Bundle of documents for Oral hearings commencing from 19 August 2024 in relation to the Queen Elizabeth University Hospital and the Royal Hospital for Children, Glasgow

Witness Statements – Week Commencing 21 October 2024 – Volume 10

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Scottish Hospitals Inquiry

Witness Statement of

Louise Slorance

WITNESS DETAILS

1. My name is Louise Slorance. My date of birth is [redacted] 1976. I am [redacted] years old. I am a policy and public affairs officer.

2. I am the wife of Andrew Slorance. [redacted] 1971. Andrew passed away on 5 December 2020 from what was reported as COVID-19.

3. I live with my children in Edinburgh.

OVERVIEW

4. My husband was first diagnosed with Mantle Cell Lymphoma (MCL) in 2015. In January 2019 he suffered a relapse of his MCL. It was agreed that a wait and see approach would be adopted due to staging showing a very low prevalence of MCL. Following the enlargement of a pelvic lymph node in November 2019 however, Andrew started treatment on Ibrutinib as a bridge to Allogenic Stem Cell Transplant (SCT) in 12-18 months' time. At this point a referral to NHS Greater Glasgow and Clyde (GGC) for the transplant was made (Donor allogenic SCTs are only carried out in Glasgow which acts as a national service).

5. Andrew was admitted to the Queen Elizabeth University Hospital (QEUH), Ward 4B on 26 October 2020 to undergo the allogenic SCT. Andrew developed COVID and aspergillus while he was an inpatient. Despite

interventions he passed away on, 5 December 2020. I will discuss this further below.

6. Due to COVID restrictions at the time of Andrew's admission to the QEUH in 2020, visiting was only allowed in special circumstances. I therefore was only allowed to visit for ventilation in November, and, in December 2020 shortly before Andrew's death. As a result, I am unable to comment on the conditions of the hospital during his admission, however Andrew and I were in constant communication through phone calls and text so I am able to speak to the experience that Andrew had at the hospital and the experience his family had in terms of communication outside the hospital.

7. There are some specific details I would like to mention in this statement. Prior to admission at the QEUH, Andrew and I attended 2 pre-admission meetings, the first on, 21 January 2020 and the second on, 13 October 2020.

8. Andrew was prescribed anti-fungal prophylaxis as part of the standard treatment for a patient receiving an allogeneic stem cell transplant. I have identified three occasions during his admission where his prophylaxis medication was not given. The incubation period where he could have potentially been developing aspergillus due to this presents a large period of time. Andrew was diagnosed with asymptomatic COVID-19 on the 8th day of his admission and medical notes have recorded 1 negative aspergillus test in November 2020 and 3 positive and 1 negative test for aspergillus in December 2020.

9. After Andrew's death I will discuss the decision not to conduct a post mortem on the advice of an ICU doctor. I will further discuss my experience of requesting all of Andrew's medical records from NHS GGC and what they have and have not revealed. I will finally discuss the difficulties I have had with requesting records in relation to whole genome sequencing for Andrew. These test results would allow us to calculate the probable routes and potential sources of infections however to date NHSGGC have not provided me with this information with no clear reason as to why.

10. I have prepared a timeline which sets out the dates of key events that occurred while Andrew was in hospital and key events that occurred after his death. The timeline is attached to this statement at **(LS/01-appendix 1)**.

Family Background

11. Andrew and I were married on [redacted] 2007. We have 3 children together: [redacted], 16; [redacted], 13 and [redacted], 11. I also have two stepsons: [redacted], 25 and [redacted] 22. Andrew was a faithful and trustworthy civil servant of over 20 years, dedicated to his work and loyal to each and every government he served.

SEQUENCE OF EVENTS: THE FAMILY'S EXPERIENCE AT QEUH

<u>Key events and pre-admission meetings between January 2019 – October 2020</u>

12. My husband, Andrew, was first diagnosed with Mantle Cell Lymphoma (MCL) in 2015. In January 2019 he suffered a sudden bleeding event which led to the discovery that he had relapsed from his MCL. Following his diagnosis at the Western General Hospital, Edinburgh an initial referral was made to NHS GGC to investigate the possibility of sibling donors for an allogenic stem cell transplant, while staging tests were carried out. Staging showed that there was a very low prevalence of MCL and therefore a watch and wait approach was agreed.

