wonder if you can help me.

A I think Dr Inkster wrote this, but

you would need to check with Dr Inkster----

Q Right. I will do that.

A -- but I'm sure Dr Inkster wrote it.

Q You're looking a little bit uncertain. Expand that.

A No, I think Dr-- I wondered whether that was something that Laura Imrie had written as Chair. I think Laura did a summary. I think this is Dr Inkster's, but you'd be better----

Q Well, I'll ask Miss Imrie on Friday and we'll see if we can pick it up with Dr Inkster. The question that you may not know the answer to but if you do it would assist is, would you have any understanding of how widely this was circulated?

A It would have gone to the circulation of the IMT membership. Beyond that, I don't know.

Q Is it reasonable or unreasonable to infer that it would go to the people listed on the action points on the previous page, that's on page 54?

A I think it's reasonable, yes.

Q Right, now, if we could take that off the screen, I want to ask you some general questions about the water incident and what it might mean and, again, if you feel this is beyond your level of expertise, please do tell me.

A Okay.

Q The first question is, I suppose, a counterfactual. We asked you about something called the DMA Canyon report and you have answered it, the question we asked, at question 21(b) of your statement, which is on page 17 of your statement, and also we asked you a general question, which we'll start with, which is the one at the top of the page. So, we asked you when you were first made aware of the DMA Canyon reports and you explained you couldn't specifically remember when they were, but it would be 2019. Can you expand a little bit on that? How would you find out about them?

A It definitely wasn't before 2018. I am not sure if I had heard reference to-- I don't recall DMA Canyon reports as such, but I'm not sure whether I'd heard reference via the IMT for the water technical group around the Legionella risk assessments and an issue with Legionella risk assessments prior to the 2018 incident. I don't know detail. The reason I have put 2019 there is I was aware of, in 2019, when we heard of the Innovative Design Solutions Ventilation Report for 2A, 2B, and my recollection is the DMA Canyon we saw around about that time, but I was aware that there was-- there had been issues with Legionella risk assessment reports, but I couldn't have told you it was the DMA Canyon

reports. That's what it was called.

Q There is in the bundles – I don't need to take it to you, because if you've heard about it, you'll know, and if you haven't heard about it, don't need to take it to you – a review carried out by a Mr Jim Leeper into these topics around the DMA Canyon report. Is that something you will have heard of at the time, or is that news to you?

A No, I don't think I would-----

Q Right, well, we won't talk about that. If we look at your second answer, 21(b), it's put to you that Dr Peters and others have said that if they had sight of these reports in 2015, they wouldn't have allowed the hospital to open, and you've taken a relatively robust position about how you would have dealt with that. I want to ask you a sort of different way of looking at this counterfactual. So, not whether the hospital would have been allowed to open because you, sort of, address that to the extent you're comfortable in that answer but how would knowledge of a failed Legionella risk assessment affect the practice of an Infection Prevention Control Team in somewhere like the Children's Hospital?

A So, you mean the Glasgow Infection Control Team----

Q So, let's imagine----

A -- rather than a national role?

Q No, let's imagine that you are

putting yourself in the shoes of, I think at this point, it would have been either Pamela Joannidis or Susan Dodd as leads of the team in the Children's Hospital in ‘15, ‘16, ‘17 and into ‘18, and obviously I've asked them this question and I just want to get your take on it. How would knowledge, simple knowledge, that the water system had failed the Legionella risk assessment impact on the way that an infection prevention control team would conduct themselves in a hospital like the Children's Hospital in Glasgow?

A I'm not sure I'm understanding what you mean with how would they conduct themselves?

Q So, is there a difference in the way that an IPC team reacts to news of infections when they know that there's a failed Legionella risk assessment with all the consequences that flow from that, or when they don't know that? Does it change the way they behave knowing that there's a risk?

A So, if you have a failed Legionella risk assessment such as this and it highlights that there are issues around water temperature, water control. It would heighten your awareness to the water system as perhaps not being optimal. So if you had organisms reported to you that had a potential waterborne link, you might review that

more closely rather than considering a person-to-person spread, but I'm guessing the-- if it was known about in 2015, then the team would have got involved and ensured remedial action was in place to----

Q Thank you. I don't think it was known to them in 2015. If we now think of another group people, not the Infection Control team but the water technical group, because you arrived on that and it was set up in March 2018. Now, we understand that these reports don't become known to more senior people within the Health Board until late June 2018. So there is a number of months when there's a water technical group happening, but the information about the existence of these reports hasn't reached some of the people on that group, including, I take it, you. How would the way the water technical group have carried out its business have been affected had it known when it set up that there had been a failed Legionella assessment?

A So, I think I'm going to take the view similar to I did with the BMT SBARs in that the purpose of the water technical group was for action going forward to try and have the system safe. What should have been reviewed is the recommendations and the actions to make sure they were in place in case

there were issues ongoing from that but, by that point, we were dealing with what we believed was a contaminated water system and it was getting the remedial corrections in place to allow, going forward, a safer system.

Q I think I'm going to have to press you a little bit on this, which is that are you effectively saying that you wouldn't have needed to do anything different because you were still looking forward? You wouldn't have done anything different because it was your job to look----

A I would like to think we were doing all that we could do, that you wouldn't do anything different. That's what I'm trying to say----

Q I see that, thank you.

A -- in that-- We had a system that we were getting a lot of positive results from and, irrespective of what it was, you wanted to try and make that system safe.

Q Now, I think, before we go to have a lunch break, I'd like to just put it----

THE CHAIR: Let me just clarify one thing. When you say you were getting, and we're, I think, talking about March 2018, a lot of positive results. Now, by "positive results," I'm interpreting you to mean water sample results indicating----

A Contaminated system.

Q -- a high level of

microorganisms?

A Yes.

Q Right. Thank you.

MR MACKINTOSH: What I wanted to do now is to go to your paper that we'd touched on at the very beginning, which was bundle 7, document 1, page 3. Now, I'm not going to go through this in detail because we can read it, and we have, and it's informed our PPP, but I want to just get the timings right.

So, we notice on the bottom of this page we have a date of 31 May '18, and that's two weeks after the water incident debrief meeting, and then it appears to be about a week or less before the date of the document that we saw before in bundle 27, volume 4 that you thought might have been written by Dr Inkster.

A Yeah.

Q So it goes debrief, two weeks, your report, Dr Inkster's report. Now, what I wanted to understand is, at this point, in May 18, you reach various, sort of, preliminary conclusions, and we're about to look at the decant, and I'm going to start doing that before lunch. What I'd like you to do over the lunch break is to reflect on something. I'll ask you about it when we return, which is: is there anything in this report from May 18 that either you wouldn't say now or has changed now or even would have changed in the few months before the decant as more information became available? Does that make sense as a question?

A Yeah, I think so.

Q Because I'm really interested to see-- This is the May 2018 Annette Rankin's position in a sense. Decant happens in September and we're now looking at this many years down the track. So is there anything in here that you would change knowing what you knew then or what you'd know now?

A Okay.

Q And if you could think about it----

A For the report only? What would I change in that report?

Q In this report only, yes. So, I'll ask you lots of other questions in the rest of the day but that's one that I haven't given you advance notice on so I'd like to think about it over lunch.

A Okay.

Q What I want to do now, before we have the lunch break, is to look at the decant and what's going on in the IMTs at this point, and you're observing a lot of these meetings. What is your view as to whether there was a real issue with an increased rate of infections in ward 2A at this point? Was it a real increase in infections or was it just the same as it would have been at Yorkhill or anywhere else?

A So, I wasn't involved in Yorkhill. In my professional opinion, there was, if not a numerical increase, which I believe there was, there was something very different in terms of organism type. They were, going back to the word "unusual," there were organisms that were appearing that I had never dealt with that were linked to water systems that we were then finding within the water system. So, if you're asking my opinion, did I believe that there was an incident, an actual incident happening? Then my response is yes.

Q Thank you.

THE CHAIR: Sorry, just can I get that again for my note? If the question is, "Was there an actual incident?"

A Incident. My response is yes.

Q Your answer is yes. Thank you.

MR MACKINTOSH: Now, the other thing was, just to be clear so we understand your position, looking back at it now, what connection, if any, do you consider there was between the water system in the hospital and the infections being seen between '15 and '18 in the Schiehallion unit?

A That's very difficult to answer because you'd need to have a look at each case case by case to see but there is certainly-- appears to be a number of patients with positive gram-negative bloodstream infections that were from organisms that we associated from March 2018 onwards.

Q So, organisms that were associated?

A That were associated.

Q With what?

A With the water.

Q With the water, right. Now, you've already touched on the idea that concerns about the ventilation system might have received a little bit less attention once the water incident had started. If we look back to the summer of 2018, what knowledge do you have about chilled beams and issues around dust and condensation?

A I don't recall chilled beams in 2018-- July 2018 being a significant factor. It wasn't hypothesis at that point so I don't recall it being raised as a concern.

Q Well, we'll come to that this afternoon when we turn to 2019 then. Now, when the decant happens, and you've explained your views and how you're, in a sense, content with the decision, what I want to understand is: the patients were being decanted from a ward that was receiving the same water supply as the ward they were being sent to and it would appear had the same ventilation system as the ward they were being sent to, and I do appreciate that

this is not a game of absolute risk because they have to be put somewhere, how do you respond to the person who says, "If 2A wasn't safe then 6A wasn't safe either" ? What's your response to that?

A So, my recollection is that the primary driver for the decant of the children in 2A and 2B was as a result of the emerging issues with the drains which weren't reported around March 2018. My recollection is that staff had reported seeing visible grime, I think is how they described it, black effluent from the drains. That was compounded by point of use filters being put in place, which made the outlet closer and therefore increased the splash risk, and the patient population.

So, this was a children cohort who were perhaps at sink height so they had a line, a central line in, and they were at the sink to brush their teeth. They're at the splash zone risk whereas an adult wouldn't have that direct splash zone risk. The ward-- These were the wards it was being reported in, there was no report----

THE CHAIR: (Inaudible).

A -- of the----

Q Sorry.

A Sorry.

Q Just so that I'm understanding what I think is really quite a straightforward point. Point of use filter increases the likelihood of splashing and the splash is at the level of the basin and a child's head----

A Yeah, they're chest height is closer to that----

Q -- is going to be closer than an adult?

A -- splash.

Q Sorry.

MR MACKINTOSH: Thank you.

A Okay.

THE CHAIR: Just to make sure, keeping up.

A Yeah, so----

MR MACKINTOSH: So you-- Carry on, please.

A No, so we weren't-- There was no concern and, if I recall correctly, there was a look at the drains elsewhere and, outwith the children's hospital, there wasn't the same issues being reported as the drains so I agree with you, in terms of ventilation it was the same, the point of use filters, the outlet of the waters were the same but the hypothesis at that time that triggered the move was the drains in 2A and 2B.

Q So, I don't know whether I'm cutting this too short, and if you want to go and look at the documents, we can do so but my recollection from reading the IMTs is that there's discussion at this point about-- and certainly the following year, about whether the cause of the

drain buildup might not be related to the point of use filters and the lack of pressure and potentially even the chlorine dioxide system. So why wouldn't the same cause exist in another ward because it's got the same sinks and the same filters and the same chlorine dioxide?

A So, at that time, why they weren't seeing it and why they saw it in 2A and not 6A, I'm not sure but there was no reports of visibly dirty drains. The drains looked clean. Looked, appeared to be, clean, and I think we have to bear in mind this was intended to be a very short -term decant. So, when the options were looked at for the move, one of the most preferred options was to have an on-site unit brought in but the time to procure that, or the lead-in time, was fairly significant, and----

Q And that would be assemble of portacabins that (inaudible) up?

A Yes.

Q Yes.

A That were HEPA filtered and for the purpose-- but the initial agreement for the move was very-- meant to be very short-term. Now, I think the move was September and I do recall Professor Gibson being clear that the children needed to be back in by Christmas time, so we were talking two months before, and that was an acceptance-- It was a very short-term. Otherwise, and with hindsight, perhaps we could have looked elsewhere. The options weren't great.

Q We've seen Mr Redfern's options paper, and presumably, you saw it at the time.

A Yes.

Q So, I won't take you to that. What I want to do just before we break is, can I take you to a single document which is the IMT of 17 September 2018, which is bundle 1, document 39, page 169? Now, this should be the IMT, and I see you were present. This is the IMT before the news of the decant is brought by Grant Archibald at the following meeting, but if we go to page 171, we see at the bottom of the hill-- Mr Hill, who was then Director for Children's Services, reporting back for an executive meeting, and do you see how, on the fourth line from the bottom, is:

> "The executive group will wait till drainage expert will give a preliminary scope on how they are carrying out their work."

A Yeah.

Q I wondered if HPS ever received a copy of the report of the drainage expert.

A No. No, we didn't.

Q And so, I suppose my final question before we break is that if the

hypothesis is that there was something about the way the water system was being used in Ward 2A that encouraged the build-up of the black grime, and-- Could it well be that that causal package, as it were, wouldn't have been in place in 6A and that's why there wasn't black grime in 6A?

A I'm not sure, perhaps.

Q We'll turn to what happens in 6A after lunch, I think.

A Okay.

Q So if I ask you to go and think about that question, about whether your report in-- from 2018, whether you would have changed anything if you were reviewing it after decant or now, I'd be very grateful, and we-- and that, I think, is probably the right place to stop for the morning, my Lord.

THE CHAIR: We'll take our lunch break now, and could I ask you to be back for two o'clock, Ms Rankin?

(Short break)

THE CHAIR : Good afternoon, Ms Rankin. Mr Mackintosh.

MR MACKINTOSH : Ms Rankin, before the lunch break, I asked you to have a look at your May 2018 report and what you would change. Now, of course, you did actually produce a follow-on report with Mr Storrar, didn't you?

A Well, we intended to. We didn't actually publish or complete that report.

We got to a finalised draft stage that we shared with Glasgow for factual accuracy, but it became quite apparent that the level of technical detail was-- There was two very different audiences for the report, and the clinical detail was almost lost because there was so much, so we agreed that we would split it completely, so that report actually never went anywhere.

Q Well, it did go somewhere. It went into bundle 19 of this----

A Well, I know it did, but it didn't officially become a report to be acted upon or that either of us signed off as complete, and not one that we in ARHAI or Assure would refer to.

Q Well, I'm not going to take you to it for that reason.

A That's good.

Q But it was certainly worth saying from the Inquiry's point of view. It's helpful for us-- It would help us to understand, and the PPP on water and ventilation have found it a useful journey, if not a source, but the thing I wanted to do was to look at your original report, the one you have signed off, which is in bundle 7, and it starts at page three, if we recollect from this morning.

I want to go to what I hope is the right place, which is page 9 of the bundle, which is where you describe the current-- I'm just doing this to sort of get us up to

speed before I ask you a question. You describe the current management that was then in place. This is in May of '18, and you mention the point of use filters and you mention the water treatment options that are being discussed. Then, over the next page, there's thermal disinfection, and then you have three hypotheses, and then you have a short summary, and then some recommendations, and of course the report then has a lot of appendices as well, but I want to focus – and if this is unfair, then do say so – on pages 10 and 11 and ask you whether there's anything about the report as a whole, but particularly about page 10 and 11, that you would change now, knowing what you know, in terms of its conclusions?

A So, I've had a look and, as you say, this was the initial report. It covered seven bloodstream infections with just three different organisms.

Q Could you say that again?

A Seven bloodstream infections with three different organisms as opposed to going onto much wider. I think we weren't aware of all the information, so we have produced a report based on what we knew. We weren't aware of the DMA Canyon report. We weren't aware that there were reports out there that hadn't been actioned, that the board had-- whoever on the board had them, that they hadn't been actioned.

I think to highlight-- There's a largely highly skilled IPCT in the board, and we would have been reliant on the board to engage with us. So I think the question you asked me was what we would have done differently, and I'm not so sure that we would have done much different in that there's not much different we could have done, but perhaps our method of communicating with Scottish Government or reporting would have allowed them to intervene early. So they perhaps might have had a different view, with an awareness of all the reports that were there and the issues.

Q So you feel that the difference is in one of primarily in terms of communication to the-- a difference in terms of communicating information?

A Yes, but we also-- what's become apparent is thereafter we've been chasing hypothesis. So we went from the water system; we put on point of use filters. We then went to the drains and we tried to address the drains, and then we came with the chilled beams, but at that point there was issues with chilled beams that wasn't highlighted. There was reports earlier on of contamination via the drains that we weren't aware of.

So we didn't have a big picture, so we've produced a report based on what we-- and probably part-- I can't say the

whole IMT, but part of the IMT perhaps only knew it. I don't know who knew what to be honest.

Q Is it fair to say that you see this report as somewhat limited by the lack of information you had?

A It's very limited. It's based on the information and knowledge that we had at the time.

Q Right, so, that's helpful. There's a sort of other way of answering that question, which I want to explore, which is if it's the case that, since you wrote this report, you've learnt more things-- So, you've learnt about the DMA Canyon report, for example. You've learnt about other issues arising earlier. In this report, you have set out that the most likely cause of widespread contamination is a combination of regressional contamination and contamination and installation and commissioning, and on the following page, if we could jump to the following page, you reported the then-truth that was, "no new reported cases in April '18", and you're effectively reporting a series of intended future actions. Now, given you now know a lot more, if we go back to the previous page, would you remain of the view that the most likely cause of the contamination is B and C on that list, or think it's a different combination of three things, or something else entirely, or you don't know?

A So, I don't think, from a water perspective, they're wrong, but I think there are more hypotheses we would consider in the environment as a whole including the maintenance ongoing-- So we had the flow straightener maintenance----

Q Well, let's do a list, because it might help us all.

A The flow straightener maintenance, or even the presence of flow straighteners because I understand now that in this ward that's all been changed. The chilled beams, which emerged as been reported as being dusty and I think, on occasion, leaking at that point. The ventilation. Now, I know that we were----

Q When you say ventilation, do you mean----

A Ventilation as a whole within the ward because I think the-- Matt Lambert's report highlighted ventilation around directional airflow.

Q That's the Innovative Design Solutions report, right?

A Yes, yes. So, it would be a combination and probably be-- I'm not saying that this would have been a much bigger report, but it would have covered, perhaps, bullet points of more issues for investigation.

Q So, if I understand it correctly,

what you're saying is that when this report was written – and we can take it off the screen – you were looking primarily at water, and you've said what you've said.

A Yeah.

Q But now you would look at, or afterwards you looked at, other additional possible hypotheses alongside that.

A Yes.

Q Now----

A And I think one of the challenges was we were being drip fed. So, we are a national organisation trying to provide support when we don't have the whole picture.

Q Right. So, what I'm going to do is I'm going to come back to those four things you mentioned, the water, the flow straighteners, the ventilation, chilled beams, in a moment when we deal with 2019 and the events that follow. I just need to pick out one thing that has been drawn to my attention over lunchtime. Could we look at bundle 1, please, page 128? Now, this is an IMT minute from 15 June 2018, which has been pointed out to me. This is a few weeks after the wrap-up meeting, and Dr Inkster is in the chair, and you're recorded as being present, and do you see the second paragraph under "case definition" ?

A Yeah.