13. Following the enlargement of a pelvic lymph node, Andrew started treatment on Ibrutinib in November 2019 as a bridge to Allogenic SCT, to take place in 12-18 months' time. At this point a referral to NHS GGC for the transplant was made. No other option was given.

14. The first of two pre-admission meetings with the transplant team was held face to face in Glasgow on 21 January 2020 with Andrew and I, and Dr Grant

McQuaker who was one of the haematologists at Bone Marrow Transplant (BMT) Ward (4B). At this meeting we were told they had a match and wished to perform the transplant in March 2020. We were advised that the transplant would be taking place at the Queen Elizabeth University Hospital (QEUH) and not at the Beatson Cancer Centre as we had been previously informed. I asked Dr McQuaker when the transplant department had moved from the Beatson Cancer Centre and was told it had moved 18 months ago, in 2018. The shock at the quick timing was also discussed at the meeting and the transplant consultant having admitted to very little or recent experience with MCL, suggested we talk with Andrew's Edinburgh consultant, Dr Fiona Scott, in regard to the timing. At a further meeting later that week with Dr Scott we had this conversation and agreed to the transplant taking place at the end of April 2020. This timing was picked to allow us more time, keep the potential donor and have half term with the children before admission.

15. I have subsequently discovered that Ward 4B was closed in August 2015 and all patients were moved back to the Beatson Cancer Centre due to air quality issues. The QEUH Independent Review published in June 2020, identifies in 8.9.10 that, "there were particle readings indicating that the isolation rooms intended and occupied by adult haemato-oncology patients and including potential BMT patients on Ward 4B were unsatisfactory and showed evidence of potential risk for future patient infection by airborne route." Section 8.9.11 states that, "the finding prompted the urgent transfer of the patients to the Beatson West of Scotland Cancer Centre, Gartnavel Hospital where non transplant patients remained for several weeks and transplant patients remained for over two years before returning". Dr McQuaker failed to advise Andrew and I of this at the time of our meeting. Disclosure of this at the time would have allowed for the necessary conversations to be had about how we could mitigate risks or make an informed decision about how we would proceed. It has since come to light that NHS Scotland patients may be treated in BMT units in England.

16. Baseline tests needed to be carried out in advance of the transplant however these were not carried out. A colonoscopy appointment was never received,

then lockdown was introduced and shortly after, around the beginning of April the CT scan was cancelled. It is important to note that the lack of tests and communication was significant as a CT scan and colonoscopy was a vital step that should have taken place 3 months after his treatment [Ibrutinib] had commenced in November. This scan would have allowed the assessment of the effect of this treatment on the cancer. Following the CT cancellation Andrew phoned his Edinburgh consultant to confirm the transplant itself had been cancelled, which it had. NHS GGC documentation, received through a subject access request, shows that on 13 March 2020 the transplant was likely to be delayed and on 20 March it was marked as delayed. Neither of these updates were communicated to Andrew, or as far as I'm aware, NHS Lothian.

17. In May NHS Lothian Radiography telephoned Andrew directly to offer him a new CT appointment due to the previous cancellation due to COVID. As no scan had taken place since the start of treatment and despite no current plans for the transplant. Andrew accepted it and a CT scan took place in May. This scan showed that there had been a significant reduction in the level of lymphoma with lymph nodes having reduced in size.

18. At the end of July, Andrew received a phone call from Glasgow advising him that the transplant would be able to proceed in October. His Edinburgh Consultant then ordered the baseline CT scan and colonoscopy again.

19. It is worth noting that at this point and at the point when Andrew was admitted in October, he was in excellent health. He was cycling daily and was in a good physical condition to withstand such a dangerous procedure.

20. Another chest CT took place in September and the result was given verbally over the phone by Andrew’s NHS Lothian Consultant, Dr Scott. Andrew remained stable as compared to the CT in July.

21. On 13 October 2020 Andrew attended the second pre-admission meeting in Glasgow. NHS GGC advised that I was unable to attend with Andrew due to

COVID restrictions. Andrew subsequently used his mobile phone on loudspeaker for me to participate in the meeting. This meeting was held with Dr Anne Latif. With a surge in COVID cases in Glasgow at this time, I asked about the risks to Andrew of contracting COVID during and after the transplant with the understanding that Andrew's immune system may take 1-2 years to recover. My questions were dismissed, and I was told that the transplant patients they had treated were asymptomatic and did fine. When I asked about the resumption of transplants and any new measures that had been introduced I was told they had continued throughout the pandemic. Shortly after this, Andrew was asked to sign the transplant consent form (which we had both received in January, had had time to digest and knew the contents well) and an 'additional' consent form due to the COVID pandemic, the Supplementary COVID Consent. Summarised by Dr Latif I was told this form said that Andrew understands that they may be short staffed, they may not have an available CCU bed and there was an increased risk of mortality from COVID. He signed it. The 2 pre-admission meetings defy GMC guidance *Decision making and consent*. This sets out that all patients have the right to be listened to, and to be given the information they need to make a decision and the time and support they need to understand it. All patients have the right to be involved in decisions about their treatment and care and be supported to make informed decisions if they are able. They also must be honest and open and act with integrity.

22. I did not see the second consent form for COVID until after Andrew died when it was included with his belongings. At no point does the form mention that Andrew could be moved out of the protected environment, necessary for transplant patients. Both Andrew and I believed that he would receive any critical care required within the protective environment of the transplant ward or ICU/critical care. Within the second paragraph of this consent form, it states that discussion would be had if there was a high risk and it weighed against the risk of delaying transplant. This highlights that for some it would be better to delay proceeding and for others it would be better to proceed. It is normal procedure for a multi-disciplinary team (MDT) meeting to take place in the

week leading up to admission due to nature of the treatment. The second consent form is attached to this statement at **(LS/02-appendix 2)**

23. There are two entries in Andrew's medical notes prior to admission on 20 October 2020. Andrew had undergone his CT scan at this point. Dr McQuaker reviewed the image and reports – "fatty liver, despite not overweight, minimal lymphadenopathy". The second comment was from Dr Anne Parker, "Severe fatty liver, minimal if any LN visible on CT scan" - the differences are notable. Neither Andrew nor I were aware of these comments, all we were told by his NHS Lothian consultant was the CT scan results were stable. There is an expectation that a full clinical decision making process would have been carried out at a MDT weighing the risks and benefits of proceeding. This does not appear to have happened, there is certainly no record of it.

24. NHS GGC were aware of the ongoing issues with 4B at this point linking the substandard ventilation and water systems and a rising risk of COVID 19 in the locality of the hospital.

25. Later in the second pre admission conversation it was established that GGC were not aware that Andrew had experienced reactions to platelets and required premedication and irradiated blood when receiving blood products. This was an example of poor communication or a lack of knowledge of Andrew's needs. The overall plan was not impacted but it required further organisation by NHSGGC. Irradiated blood only comes from Edinburgh so it should be prescribed at a point when it is predicted they are needed. The blood has to be 'biked' through and does go off after a period. It was unsettling that GGC were not aware of this. Andrew had a respiratory emergency in NHSL in 2016 as a result of this which left him with long lasting psychological effects. When he coughed, he quite often stopped breathing. This was a panic attack response which meant he would need to be talked down by myself to enable him to breathe again.

26. Due to my work I was aware of the paediatric infections that had happened at the QEUH, however Andrew asked that we didn't speak about this following

the knowledge that the transplant would be carried out at the hospital. Returning home after the meeting Andrew was visibly upset but said very little. I knew he was terrified about what was about to happen, we both were.

27. Andrew attended the Western General Hospital Edinburgh, for his colonoscopy on the 21 October. The written colonoscopy report, noted no signs of lymphoma and a normal presentation of the colon, awaiting biopsy results. This was received by NHS GGC the same day.

28. On 23 October a pre-admission COVID test was conducted by the Western General Hospital Edinburgh. The result was negative. On this day he was a day patient at the day oncology ward at the WGH to have his Hickman Line inserted. When I was phoned by nursing staff to say I could come and collect him, I was told to come to the day ward to pick him up. I refused due to the potential for COVID transmission and arranged an alternative pick up point. Both of us were acutely aware of the risk of COVID, Andrew had shielded from the outside world, and, his family all the way through lockdown to protect him as far as we could from COVID. The Chief Medical Officer (CMO) at Scottish Government at the time, Dr Catherine Calderwood, had advised Andrew to shield and work from home ahead of lockdown and schools closing. As a result of this advice and based on the associated risk, our children stopped attending school prior to the closure of schools. We were acutely aware of the very high risk to Andrew posed by COVID and took all possible precautions to mitigate risk no matter what the cost.