Q There's a reference to atypical Mycobacteria. I'm being told that it might well be the case – and I'll check this with Dr Inkster – that that atypical Mycobacteria case that's being mentioned there is the early 2018 paediatric case of Mycobacterium chelonae we discussed this morning, just misrecorded in the minutes. Now, do you have any memory about that meeting and whether that might be true?

A I have no reason to doubt it not being true, but I can't recall there being that----

Q Well, we'll park that.

A And I don't-- From the list I've given you, I'm not sure we have that, but we can go back and just----

Q Well, if we can go back to bundle 27, volume 3, page 482, again, which is the spreadsheet at the first page, and we go down to the bottom, do you see how-- right to the bottom, thank you. We have, seven lines up from the bottom, a series of June reports. One for Klebsiella and one for-- We don't have a report in June, and in fact if we go back to the beginning of 2018 we don't have, unless I've missed it, any mention of Mycobacteria of any version.

A I can go back and check our records just to make----

Q It would be of assistance if you could because I think we'd like to be clear.

A Can I just check, so that's-- it's

for June----

Q It would be February to June 2018.

A Okay.

Q But if we could move onto 2019. If we take this off the screen. I'd like to talk briefly about Cryptococcus because, as you explained in your statement, although there was a Cryptococcus IMT, you didn't attend any meetings of it?

A No, that's right. We weren't invited.

Q Yes. You intended-- The first question then is: the Cryptococcus case was reported as a red on 20 December 2018, doesn't that give you a right to turn up to IMTs?

A No. We have no right with the boards at all for anything.

Q So, although a board has reported a red, you still have to be invited.

A Or the government can-- Scottish Government can invoke the algorithm and instruct you to go.

Q Yes, and that's what happens later, but not at this point. I understand. So, if we look at-- think about the expert panel subgroup and its report, which is bundle 6, page 1115. I hope this is the beginning of the report. It is. Now, I want to ask you a series of questions about this report. You've discussed it already in your statement to some extent. So, firstly, were you a member of the expert advisory subgroup?

A I was.

Q Yes. Were there any other NSS persons?

A There was. Ian Storrar and Susie Dodd.

Q We've spoken to Ms Dodd. We won't be able to speak to Mr Storrar. Now, the first question is: it's been suggested by some people that this was a group designed to report back to the chair of the IMT. Do you think there's any particular obstacle to that happening, given that the IMT had ceased to operate by this point?

A No, that's not unusual, particularly in environmental issues with other boards. You can close an IMT. You've got outstanding actions. They're still fed back to the chair who should have oversight and the chair can decide whether to close completely or whether to re-establish the IMT or-- so, no that's not unusual.

Q Okay. Was there a reason ever given to you why Dr Inkster wasn't a member of the group?

A No.

Q No. It's been suggested that that might have been in order to give the group a measure of independence. How would you react to that?

A I would have-- I'm not sure what that means. That would be suggesting that Dr Inkster wasn't independent and therefore wouldn't be-- I would find it a strange reason.

Q We perhaps could just ground ourselves in who were the members of the IMT. So, that's on page-- the subgroup, rather, and that's on-- No, I can't believe it. We've managed to redact the names of the membership of the group off this particular version, but I think I probably don't need to take it from you. We can work it out ourselves.

A I don't think I have it.

Q Why do you think it took two years for this report to be produced?

A I'm not sure to be honest. It took-- It was a very frustrating group. It was one where there was a lot of hypotheses that was being explored. There was issues with the literature review findings. We felt so----

Q So, when you say we, do you mean----

A So, yeah. So, Susie, Ian and I met outwith this group to discuss. So, if we got a report for comment, we would comment independently, and then we would collectively have an NSS combined view. So, we would discuss and we couldn't find a methodology for the literature review for the article selected. It felt to us as if there was some bias. It

wasn't open and transparent. So, we went back and offered to do a literature review. There was, at the time, there was quite a number of meetings that Susie went to because I----

Q Can we deal with the literature review first, and then come back to the rest of it? In terms of literature review, you offered to provide one.

A Yes.

Q Was one eventually provided?

A Eventually it was.

Q How long did that take?

A Oh gosh, I'm not sure. It certainly was a few months before-- it wasn't accepted right away, and then----

Q So, you gave the-- you had a concern there was a possible bias in the literature review. Now, obviously that's in the context of a literature review.

A Yes.

Q In what direction do you feel the literature review was leaning?

A So, we felt there was a selection bias to try and disprove the hypothesis of a healthcare associated link. That might not have been the case. That was just-- we couldn't see a methodology that----

Q How would you----

THE CHAIR: Sorry. I just didn't catch that. Selection bias to disprove the hypothesis----?

A Of a healthcare associated

link.

Q Thank you.

MR MACKINTOSH : From the point of view of a lay audience, i.e. us, how would you understand that there was a selection bias in a literature review?

A Well, we couldn't see-- there was no selection. I mean, we did a call, a lot of it went on to Teams because of the pandemic and, you know, John had all the articles and laid out all the articles. We couldn't understand what had been selected, what had been excluded, why they'd been excluded because a lot of articles can be excluded but we didn't know why. So, we weren't sure what the selection criteria and exclusion criteria for the articles were, so----

Q Because it's quite a-- I mean, I appreciate this is biased in the context of selection of an article, not a bias in the context of production of a report, but it's not an insignificant concern to have. Had you realised that there are articles that should have been included that weren't that you knew about, or is it just that you didn't know what the methodology was?

A We didn't know what the methodology was, so we didn't know if there was-- if there was others there or not, and that was why we thought, as part of the National Manual, the evidence is literature reviews and we have a scientific team that follow methodology and that

was why we thought it was-- you know, it would be accepted if we offered to do literature review with a methodology that can stand up to scrutiny. That could-- you know, if there's questions as to why you excluded or included and what your search terms were etc.

THE CHAIR: It may not be necessary for me to understand this in detail, but at the moment I just can't think of what a methodology in relation to selection of journal articles in relation to a particular topic might involve. It's just my ignorance.

A So, you have a search strategy. You have exclusions. You have inclusions. You have dates.

Q Sorry, again?

A A search strategy. You have inclusions. You have exclusions. You have the dates, the type of article, whether it's a scientific article, whether it's a peer reviewed article. So, we would look at all of that rather than, perhaps, just a notes to editor or----

MR MACKINTOSH: So, part of it is about picking-- setting search terms in databases. You're nodding.

A Yes, sorry.

Q So that you pick up more things, I suppose. Is that a fair-- It's about the scope of the search?

A I think it's so that you are getting a broad view and you're not

biased. You're getting----

Q So, again, conscious that you're talking to an audience in this room of people who are used to searching for case reports. So, we're familiar with the idea that if you, for example, want to investigate an area or a particular type of law and you restrict yourself to a particular court or a particular jurisdiction, you might-- or a particular date range, you might get a particular selection of all the cases in that field. How would the search terms you employed in a literature review in this field restrict what you get?

A So, we would be looking for a peer-reviewed article published in a scientific journal. So, it's----

Q And, effectively, you're setting yourself a quality threshold there.

A Yes.

Q So, to what extent was the concern that some of the articles being produced in this process didn't meet that quality threshold?

A I don't think I can give you specifics without going back and looking at what some of them were but I remember we were concerned at the time.

Q Well, hold it at that. So, you were concerned and you explained you couldn't really understand why it took so long. We've actually got all the minutes of the meeting. I'm not proposing to go through them, but there were, to my count, 37 meetings. When-- You described how the three of you met and responded with an NSS view, to what extent did you feel that the Chair and the other members of the group were willing to take on the views of NSS?

A So, we produced tables of comments and at times the meetings were just going through the comments, but what we weren't clear on, a lot of the meeting, was discussion on the comments and no clarity on whether they would be included in the report or not or whether the report would be changed. It became more a response to our comments rather than the report.

Q If you had a particular paragraph in the draft that you were then looking at that you had a comment on and there was a discussion, would you by the end of the discussion be told whether everyone's agreeing with the change you wanted or not?

A No, not always. It was really quite confusing.

Q And so, ultimately, whose report is this?

A Glasgow.

Q And to what extent is it the report of more than one person's authorship?

A I'm not sure.

Q Not sure. I mean, to be fair, we

can't ask Professor Hood, so I probably shouldn't go much further, but in your statement in respect of at question 44 – so, that is on page 36 – you've actually mentioned some potential other cases, and you've described how Ms Dodd had been at a meeting on 26 November and discussed three potential new cases to be discussed later in the meeting, but she had to leave the meeting.

A Yeah, that's correct.

Q Now, I think, probably having tried to do this in a confusing way before with Ms Dodd, I'll try and do it in a simpler way now. I put it to you that the three cases were: a child in July 2020 who was in the hospital when the possibility that they had a Cryptococcus-- they had Cryptococcus neoformans came up, and two adults who were in different hospitals when that happened but have, at various points in the past, been in the hospital in the adult part. Is that what you understand?

A No, my understanding was that-- It was Susie that dealt with this, and Susie went back, and my understanding was that the three cases, apart from the child in July 2020, the response-- and I'm sure it was Sandra Devine that gave the response that they were historical cases and dated quite a bit back.

Q Right, well, we'll ask her.

A Yeah.

Q So, the question that arises from this paragraph is, given that I think it's GGC's position that the child didn't actually have Cryptococcus neoformans-- Although various tests were-- suggest one level he did, there was a debate and there's a conclusion reached by the Health Board that he didn't, and the other two cases had-- their time in the hospital was short and some time before their ultimate diagnosis. Do you think these should have been considered as part of the report process even though there's some doubts about them in places?

A I don't think this is really the place to consider cases. This should have been referred back to Dr Inkster as Chair of the IMT. I don't-- You're doing a subgroup into hypothesis. I'm not sure why you would be considering cases.

Q Right. So your view is that the subgroup shouldn't have been considering these cases, but if anyone should be, it should have been Dr Inkster?

A It should have been referred back, yes.

Q And that-- Well, of course, that would involve reactivating the IMT.

A She would have made that decision. She would have looked at the cases, and she would have had-- with the information, it would have been Dr

Inkster's decision, but she was still ultimately the Chair of the IMT. The report was reporting into the Chair of the IMT was how I understood it, so the cases were not the remit of a subgroup.

Q So, ultimately, to wrap up this topic, what's your understanding of why you think it-- So, why do you think it wasn't possible to produce a consensus report from the whole group?

A Because we had a lot of comments, a lot of input, and they weren't being taken on board. It was taking up a lot of time and we felt we weren't getting anywhere to the conclusion of the report, that we felt it was better. If Glasgow had the view that this was what they wanted to present, then they could present it and that was absolutely fine, but the NSS element of it was the comments not being-- and the comments didn't need to taken onboard but we were looking for a rationale as to why they weren't but there was no-- it was just back and forward comments constantly.

Q So, what I'm proposing to do now is move on from Cryptococcus onto chilled beams we've talked about before. Can we go to bundle 1, document 76, page 338? Now, if I've got this right, this is an IMT from 8 August 2019 and-- at which you are reported to have been----

A Yeah, that's correct.

Q -- present, and this is the fourth IMT of the gram-negative sequence. If we go onto page-- the next page, we should see a discussion of chilled beams four paragraphs down from-- up from the bottom. You see where it says, "Swabs of chilled beams were taken in all the patient rooms?"

A Yeah.

Q So, first question is do you know who organised the taking of these swabs? Do you remember?

A I don't-- I can't remember.

Q Fair enough, and then there's a report of a light growth of various gram-negatives but the patient hadn't tested positive for them.

A Yep.

Q But there'd been a previous incident with Pantoea. Now, and then there's discussion about Dr Inkster's engagement with Mr Storrar but what I wanted to ask you first is, just on this point about there being no current infections for those three gram-negatives, why is that an issue?

A Why would the chilled beams then be considered an issue?

Q No, why does it matter one way or the other whether there were or were not current infections then for Klebsiella----

A I don't-- Klebsiella, Acinetobacter and Pantoea.

Q Thank you.

A So, it's relevant in the sense that what is being shown is that it has the ability and the medium in which to grow gram-negative organisms. They haven't isolated types at that particular time that were known to be present in the ward, in the children. There was-- I'm sure there was previous, certainly Pantoea, I'm sure there was previous of the other two but it highlights there was a source for the potential transmission.

Q Because the question that occurs to me, and this may sound like a really stupid question asked by someone who doesn't know how to do IPC, is, if you have an unusual-- Are any of these unusual microbacteria from your----

A Pantoea.

Q Right. You have unusual microbacteria like Pantoea and you are capable of growing it in a particular part of the hospital system which, in this case, is directly above patients' beds. At one level, does it matter whether you have cases that week or month of that microorganism in your patient at that precise moment? Is that even relevant? Surely there's a risk still?

A Absolutely. So, I think what you're asking me is, "Does it matter that they're not there present, but what if they'd been present a month before or the" -- Is that what you're asking?

Q Yes.

A Absolutely.

Q Because how reliable is this sort of swabbing exercise? And what I mean by that is, if you swab this chilled beam, are you sure you've caught every single microorganism growing on the chill beam?

A No.

Q And why is that?

A Because you might not have got the part where the issue is. You might have-- So, I think the fact that you have something that has the ability to grow it, whilst it might not match at that particular time, it might have matched at a previous time or you might have gone on, in another chilled beam in another room, to grow something different.

Q Is there any analogy here with whether you find a particular organism in one drain or one flow straightener of all the ones in the hospital in that, if it's just in one tap, it doesn't mean it's not everywhere else?

A It shows it's got the potential. I suppose the difference with taps in such a widespread area is maybe in use and maintenance but, yeah, yes, if you can grow it in one and it's the same then you can grow it in others.

Q Now, this is 2019 and Mr Storrar is being asked to give advice on the best place to take samples. At this point, were you aware whether there was

a cleaning program for chilled beams in the hospital?

A I can't recall.

Q All right. The----

A Although it does say there, "Compare them with new samples to be taken of newly cleaned chilled beams" but I don't know if there was a programme of cleaning or some had just been cleaned.

Q At this point, how much did you know about previous concerns and discussions around chilled beams in the previous three years?

A I wasn't aware of much. I think we had heard it being reported that there was dust but, again, I don't know if I'm-- what I know now, I'm reflecting back on, but----

Q Now----

A -- chilled beams had not become a hypothesis until that point.

Q So, even if other people were discussing them at other IMTs at which HPS wasn't represented, you hadn't, as an organization, realised that?

A No. No.

Q This is something that may be outside your comfortable level of confidence so please tell me if it is. It's been noticed that the SHTM 03-01 guidance in 2009 doesn't contain a discouragement of fitting chilled beams whereas the more modern version does. Are you able to express a view as to whether it was reasonable or unreasonable, wise or unwise to fit chilled beams to this hospital back in 2009 to '15 when it was built?

A I wouldn't want to comment on chilled beams as a whole. I don't think it's reasonable to have chilled beams in a high-risk children's unit where you should have sealed ceilings but, irrespective of where they are, they should certainly have a maintenance and cleaning program but I couldn't go into detail into the SHTM----

Q So you'd go as far as saying that wherever there needs to be a sealed ceiling, there shouldn't be chill beams?

A Yeah.

Q That brings you back to the question I asked you before: by this point, do you know what a chilled beam is, I'm assuming?

A Yes.

Q There are at least four of them above us here and they sit inside squares of insulation-- of ceiling tiles. Had you made the connection that you'd seen them in the old 2A at this point?

A Had I made the connection with----?

Q That you'd seen these-- that chill beams were in other wards? It wasn't just ward 6A that had chilled beams; it's all over the hospital.

A But we didn't go all over the hospital, we wouldn't have visited.

Q But you had been in 2A back in 2018.

A Yeah. Mm-hmm.

Q Had you made the connection that there were chilled beams in 2A once chilled beams were brought to your attention?

A Yes.

Q Should there have been chilled beams in 2A or is it one of the points when you challenged me earlier on about some of the patients are not neutropenic and therefore they don't need to have----

A Yeah, but it's a whole ventilation strategy for the ward. I don't-- I mean, I'm not qualified to talk on the technical side of chilled beams and----

Q Well, we'll leave that there and we'll move on. Right, what I want to do is now move onto the events that follow this because we've been looking at this-- If we go back one page. This is 8 August. There's a reference in your statement, question 51. So, that's on page 39. This is the bit you've changed.

A Yeah.

Q So, I want to do two things in this section. One is discuss the first half, which we'll do first, and then we'll discuss your change. So, the first half of my questions go from "I cannot give a recap" down to "There appeared to be significant tension around the table." So, I'm going to go that far and then I'm going to come to the last bit where you've made a change.

So, it's probably a good idea if we get the meeting of 14 August in front of us or at least ready to go up. So, when I need to, I'll need that on bundle 1, page 343. So, you have described in the italic text here an original version of some text in the minutes and what I'm going to do is I'm going to jump to bundle 1, page 340. So, do you see at the bottom of this page there's a-- This is in the previous minute, 8 August. It says, "Kevin Hill has asked if ward 4B should give more beds to the paediatric service."

A Yeah.

Q Now, this is the section where you are reporting there's a discussion at the following meeting about changing the minute.

A Yeah.

Q Now, am I right in thinking – and we'll go back to the text that gets-- that was there before – that the differential point, the point of dispute, is whether the chief executive should be named?

A And the word "endorsed" was what was said before. It was that the decision would be made by, or the decision would need to come from.

Q Okay, let's go back to your statement.

A Yeah.

Q So, the final sentence of the italic block of text here is:

> "The final decision would need come from Jane Grant, the Chief Executive"

And it was changed to be endorsed by the Chief Executive.

A Yes.

Q I'm going to focus on the verb rather than the noun. What was your understanding at the meeting on the 8th about who would have to approve any decant?

A The Chief Executive.

Q And why do you say that?

A Because I'm sure that was what was discussed, that any decision would need to be taken by the Chief Executive.

Q There'd been a decant the previous year.

A Yeah.

Q Do you remember what person or group approved or made the decision to decant?

A The executive management team.

Q And why do you say that?

A Because that was who gave us the feedback. At the time when they moved from 2A to 6A, there was a bit of a delay, and there was meetings of-- I'm sure Kevin Hill fed back.

Q We actually looked at the text----

A That the executive team----

Q -- about the drains (inaudible).

A Yeah, and then the following meeting, my recollection is that the Chief Operating Officer attended to say that the executive management team had met that morning, and that Ward 6A had been identified, and----

Q So, we can probably find that. So, I think it's page 175 is the minute, and the reportage from Mr Archibald is on page 177. No, sorry, Bundle 1, page 177. Thank you. So, this is a section from the minute of 18 September 2018, so it's the previous decant.

A Yeah.

Q And do you see, if this is the text you're referring to, the second paragraph of part 6:

> "Grant Archibald informed the group that following a water meeting this morning, it was agreed that BMT patients currently in ward 2A will be decanted to ward 4B."

A Yeah, yeah. No, that was-- It was removed to 6A.

Q Well, it goes on to describe----

A Right, okay.

Q Because the way I read this is that, without taking time to read the whole

thing, at this point, they didn't know it's actually 6A. It takes another day for them to work out that it's 6A. You see, in the second paragraph, "The majority of patients will go to an alternative 28-bed ward."