Admission to the QEUH; COVID diagnosis October 2020- December 2020

29. Andrew was admitted to Ward 4B at the QEUH on 26 October 2020. Due to COVID restrictions the nurse came to the doors of the ward and told us to say our goodbyes. I was not allowed to enter the ward and remained in the corridor outside.

30. On admission to the ward, a COVID swab was taken and was reported negative on 27 October.

31. On the afternoon of 26 October, Andrew text me that his isolation room was incredibly warm, and he would not require the sweaters and jogging bottoms he had packed. Over the next couple of days, the temperature in the room was unpleasant and the room thermostat was unable to control it so he reported the problem to the nurses. Subsequently, he was told that maintenance was unable to resolve this while a patient was housed in the room as the problem was located inside his isolation room.

32. On 27 October a doctor came to see him, prior to starting treatment, to say there was a bug in his Hickman Line and they would come back later to discuss. A nurse later responded to Andrew requesting a follow up stating that the doctor had gone into the wrong room, later that day the patient in the next-door room was moved.

33. On this day Andrew sent me a text that said, "*Just had a shower. It's as good if not better than ours! And room v warm so I'll be in shorts not trackie bottoms*". He also spoke about a conversation he had with the psychologist where he advised them that, "*You are the best judge of my mental health. He or colleague Kathleen are always happy to speak to you if you need it.".* I was the person to speak to about Andrew practically and emotionally.

34. On 28 October, Andrew started his conditioning treatment for the Stem Cell Transplant (day -7). Clinical notes state on this date: "gram +ve cocci in HL [Hickman line], micro will try to identify new HL inserted 23/10/20. P: continue as per protocol. Add vanc to broad spectrum Abx if pyrexial". There is no further information or follow up on this in any of the notes.

35. On 29 October (day -6) a second COVID PCR test, taken on 28 October and was reported as negative. Andrew text me this day saying, "*What a waste bringing my trackie bottoms. Far too warm for joggers!"*

36. On 1 November Andrew text me saying, " *I just want a bit of fresh air!!". "I will try to be positive but I really do miss just a bit of fresh air and a comfy seat".*

37. On 2 November (day -1) Andrew was administered with a particular conditioning medication for the first time and spiked a temperature, developed hives and suffered respiratory distress. He was treated rapidly for the medication side effects and these resolved within 2 hours. However the temperature spike demanded a repeat COVID test. He sent me a text saying he was trying to be brave in what must have been frightening situation. In the medical records it states that on this day Andrew was also started on a 3-day course of Tazocin however there is no explanation in the records as to the reason for this.

38. Overnight into the 3 November Andrew started on Dexamethosone and Ciclosporin as part of the conditioning regime and became tight chested. This resolved following a change in dosing. During the morning the same day, Andrew text me saying that he was being moved rooms within Ward 4B. He said it was something to do with COVID. *"Think they are creating a wing for any transplant patients that have COVID".* Late in the afternoon a consultant, Dr McQuaker, informed Andrew that he was COVID positive and they would shortly be doing a second test to confirm. It is important to note that the first room move took place before the test result had been established. He was also told it was too late to stop the transplant so the donor cells would be infused, as planned on 4 November. The list of negative and positive COVID PCR tests are attached to this statement at **(LS/03-appendix-3)**

39. Following the consultant's visit, Andrew rang me in tears to convey the news. In the evening, Andrew moved rooms again to be closer to the nursing station, the second move of the day. At this point I had never been contacted by the hospital.

40. In our conversation Andrew's mind was also on what the children knew. He asked me what I had told them. I told him that the children knew the truth that he was COVID positive but it could be a false positive so they were doing a second test. Our entire family were relying on Andrew communicating what

was happening while dealing with the most frightening news. He was sat in the hospital alone, his thoughts about his children and his will.

41. On 4 November the second COVID positive result confirmed the COVID diagnosis, however Andrew remained asymptomatic. Stem cells were infused (Day 0). I put in a call to Dr McQuaker that afternoon to discuss the implications of Andrew contracting COVID considering the conditioning treatment had been completed and his immune system would soon be non-existent. During this conversation I was informed that Andrew would be moved out of the Transplant ward, either to the infectious diseases ward or to the renal ward (Ward 4A). It was Dr McQuaker's preference for this to be renal as they were used to using a Hickman line. I was informed that whichever ward he was relocated to, Andrew would now be under the joint care of infectious diseases and transplant. During our call Dr McQuaker took another phone call with the news that there was a bed available on the renal ward. Dr McQuaker confirmed to me that Andrew would be moving to 4A in the next couple of hours.