A Yeah.

Q So, could it be the case that at the meeting of 18 September 2018, Mr Archibald did report back that there'd been a----

A I think he did.

Q Yes. Now, at one level, this seems a rather esoteric discussion to have about who makes decisions, but if we go back to the IMT for 2019, so that is page 343, can you think of-- well, at the time, did you think there was any particular reason why it seemed to matter to some people in the IMT that the minute described a decision being made by the Chief Executive, as opposed to endorsed by the Chief Executive?

A I just recall that there was significant debate on it that took a long time over the change of what a Chief Executive would do, and the Chief Executive wasn't at the meeting, and it was being-- and the meeting started off with that discussion is my recollection, and it was very tense.

Q So, it was a tense discussion about the minutes at the beginning of this meeting.

A Yes.

Q And the minute here describes that coming from Miss Rogers, Professor Steele and Sandra Bustillo, but the decant didn't actually eventually happen.

A No, it didn't.

Q No. What was the tone of this meeting, from your recollection?

A It wasn't a pleasant meeting. It was-- my recollection, this is the meeting that-- yeah, it was a-- a very-- Dr Inkster-- this was the last meeting that Dr Inkster chaired, and it was a difficult meeting for her to chair, but I felt she chaired it very well. There were such opposing views. It was starting to emerge-- So, we had, if I remember correctly, Dr Peters was there presenting on the chilled beams. Dr Harvey Wood was presenting on the unusual epidemiology, the unusual organisms, and----

THE CHAIR: Sorry. Could you just give me that name again? Who was presenting?

A Dr Harvey Wood.

Q Right, right, thank you.

A And Dr-- there was a lot of debate on that we aren't seeing anything different. Numbers are the same, we don't really have an issue with chilled beams, it's corrosion. So, there was that-- There was a lot of tension in the room, and debate.

MR MACKINTOSH: Well, let's go

back to your statement, page 39 of the Statement Bundle, and deal with the change that you made.

A Okay.

Q So, you've changed this final section. So, we'll take it off the screen and, unfortunately, everyone who's watching this online doesn't have the benefit of the words written down, but you explained to us this morning that you'd had a disagreement with Dr Kennedy's epidemiology report. Now, I think we can probably put Dr Kennedy's report on the screen instead, which is Bundle 6, document 28, page 104. So, if we understand it correctly, this is a report produced by Dr Kennedy in August of-- just before this report. I think it's in July of 2019.

A Yeah.

Q Is this the report that he was presenting at the meeting?

A Can I see the next-- is it----

Q Of course.

A The next page?

Q There we are.

A Next one, again, sorry. There's a table I'm looking for because I don't know if it might be the one prior. No, that's it. Is that it?

Q Yes, so let's stay on that page because I thought that's a good place to talk about the substance. Clearly, Dr Kennedy will express his own views about this when he gives his evidence and he has done in his statement. What's your issue with the selection of the organisms he's considered in this table and the report?

A So, there was a focus on Stenotrophomonas, Klebsiella Pseudomonas, which are all organisms of interest and, I think, ones of concern, but there was no-- of the Delftia, of Elizabethkingia, of some of the other unusual ones. They were all lumped together as "other organisms."

Q Were they actually in the table though?

A They weren't. They were linked as-- Oh, well, I'm guessing they're linked as, "other"----

Q Because some others are.

A Because the "other" at the bottom is others.

Q So, I want to just check here, because it seems important: is that-- if the complaint is just that Elizabethkingia and the other ones you've mentioned are clumped together within "other", they are still in the numbers, they're just hidden a bit, or is the complaint that they're not actually in the data set at all?

A I don't think they're in the data set at all. I think it was selected gram-negatives, rather-- and not representative of the unusual. That's my recollection and that was why Dr Kennedy wasn't at that

meeting, I don't think. It was Dr Deighan that was referring to his report, so we didn't have the report in front-- So it wasn't that we were discussing Dr Kennedy's report. It was “We don't have an issue. Dr Kennedy's report is supporting that we don't have an issue.” So, our-- the concern in----

Q So, sorry, just to recap, your position is that some people, including Dr Deighan, were saying there isn't an issue and my reason for thinking that is a look at Dr Kennedy's report. It says what it says.

A Yeah, that based on-- yes.

Q And your position is that you think it's----

A It wasn't representative of all the organisms we were seeing.

Q Wasn't representative. Now, I have none of the CP----

THE CHAIR: Sorry. I just didn't hear that last answer.

A Sorry. It wasn't representative of all the organisms we were seeing.

Q Right.

MR MACKINTOSH: Now, I have a draft statement from Dr Kennedy which will get to the core participants soon, but they haven't seen yet, and he states in his draft statement that Dr Inkster provided him with a list of the organisms that had been found on either patient samples from the patients included in the (inaudible) or have been found in the water or on drain samples, and it seems from the explanation in his statement that this is the selection that's here. Now, I clearly will want to ask Dr Inkster and him about that, but if it is the case that he's simply reflecting a list he's been given, does that impact on your opinion, or does it leave it unchanged?

A I think my opinion from the time would remain unchanged.

Q Okay, right. Now, if we could take that off, please?

THE CHAIR: Sorry, again?

A My opinion, sorry, my opinion from the time would remain unchanged.

Q Sorry, your opinion from the time----

A From the time would remain unchanged.

Q Right, thank you.

MR MACKINTOSH: Now, just sticking with that moment in 14 August when there's this discussion going on. Apart from that moment about the epidemiology, which seems to have come up across a lot of people's statements, I want to just step back a bit and think about what might have been going on at this point in terms of hypotheses?

A I recall the hypothesis where-- with chilled beams.

Q Well, we can look at the IMT minute to see that. So, if we go to page

346, we have the hypothesis recorded in the minute.

A Yes.

Q So, we had chilled beams.

A And the access to unfiltered water out with Ward 6A.

Q So, what we don't have is water within the ward.

A No.

Q Or ventilation in general. You're shaking your head.

A We don't have.

Q No. So, from your point of view, and this is thinking about you rather than the IMT as a whole, what were you considering were the most likely at that time hypotheses for what you thought you were seeing in terms of infection?

A At that point, we were-- I would have said the most likely was the chilled beams, given that there was reports of it leaking. There was-- some staff had reported there was significant leakage onto a patient's bed and that there had been positive microbiology.

Q So, it would seem to be a countervailing position that there--which is two-part. I'll try and put it to you and see how you react, I think you've already given me an answer to half of it, that the number of infections that were being seen in 2019 in ward 6A were comparable to Yorkhill or other hospitals with paediatric patients in Scotland, and you've explained why you don't-- you have doubts about that epidemiology report from Dr Kennedy, but even if we put aside your doubts, what difference would it make to the work of the IMT that the rate of infection was comparable to a previous hospital or another hospital?

A So, from that point of view, we had been attending IMTs at that point for about a year. We had not supported an IMT at that level – I certainly hadn't – ongoing-- with that volume of ongoing gram-negative bloodstream infections of unusual nature, but we were not seeing any issue elsewhere. We had nothing alike, except that HIIAT greens were managed from 2016 after Yorkhill had closed, but they still reported in other. We had no reports in from unusual organisms from Yorkhill, so we were dealing with, and the HPS view was what we were dealing with was something that was different.

Q Right, and how do you respond to the suggestion that that perspective that you have is fundamentally anecdotal, and you're too close to it, and all you're seeing is the problems, you're not seeing it in context?

A In context of?

Q The rates in Edinburgh or Aberdeen or----

A Well, we weren't getting any reports in from Edinburgh or Aberdeen

and we had a mandatory green reporting at that point. We were getting no cases reported in from haemato-oncology in Lothian or Grampian at that point, certainly not of that level at all.

Q The second part of the sort of position to put to you is that the primary-- If it was the case that the primary problem-- I'm not even sure problem is the right word, the primary issue in the children's hospital and in the whole hospital was its water supply, domestic water supply, that had been addressed and therefore you wouldn't actually expect to see many other cases, and so the problem has been solved, we need to move on. How would you react to that?

A Sorry, could you repeat that?

Q So the viewpoint that there had been action taken to address the water issue in 2018 by fitting chlorine dioxide at point of use filters and extra filtration system in the plant room, there was more testing than had ever been before, and therefore the water system was sorted, and therefore the problem was over and it was all in a sense being conjured out of nothing. How would you react to that?

A So, it didn't appear to be nothing. There was significant concern from the clinical staff. They felt they were seeing something different from the----

THE CHAIR: Sorry, can you just give me that again? "It didn't appear to be nothing."

A There was significant concern being reported by the clinical staff who were expressing concern over the number of patients they were seeing with bloodstream infections. The microbiology team were expressing concern as to what they were finding in the environment as well as the rates, and if we look at-- if what we were seeing was a normal level, we've not seen-- it's not being reported now. The children have moved back into a refurbished ward 2A/b with different water, sanitary fittings and ventilation. We are not getting that reported, so I don't know if that's not a normal background rate then or----

MR MACKINTOSH: So, in a sense, you're saying two things. One is that you weren't seeing anything comparable anywhere else at the time?

A (No audible response).

Q You're going to have to speak.

A Sorry, it's all so (inaudible). No.

THE CHAIR: It's an unnatural situation, and everyone finds a difficulty. It's just because we're so keen to get your answers.

A No.

MR MACKINTOSH: So, your position seems to be, one, at the time, nowhere else was reporting to HPS, anything like this?

A No, no. I also have to highlight

that there was a heightened awareness because there was a lot of media, etc. So, I am sure other boards would have perhaps over reported.

Q So, other boards were feeling nervous, do you think?

A I think, yes. So, I don't believe that there was other boards had issues and weren't reporting.

Q Right. So, there's that issue about non-reporting elsewhere, as it were, or lack of reporting elsewhere. There is the clinicians anxieties that you've described. There's still environmental testing results, albeit probably better than the previous year. Would that be a fair----

A Yes.

Q Water samples are coming up-- coming up less often, but they're still coming up.

A Yes.

Q I get the impression from just reading these minutes the amount of gram-negative in the water supply is dropping off quite fast. That doesn't change your position?

A Well, the number of patients weren't, so there's obviously other routes. So we did focus on the water.

Q The number of patients weren't dropping off?

A No, we still had unusual organisms in place. That's why we were having the IMTs.

Q Right. What I want to do now is to look briefly on this minute onto page 334. I hope it's 334. No, it's not, I've got it wrong. 344. Bottom of the page, there's a report of what I think is Dr Peter's presentation on chilled beams. Are you able to help me about what the reaction was to this discussion?

A My recollection is there was a debate on this and whether this was-- Now, this is where I'm maybe kind of out my depth with the technical part, but corrosion and coolant leaking rather than water leaking was the alternative discussion.

Q I see. Are you aware of any suggestion that there was eventually a failure of the chilled water system the following year?

A No.

Q No. Right, I want to move on to the next IMT, so that means going to page 348, please. Now, this IMT reports at ten o'clock in the morning in room L 2005 and has a different Chair, and you describe this in your statement on the following page at page 40. I don't want to go there because we've all read it. You described a pre-meeting happening before the IMT.

A Yes.

Q Now, what you didn't do is help me who was at the pre-meeting and who

was, I presume, waiting outside. Do remember?

A I'm probably going to be more factual with who was outside because I was outside.

Q Well, that seems a sensible approach.

A I have a memory of a couple who were inside, but I can tell you roughly who was outside.

Q Well, that's helpful. Just on who was outside, if we go to the list at the top of that page, so, was Dr Crighton outside?

A No.

Q Was Dr Deighan outside?

A No.

Q Ms Bowskill?

A I can't recall.

Q All right. Sandra Devine, was she?

Q No. Jenn Rodgers?

A No, I don't think so.

Q Professor Steele?

A No.

Q Mr Conner?

A I can't recall where Darryl was.

Q Dr Sastry?

Q Yes.

Q He was outside?

A Yes.

Q Ms Joannidis?

Q I am not sure.

Q Dr Kennedy?

A I'm not sure.

Q There maybe-- turn out to be at-- well, we'll keep going, but we're going to end up with a partial list.

A Yes.

Q Professor Gibson?

A Was outside.

Q Dr Inkster?

A Outside.

Q You?

A Outside.

Q Ms Somerville?

A Outside.

Q Mr Purdon?

A Outside.

Q Ms Dick?

A I can't recall.

Q Mr Mallon?

A Yes, he was outside.

A Dr Murphy was outside.

Q Fine.

A Dr Ronghe was outside and Calum was outside.

Q So Dr Ronghe, what background is Dr Ronghe?

A Dr Ronghe is a haemato-oncologist.

Q Right, so we have-- I think what you said is that all the clinicians – treating clinicians – are outside?

A Yes.

Q And all the Infection Control doctors are outside plus a couple of other people?

A Yes.

Q Right. Was this the first time you'd ever come across a pre-meeting IMT?

A It's the first time I recall. I mean, I know that others have said that there was pre-meetings. I was not aware of pre-meetings. I would turn up for a meeting and if there was a pre -meeting, it finished before. This pre-meeting ran significantly over time to the extent that some of the clinicians were getting anxious because they had patients to see; they had clinical commitments.

Q So when did the meeting start?

THE CHAIR: Can I interrupt? I think I got the people who were outside. Now, the people who, as far as Ms Rankin can remember, who were inside, I think-- or rather not outside, Dr Crighton, Dr Deighan and then I think I missed the next two or three.

A Sandra Devine was inside.

Q She was inside?

A Inside.

MR MACKINTOSH: Who else do you know was inside?

A Tom Steele, and that's all I could say with certainty.

THE CHAIR: Right, okay.

MR MACKINTOSH: Right. Now, not focusing purely on this IMT and this hospital, how often do you come across pre-meetings in IMTs that you visit across Scotland?

A I'm sure they happen, but they don't happen before. You might have something where there's something to discuss, maybe get a consensus view on results etc., or if there's any discussion-- it can happen, but not to the level of half the team inside and half the team outside and it running over.

Q Have you ever come across the replacement of an IMT Chair for reasons other than not being available for health or annual leave or leaving the job?

A No, no.

Q Conscious that you're only there by invitation----

A

Yes.

Q -- to what extent is an incident management team a requirement of the National Infection Control Prevention Manual?

A It's a requirement if the boards have an issue and they wish to investigate it, then it's investigated by an IMT, but you don't have to have an IMT for every incident, but at this level you would have an IMT.

Q So if you want to investigate, you need an IMT, but you don't have to investigate?

A Yes.

Q Right. To what extent would you consider it to be appropriate or

reasonable for a health board to consult HPS about the change to an IMT Chair when you've been invited to attend?

A So I think what-- Well, okay, I'll answer your question because I'm going to answer it. Putting it into context, a health board can contact HPS for clarity on who could chair an IMT. That's a reasonable approach. For a health board to contact HPS about chairing a meeting that has been going on for some time, of which HPS have had representative, is very unusual and particularly when the context of the question was omitted.

Q You explained in your statement there was a question asked of HPS. What was the question that you understand was asked?

A Can I just check, just so I've got it right? My understanding is it was the Director of Nursing who went to our Director of Nursing and asked-- it was in a meeting to discuss IMTs, if it's not an ICD, who should/could it be? That was the question asked.

Q So the question was what sort of person, not what should we do in this case?

A No. There was no context given at all. I have a copy of the email.

Q You have a copy of the email?

A Yes.

Q Well, if you could provide it to the Inquiry that would be of assistance.

Now, we have Professor Gibson's evidence about this meeting, which she gave last year on 12th June at the previous Glasgow hearing, and Ms Dodd wasn't there. Ms Joannidis, to be fair, had described the meeting as formal and didn't appear to think it was in any way unusual. I also have the draft statement for Dr Crighton. I think it might not actually be a draft; I think it might be finished now. She says, "During the meeting, I witnessed a quite hostile tone of challenge from a senior clinician and Annette Rankin" – that's you – "towards Sandra Devine when she advised the group about the background of seeking a new chair and the advice previously received about the IMT being chaired by a consultant in public health medicine." How do you respond to that?

A That's not my recollection. My recollection is, when we were finally allowed in the room, I was sitting beside Professor Gibson and Dr Crighton was kind of diagonally opposite me and Dr Inkster was to my right-hand side. The meeting started with introductions, with no explanation as to why there was a change of Chair, and I recall Professor Gibson saying to me, "What is happening?" and "I said I'm not sure," and I said, "Do you want me to ask or will you?" and she says, "I'll ask." So she said, "Can I ask why there's a change in

chair?" and I think it was Sandra Devine who responded that she'd had a conversation with Dr Inkster and given the complexities that the Chair was going to be changed, to which I responded was, "As long as due process is followed and this is recorded in the minutes from a governance perspective," and that was my-- the response back was, "We have discussed this with Professor Reilly," who was my line manager at the time and who has the email from (inaudible).

Q Might you have been a bit surprised at that?

A I was very surprised. I was very surprised on a number of levels, and nothing more than-- even to the point where Dr Inkster, who had chaired and, in my professional opinion, chaired meetings incredibly well under sometimes very hard circumstances for over a year, to be present in a room and not even an acknowledgement or a thanks or a-- or handed no explanation. It must have been-- If I felt uncomfortable, I'm pretty sure Dr Inkster must have felt extremely uncomfortable.

Q Do you have a-- Well, let's look at the minute. So, we see the minute here. This big first paragraph. The one that begins, "The group asked why Dr Crighton was chairing this meeting." To what extent can you help me whether this is an accurate recording

of what happened? Particularly, I want----

A I don't recall all that discussion, but-- Given that it is a while ago, I do recall Professor Gibson asking why the Chair had changed. I recall Sandra Devine telling me that she had spoken with Professor Reilly who had agreed, but I don't remember that level of discussion around complexities of chairing a meeting and-- I don't recall that at all.

Q We'll obviously probably keep asking lots of people this question.

A Yes.

Q But you were there and you presumably went back and reported to your colleagues.

A So, what----

Q Can I ask you a question before I get to the end of that?

A Of course, sorry.

Q What did you report back to your colleagues about this meeting?

A I don't know if I reported anything back to my colleagues at that point. I think I came back-- I did come back and I asked Professor Reilly-- I contacted Professor Reilly because I was keen to understand what discussions had taken place with her because I was a bit concerned that discussions had taken place regarding an IMT of which I had been a member for quite some time. So, I did have that and it was done by email and I'm sure that's the email I have.

We, after each meeting, update Scottish Government. Now, we can either wait for a HIIORT, or we can provide an update, and at that point when the HIIAT came in we would interpret for the government, and I put a line in about the change of chair because I felt that was an important part. It was a factual statement to which then I got a response from Sandra to say-- and I think I might need to refer-- Well, can I just double check what the response was? I think I've said in my statement what it was----

Q You have, yes.

A -- because I do have this.

Q This is on page 41----

A Yeah. So, I have said----

Q -- of the statement.

A -- that, "NHS GGC have replaced the IMT chair from the lead ICD to the NHS GGC"----

Q This is the top of the page.

A -- "(inaudible) public health." Yeah. So, that's all I said. I gave no opinion. I gave-- that was a factual statement to which I got a response:

> "The chair agreed to be replaced in order for her to have time to review incident results and actions. Other ICDs in the site were asked to chair and declined. National guidance confirms that it's appropriate for a CPHM to chair an IMT."