42. In an email dated 18 Dec 2020 from a Nursing Staff Member she stated following a discussion with medics, "We moved AS to room 76 so he could get his Stem Cells with our Team (BMT) and then transferred to a COVID ward the following day." This communication is the first time I have seen Ward 4A being described as a COVID ward. This e-mail is attached to this statement at **(LS/04-appendix 4).** The email suggests that NHS GGC disguised the nature of the move toward 4A. The COVID consent form at no point states if Andrew contracted COVID he would be moved to a COVID ward which presents other, potentially fatal infection risks to immunocompromised patients. The supplementary COVID consent did not cover this action. NHS GGC were acting out with Andrew's consent.

43. Later that afternoon Andrew moved rooms for a third time within 24 hours to Ward 4A. Following the move to ward 4A, Andrew phoned me and told me that there was no access to bottled water on this ward (only, bottled water was drunk on Ward 4B) and this had made him very anxious.

44. According to the NHS GGC Patient Placement Standing Operating Procedures which list all rooms with specialist ventilation, ward 4A has no specialist ventilation and no HEPA filtration. For BMT rooms national guidance recommends an air change rate per hour (ACH) of 10 ACH. According to the Independent Review at sections 7.5.24 and 7.5.29 within 4B it is 6 changes and within 4A this is 2.5 ACH as opposed to 6 ACH for general rooms. The Review states at section 5.5.21, “therefore it would need to be upgraded to achieve 10 ACH, including major strip out and reinstatement of all associated plant.” And “available knowledge that show there is an inverse relationship between infection risk and air change rates; risk falls with progressively higher air change rates.”

45. That evening, 4 November, 10 days after admission it finally became clear why the hospital had not been providing me with updates. They had noted my telephone number incorrectly on admission. This would have been identified earlier had anyone attempted to contact me earlier in the admission. Up until this point there was an informal arrangement that Andrew would phone me into ward rounds. On this day a nurse, from ward 4A had realised the error when she had tried to ring me, obtained the correct telephone number from Andrew and subsequently updated me on the new ward.

46. Around this time I received a letter from the WGH confirming that the biopsies taken during the colonoscopy showed that no lymphoma was present. (I never told Andrew this).

47. On 5 November Andrew text me saying: *“I’m on the move again…. Room 9 in same ward”*. I asked him why he was moving again. His response to me was “*As I’m on IVs the staffing ratio is ‘better round the corner’. Move done already*”. This was the fourth move of a COVID positive patient within 48 hours. Andrew remained asymptomatic.

48. During a ward round on 5 November, Dr McQuaker stated that as Andrew could remain COVID positive long after the infectious period, he could be

discharged COVID positive once the transplant process was complete. Andrew and I spoke about this later on in the day, expressing our discomfort at the possibility of Andrew being discharged while COVID positive. The reasons encompassed both Andrew's safety and that of our family, with the potential of myself and the children contracting COVID. This was the last time I had any communication with Dr McQuaker and from medical records, it is apparent that Dr McQuaker was only consulted by phone for the remainder of Andrew's admission.

49. Following the move into the general specification room on 4A, the records support that Andrew became neutropenic on 7 November and pancytopenic on 9 November, which is when a patient has low red/white blood cells. He then had no immune system and was extremely vulnerable to infection, fatal risks are associated with even the most mild and common infections.

50. On 9 November Andrew started developing temperatures through the night. On 10 November - Andrew texted me to say nurses had told him his blood cultures had grown a bug. By 12 November his oxygen saturations were dropping in addition to the temperatures. The same day transplant team confirmed a bug in the Hickman line. I have subsequently learned from a test result taken on 9 November that there was a positive sample taken from his Hickman line for staphylococcus epidermidis, reported on 12 November which could have been the cause of the line infection. The positive test result is attached to this statement at **(LS/05-appendix 5)** It was recommended on 9 November, that he be started on teicoplanin and vancomycin. He was started on Teicoplannin on 10 November. The morbidity and mortality meeting (M&M) presentation I have received, states that on this day the patient was "not clinically septic" and then on 11 November "more septic". Teicoplannin was stopped on 11 November and started again on 14 November. He then remained on teicoplanin until his death, stopping briefly for a day on 4 December. He started on Vancomycin on 11 November and stopped on 14 November. No reasons for these medication changes are provided in the notes I have received, nor is there any record of decision making. I attach the

morbidity and mortality meeting presentation to this statement at (**LS/06-appendix 6)**.