And I then clarified that it was a factual statement for information, and the rationale discussion was a matter for the minutes to reflect the discussion. Dr Inkster returned or responded to say she did not agree to be replaced. She'd been asked to demit. So, she also highlighted that she was asked to demit because it was reported back to her that everyone at the last IMT had found it extremely difficult. I wasn't asked about the last IMT. I know Professor Gibson wasn't, and I think, given the surprise round the table, none of the clinicians were asked about the previous meeting, so I'm not sure who was asked.

Q Right. I want to move on after this, and I'm particularly interested to notice that at the end of August a group of treating clinicians wrote – this is bundle 6, document 43, page 1416 – wrote to the Chief Executive and the Medical Director and raise some concerns, and what they asked for, over the page, what they supported, a call for an external review. Were you aware of this letter being sent?

A No. I don't think I was. I think I just saw it as part of the bundle.

Q If I'd asked you at the end of August 2019 about having an independent review, what would you have thought of the idea?

A So, an independent review? I

can understand why they were frustrated. I do think we spoke at some of the IMTs about having an independent review or having-- it might have been Great Ormond Street, but what we needed clarity on was what are they actually reviewing? Is it data? Is it-- what is the review to consist of? And that was what we needed to agree beforehand, or we would need to agree. I can totally understand why the clinical staff took the decision they did to write because they tried very, very hard to deliver the care they were delivering, and we were frustrated by the change in hypothesis to their clinical staff, and the one thing I would highlight is that throughout the-- and it was challenging, the clinical staff of Professor Gibson and the team, the nursing staff with the two senior charge nurses remained patient-focused and every IMT were very, very-- the patients were at the forefront of all their decisions and they were definitely the patients' advocate and it was very, very difficult for them.

Q Yes. I'm going to ask you to move on to the 18 September IMT.

A Yeah.

Q That's bundle 1, document 81, page 365. I simply want to pick up something that's described, actually at the bottom of the statement page we've just been looking at, page 41, I won't go

to it, where you said that, "At the 18 September IMT, two microbiologists stated to the IMT that ward 6A was microbiologically safe" and you and your colleague, Dr Ritchie, didn't support that view, and that's on page-- back to the IMT bundle, sorry. Bundle 1. Go to page 366, please. Now, make sure I'm looking at the right page. Sorry, page 367, and you see how just above epidemiology, there's a statement:

> "Dr Leonard and Professor Jones informed the IMT that 6A is microbiologically safe, and the safety of patients being moved to other health boards needs to be discussed. Not all members of the IMT agree with this statement..."

And that's you and Dr Ritchie. Could you expand on that? Why did you take this view? What are you actually dissenting with?

A So, I think at that point, what we were being told was everything is okay, it's safe and basically we can move on. I think our feeling was that we hadn't explored and closed off all the hypotheses. We weren't in receipt of all the information and if I am correct, this was the meeting where there was an email circulated from two microbiologists. They----

Q At the top of the page, it

actually, second top paragraph on that page, you see the reference to it.

A Yes. So, we'd had sight of the email of the SBAR and it was sent to the chair of the IMT for discussion and the IMT chair had decided that it's the Chair's decision not to discuss the content of the email. So, we felt we were in a position where we had Dr Leonard and Professor Jones, who hadn't been involved up until fairly recently, telling us that the ward was safe. We didn't feel that we had the evidence for this and we had a completely different view on data from two other microbiologists that the chair wasn't even willing to discuss or debate, which might help us arrive at the decision supported by-- or that Dr Leonard and Professor Jones were displaying.

Q Now, is this the point when you start attending meetings in pairs?

A Yes. It might have been the one before that but yes it was round about September----

Q Why was that?

A Because we felt that the minutes we were getting weren't an accurate representation. We felt that what was in the minutes weren't representing our view. We spent a lot of time, therefore, at the start of meetings going through minutes and I can't think of an example but if we said, "Well, at the last meeting we said this," it wasn't getting changed in the minutes. So, Lisa and I agreed that where we could, and we couldn't always do it, we thought it would be in our best interest to make sure that we had two representatives from HPS to ensure that our views were recorded accurately.

Q Was there any changing to the timing of the meeting?

A They were quite often changed to later on in the afternoon. So, you sometimes had a two or three o'clock, sometimes even a four o'clock start which then meant that because there was such a debate on the previous minutes it wasn't unusual for these meetings to go on to seven o'clock in the evening, by which point a lot of people had to leave. Lisa, for example, had a train to get to Lockerbie and some of the clinical staff had to leave. So, it became very challenging, in terms of the timing.

Q Now, what I want to do is move away from the minutes after minutes, so we can take this off the screen, and just ask some general questions to wrap up. You worked in Glasgow----

A I did.

Q -- as a clinical-- as a nurse consultant, and then you went to ARHAI. Are you-- do you feel able to comment on the working culture within the IPC team, did you see between, say, 2015 and

2020, as you observed it?

A What do you mean by the working culture?

Q So, in-- I noticed in the National Healthcare Prevention Manual, the suggestion that you should encourage and promote incident reporting and improvement, as a requirement for an organisation. So, you might have a working culture which encourages such a-- people to report things and to raise issues, and you might conceivably have a culture where they don't. Equally, you might have a culture where some people are listened to or everyone's listened to with interest and sometimes some people aren't listened to. There are lots of different ways that working culture can be both effective and ineffective and so I'm giving you a, sort of, open opportunity to comment. If you don't feel you can, that's understandable.

A So, from your time frame, if I could extend the time frame a bit beyond that to maybe 2022, my response would be we only know what we know. We only know what we're told, and we have a situation where we had our senior nurse infection control collectively writing an email to Laura Imrie, my line manager, who's a lead clinician-- lead consultant and nurse consultant over their concern that the challenge being made by Glasgow. So, if you get an incident

reported in, quite often we'll go back to seek clarity to decide, one, are we going to escalate it to the government? Have we got all the information? And it's very, very difficult. Glasgow do not like any communication back from us at all. They don't understand the role of ARHAI. They've questioned the role of ARHAI. To the extent that our communication is now done, on the whole, via our lead consultant who meets with Glasgow on a weekly basis to address any issues or-- and that doesn't happen with any other board. So, there are challenges with communication with Glasgow. I am not sure in terms of reporting-- I don't know what they report. They have their own system of assessing and reporting.

Q So, this is a question about epidemiology, and so if you don't feel you can comment on it, please do so.

A Probably not.

Q If you look at a wide, large number of different organisms, perhaps Dr Kennedy's list that we looked at or along a wider list or even the whole 120 different infections in the case notes review, and you look at that number and you compare it to other places and you do comparative epidemiology between one place and another using a list of organisms, and you discover that there is an increased rate of infections or a decreased rate of infections or the same

rate of infections compared to where you're comparing. Does that help you decide whether one particular isolate-- Is that connected to whether one particular infection is environmentally or not environmentally linked? Is the epidemiology of everything-- is it relevant to a particular decision about a particular infection?

A I'm not sure I understand what you're asking.

Q Okay, I'll rephrase it. So, have you had opportunity to look at the Case Notes Review?

A Yes.

Q Right. So, what do you understand the Case Notes Review are doing in their exercise for each of those 84 patients?

A They're reviewing the organisms; they're reviewing patients.

Q So they're looking at each individual infection----

A Yes.

Q -- or group of infections? And what do you understand root cause analysis to be?

A Just as it says, you're looking to find the cause of----

Q Yes. So, if you do a root cause analysis or a Case Notes Review-type analysis on a particular infection that's occurred once or twice in a hospital and you work out a hypothesis and you investigate it in the manner you prescribe in the manual, to what extent is it relevant to that thought process that the overall rate of infections in the hospital is high/low/medium/the same or whatever? Are the two connected? Is the large number of infections, the epidemiology, connected to the causal link for an individual infection?

A I think I'm being thick, but I'm still not understanding what you're asking me.

Q I'll try one more time. It's quite a hard concept. I've been grappling with it for some weeks. You can have a debate about whether – and we discussed it in the context of Dr Kennedy's report – have a debate about whether the rate of infections in a particular ward at a particular point of time is more or less than a comparable ward.

A Yes.

Q And you can discuss that, whether it's the right-- you're comparing the right things or the right places, and you can reach the conclusion that it is more or less. At the same time, you might be looking at one particular infection, and you've got one case that year, perhaps a case the case the year before, and you're looking at that one infection. If the rate of infections in the epidemiology are the same as everywhere else----

A I know what you're asking.

Q -- does that influence the question of whether there's a causal link for the individual one?

A So, I think you're asking, "Is it always about numbers or is it about type?" Is that what you're saying?

Q A bit.

A So----

Q Is it all about numbers, or is it all about logic and connections of fact?

A So, it's not all about numbers. It can't always be about numbers and otherwise, if it was all about numbers and you lumped everything together, your unusual organisms wouldn't be investigated. I've not answered the question.

Q Why is that?

A Why would they not be investigated? Because you need to look at each one individually. They're all individual organisms. They might be causing the same type of infection but they're individual organisms.

Q Well, I compliment you for giving a much shorter answer than my question. So, at that point, I'll move on.

A I don't actually know if I answered, sorry.

Q No, no, it's fine. Thank you very much. There's been a suggestion that the infection rate in the Schiehallion unit particularly, between say '15 and '19, is in some way-- if it is higher, it's in some way influenced by the level of deprivation of communities in Glasgow close to the hospital. Is that something that you have heard from people in this whole saga?

A I've heard it being mentioned. I can't see any evidence as to why that would be the case.

Q So why would you think it wouldn't be the case?