51. In relation to the staphylococcus epidermidis, I am aware that on 12 November a further Hickman line test, sampled on 10 November, was negative for infection. So why did he remain on teicoplanin until death? I have never been told what his diagnosis was. Andrew had three Hickman lines. The results provided in his medical records for 12 November are only for one line and there is no identifier for which of the three lines this sample was taken from. If the line that had been found positive for S.Epi was negative within 24 hours, the most probable explanation is an environmental contaminate of the first sample. This in turn would mean that the medical records do not provide the cause of neutropenic sepsis. If the positive line remained positive, where is the test result?

52. On this day Andrew became quite quiet. He text me saying, *"I Think COVID is kicking in now. My oxygen level dropped in the middle of the night so I used a basic mask to recover them. I was given a chest Xray but no result. Temp was 39+ most nights so didn't get my platelets. No paracetamol to control temp as may be affecting my liver*."

53. Also on 12 November a pharmacist entry in the medical notes states: "note vancomycin dose missed last night and has now not received dose for >24hr (received loading dose @14:35). Note also deterioration in renal function." Further clinical entries shows that further errors occurred later this day in the administration of vancomycin. Nursing notes reveal, "error overnight and today x2 vancomycin doses missed due to miscommunication and myself not being familiar with what line on Hickman can be used". I had been told by Dr McQuaker prior to the move that renal staff were used to using Hickman lines and that was why the preference was for Andrew to be moved to 4A.

54. On 13 November Andrew's Hickman line was removed due to the possibility of a bacterial infection from the line. In conjunction with infectious diseases (ID) he was started on dexamethosone and Redesimir for COVID. The

registrar phoned me and I asked whether ID knew that he had been given Dexamethosone as part of his conditioning and early in his course of COVID as that has been found to be detrimental in the course of COVID. The registrar wasn't sure but said they would speak to ID. I was never updated further.

55. I received a text from Andrew early that afternoon saying that he would probably need to give stool sample soon regarding diarrhoea, transplant would be speaking to respiratory about his chest and that they may need to take sample of fluids from his lungs. The stool sample is requested by the haematology doctor treating Andrew that day and noted in the clinical records. I do not have test results for the stool sample. The Staph epidermidis was now negative and the CT scan report states the scan was more in keeping with atypical pneumonia, and less likely COVID 19. This information was removed from the GGC Case Review. In my opinion Andrew was left in a completely unprotected environment at his time of most need of protection. I have no records to investigate the cause of an atypical pneumonia.

56. Also on this day, nursing notes reveal that Andrew was given an overdose Gliclazide and required close monitoring overnight, a DATIX was completed. The DATIX reference is provided in the notes. I had no knowledge of this adverse event, prior to obtaining the BMT notes in February 2022.

57. On 14 November, Dr Clark writes in clinical notes "Maybe 2nd source infection."

58. On 15 November Andrew text me first thing saying his temperature was low, 35.2 and he was still on low flow oxygen. The ward round from transplant provided reassuring news that there had been no escalation in his condition and that oxygen was not being required. Dr Clark also told Andrew that the stem cells had engrafted and without COVID he would likely be discharged at the end of the week. This was upsetting for Andrew to hear. Late afternoon this changed and he was put on nasal probe oxygen again. I was updated by Andrew on this news.

59. Clinical notes from an ID ward round on 16 November suggest, “ideally need bronchoscopy, BAL to PCP PCR”. A letter sent from Dr Scott, NHS Lothian Consultant to Andrew’s GP about this period stated, “He was extremely unwell immediately post transplant with concerns about septic lung emboli.” This was not communicated to myself, or I presume Andrew, by NHS GGC.

60. It became harder and harder to talk to Andrew as he found it tough with the mask. On 16 November late in the evening, my husband text to say: “*Moving to HDU in next hour or two. Numbers aren’t getting any worse but wrap round expertise is much better if needed and any additional oxygen can only be given there*”. I was not made aware when he was moved. The NHS GGC review states Andrew was housed in room 78 on HDU. This room also had no specialist ventilation and therefore was delivering 2.5 air changes per hour according to the NHS GGC SOP on patient placement. The next morning on 17 November the ward round update explained that Andrew was now under the joint care of Critical Care and Transplant. Later that day Andrew was started on CPAP. I was led to believe that moving him to critical care was a precautionary measure however the medical notes show that this move was due to his increasing oxygen requirements.