A Because, if we're looking at-- I'd like to flip that and say, "Why could that possibly be the case?" Because why would deprivation affect someone who was being treated the same way as someone who's more----

Q I suppose the hypothesis would be that----

A -- affluent from an infection perspective and their response to----

Q I suppose the hypothesis would be is that, if you have a community and persons in that community have had less positive life choices, they've had less access to good environment, food, healthcare, life opportunities, you often, for example, get a differential in life expectancy at birth, which seems to be a well-known factor, and therefore if you have a community that services a-- hospital that services a community where there's a higher level of deprivation, you might expect worse health outcomes as a starting point, it doesn't mean you would

accept that but you might-- that might be a starting point, than a more prosperous community where people have had access to more opportunities and perhaps have a greater life expectancy at birth. You might see a connection between the community the hospital serves and its own problems.

A So, if you're asking me have I seen any evidence in the literature that social deprivation impacts or is a contributing factor to someone acquiring a bloodstream infection, I have not seen that documented anywhere.

Q I'll just move on then to the question of remediation, and you've-- I want to-- I asked you to look at something in the-- which is bundle 14, volume 3, page 349, and I didn't understand the context of this and I wanted to-- I'm sorry we didn't put this to you in your question but we didn't have it at the time. So, this is an email from Professor Steele to you in 2022 and did you read this when you were given the document list?

A Yes, I did.

Q So, how did this request come to you from Professor Steele?

A So, my recollection is that Professor Steele went via our director, Julie Critchley, to ask for support or review. I'm not sure exactly what he asked for. It was to do with the children moving back to the refurbished 2A/2B.

Q Right.

A And Julie contacted Laura, myself and Ian Storrar from HFS to see if we would become involved in reviewing. What we requested, and I may be going too far because I have read the whole kind of email trail that you sent, what we did request was we felt that a short-life working group with very clear remit and a very short-life working group would be best to look at-- would give us a chance to engage with Glasgow to understand what work they did, to understand the testing they did, you know, revalidation or recommissioning testing and we were going to set up a team and that would be our priority. Unfortunately, Glasgow felt they didn't have time for this so we had a meeting with them and I think that's what that is referring to.

Q Right, and did you provide answers to the two questions that Professor Steele has asked here? "What's the standard (inaudible) in terms of water microbiology" ----

A We provided him with a lot of detail. I don't know if I've got an email that specifically answered those two but we did start to engage quite a process.

Q I'll ask him about that if I can recollect that. Okay, now, take that off the screen. To what extent do you feel able to express an opinion about whether the water system in the hospital, both

children and adult, no longer presents, if indeed it ever did, an additional avoidable risk of infection to patients?

A Now?

Q Now.

A I couldn't comment. I haven't seen results or-- so I----

Q If you were looking to see results, what sort of results would you be looking for?

A Water test results. I'd like to see that it had no unusual organisms, or very limited. I'm not sure. Comparing cases reported to us, there are very, very few cases but, as I keep saying, we only know what we know.

Q Understand. Now, what I want to just do is pick up a few questions about the HIIAT system.

A Okay.

Q I think you've made it very clear that you only know what you know. Would it-- This is possibly a cruel observation but I'll make it. It seems to me from reading the National Infection Prevention and Control Manual that it's quite a caveated structure that causes people to report and actually, if you don't want to report, generally you can find a reason not to. Would you agree with that?

A Yes.

Q And this is the review that you're currently carrying out?

A Yes.

Q When do you think the review will report?

A I don't have a timescale yet. It's predominantly led by Susie and I'll input from the environmental perspective to make sure of that because it doesn't particularly lend itself well to environmentals.

Q Now, you've already discussed, I think, about the relationship of challenge with the board. You've already discussed that in your evidence already, and that's in question 60 so I'm not going to go back to that. What I want just to understand is just to put a name to the people who are meeting. This weekly meeting is between whom?

A Laura Imrie and Sandra Devine.

Q Right, well, I can ask Laura Imrie about that on Friday. Now, finally, in your statement at question 58 on page 48, you made some observations about the-- we asked you what's your opinion about adequacy of the system and you said in your answer that you felt that the answer is very dependent or was driven by the Cabinet Secretary's interest in a particular area, and you drew out that Ms Freeman had a particular interest in this topic.

Now, obviously it's good that Ms Freeman had a particular interest in the topic and drew it out but, in terms of

having a reliable system that's not-- shouldn't it not be independent of the minister's level of interest?

A Was this question not in relation to our relationship with the government or reporting to the government?

Q This is your overview and procedure. Previous page, page 47.

A For HPS reporting to the policy unit.

Q So this is more, you're saying, the minister's level of interest in the reports rather than the efficacy of the system?

A Yes.

Q Right, well, I did wonder so that's why I asked. Can we just go back to question 6 for the same thing, which is on page-- it's 6€ so that's on page 8, and this seems a little bit more clear. Now, section 6, the heading of it is "The role of HPS in terms of advice, assistance and expertise," in fact the whole section is headed, "The role of HPS," and then the last question, (e), is this. We haven't phrased it particularly clearly, what are you trying to say in this particular answer?

A So, you're asking what extent SG are involved from a supervision-- Okay.

Q It's not a great question. It's my mistake.

A And I think I probably answered that wrong because I've put "their level of interest" is-- my response is "more to their level of interest" rather than their coordination or control. So, are you asking me the extent of the supervision that the Policy Unit have with ARHAI?

Q No, so, what I'm reacting to is your sentence, which I may have drawn out of context, which is the fourth line from the bottom, "In my experience, this," and it's a good question of what "this" is, "is dependent on how invested the Cabinet Secretary becomes in a specific incident," and I'm putting to you that actually how the Cabinet Secretary becomes invested in a particular incident should have no impact at all about the way you deliver your task as HPS or ARHAI.

A So, on the whole, it doesn't, but if the Cabinet Secretary, if the Policy Unit escalate things to the Cabinet Secretary, we may get responses back, we may be asked to do things, we may be asked specific questions. So, again bearing in mind that we are support and sometimes a conduit between Scottish Government and the board in an incident, there is sometimes a limit to what we can ask.

So if, particularly with Jeane Freeman, she did have a vested interest in HAI, and not just with Glasgow, she

would come back quite a lot with questions to go back to the board and ask for more detail. So we sometimes, you know, wait on that or you might have a-- there's been cabinet secretaries where you send it to the Policy Unit, it's forwarded up and we don't hear any more.

Q Could it be the case that what you're actually saying is that sometimes it actually helps you that a Cabinet Secretary shows an interest and asks questions?

A Very much.

Q And what I'm putting to you is that that's great but actually it'd be quite good if you didn't need that help, if you----

A Absolutely.

Q And how might you evolve the system to ensure that you didn't need the help?

A So, that would need to be a discussion with our colleagues in Scottish Government as to our role and remit, because we currently don't have any role around that.

Q Because how reasonable is it to make this possibly-cruel criticism that you are weakened by the fact that you can only react to what you're told?

A We're aware of that.

Q You can only go where you're invited.

A Yes.

Q And the health boards don't have to tell you stuff and they don't have to do what you want.

A Yes, it's difficult.

Q And what would you do to change that?

A Our role would need to be reviewed in line with discussions with Scottish Government, and I don't want to say the word powers but, yeah, our role and remit would----

Q Because you don't have an awful lot of power, do you?

A No.

Q You're mainly an advice function.

A Advisory and support.

Q Right. My Lord, I've got to the end of the questions I have to ask. Normally, we break for 10 minutes at this point.

THE CHAIR: Yes. What I need to do is to see if there's any questions coming from the floor, and in a moment I'll invite you to go to the witness room. The fault, no doubt, is mine in my reading of your statement and not pursuing it, but I just wasn't quite sure what is meant by activating or invoking the national framework.

A So, it's just a terminology. So, the national framework can be-- It's where we are asked to go into a board for a specific reason, so at times----

Q Asked by the Policy Unit?

A So, it can either be by the Policy Unit or the Board themselves can "invoke", is a term that's used. So, the Board can do a formal, "Can you come in and we've invoked the algorithm?" That very rarely happens. It tends to be the Policy Unit in response to an ongoing incident or an HAI inspection, and the term is just-- and the algorithm is invoked.

Q And is this set out in any document?

A It is. I will get that to you.

Q Thank you.

A It's in the CNO framework.

Q All right.

A I need to take a note of that too, or I'll forget.

MR MACKINTOSH: So, just to recap, we've got-- you're going to produce to us the emails between Miss Devine and Professor Reilly, that document, and I think there was another one this morning.

A There was one this morning. I've taken a note.

Q Thank you very much. Well, we'll just-- might rise there.

THE CHAIR: All right. Well, we should be able to reconvene in about 10 minutes. So, clearly, I can ask you then.

(Short Break)

MR MACKINTOSH: My Lord, I have no more questions for this witness.

THE CHAIR : No more questions and no one else.

MR MACKINTOSH : Seemingly everyone seems very, very happy.

THE CHAIR : All right. I see. Ms Rankin, I'm advised there's no more questions for you, which means that you're free to go, but before you do, can I say thank you for your attendance today?

THE WITNESS: Thank you.

THE CHAIR : And thank you for the considerable amount of work that will be involved in looking at documents and preparing your statement. So, thank you very much, but you're free to go.

THE WITNESS: Thank you very much.

MR MACKINTOSH: Thank you.

(The witness withdrew)

THE CHAIR: Now, I think we should be able to continue with another witness at 10 o'clock tomorrow.

MR MACKINTOSH: Yes, the next witness will be Dr Penelope Redding tomorrow at 10 a.m.

THE CHAIR: Right. Very well. Can I wish everyone a good afternoon? All being well, we'll see each other tomorrow.

(Session ends)

15.56