61. The only way I could receive regular updates was when Andrew would call me during the ward rounds so I could hear what was being said, I was not phoned by medical staff. Due to his oxygen supplementation I was unable to hear what was being said.

62. On 18 November at the end of the ward round call I requested a Teams meeting between myself, transplant and CCU to fully understand the situation. I explained that there had been no direct contact with CCU doctors and that the noise coming from Andrew’s oxygen supplementation was limiting what I could hear during the round updates. I was told by Dr Andrew Clark that they did not have the time and, “there are other patients in the hospital”. I did not believe this was an unreasonable request and in fact it had been suggested to

me by a Lothian clinician who said that this was welcomed by consultants as a means to communicate with the family.

63. In the clinical records, Dr Clark notes transplant issues including, profound T cell dysfunction, secondary hypogammaglobulinemia and pancytopenia. This not only means Andrew was highly susceptible to infection but will have limited, if any immune response to infection. Dr Clark then lists general issues including “Sepsis - bacterial” and “Hypoxia - likely multifactorial”. Medical records do not indicate a clear diagnosis of a specific bacterial cause of sepsis or further attempts to identify the bacteria. An email sent by Dr Clark on this day states: “He has had septic complications post transplant...his lines were changed... he has pulmonary infiltrates / consolidation...we had hoped his hypoxia was bacterial (emboli from line) but it is worsening as his bacterial indices improve)”.

64. During the morning ward round Dr Clark spoke to Andrew regarding the possibility of convalescent plasma to treat the COVID. Dr Clark was hopeful that funding would be granted for this on compassionate grounds. Dr Clark records plan for convalescent plasma in his clinical notes. Andrew was not eligible for convalescent plasma due to his reactions to blood products. It appears from internal emails that Dr Clark was unaware of Andrew’s reactions at this time. Again on this day nursing notes state that Isavuconazole was not given “as none available”.

65. On 19 November Andrew wasn’t able to phone me anymore, he was struggling to speak. Andrew had picked up from nurses' conversations in his room that due to his O2 supplementation there were increasing thoughts of the requirement for ventilation. When he relayed this to me, I asked him if a consultant had spoken to him and his response was, “*No consultant. But I’m very nervous*”.

66. Late morning of 20 November, I received a call from Dr Appleton, an ICU consultant, who was with Andrew in his room. He told us that due to further deterioration Andrew needed to be ventilated today. I was advised that I

should come through as soon as possible. Dr Appleton advised us that Andrew had a one in twelve chance of survival. An ICU admission form states the reason for admission as “pneumonia - bacterial” and previous location as “not relevant”. A COVID 19 database form also records “CPAP pre ICU – N”, when Andrew was given CPAP in HDU.

67. I was driven through to Glasgow by my friend, [redacted], straight after. On arrival in CCU I was taken to the family room with Dr Andrew Clark and an ICU doctor. During this, I was told repeatedly by Dr Clark that the transplant had been a success. The ICU doctor talked through the chances of survival following ventilation and what potential recovery looked like. In response I asked the question of whether we should be putting Andrew through this level of intervention considering his MCL and recovery time from SCT of up to two years. I also spoke about the mental toll on Andrew from his first transplant. Dr Clark again repeated that the transplant had been a success and that it was curative. I do not accept that allogeneic SCT is a curative treatment for MCL, it offers the potential for long term control but there is not the evidence for cure. He went on to state, with the support of the ICU doctor, that they would not ventilate if they did not think there was a chance of success. Andrew was ventilated and moved to ICU early evening.

68. I would like to point out that at this point I recall clearly when I was on the video calls for the ward rounds when Andrew was in HDU, the room that had a lot of light and the door to enter was on the right-hand side of the bed as Andrew lay in it. When he was to be ventilated and I attended in person, the room was darker and the door was on the left-hand side of the bed as Andrew lay in it. They were very clearly different rooms. This illustrates that there is at least one further room move that is not recorded in the records. When did they move him and why is it not in the Patient Pathway?

69. Andrew was ventilated while I waited just outside the room with a male nurse. I was told that there were no other COVID patients in this area. Straight after ventilating Andrew, the doctor held open the door and updated me on how the procedure had gone. He said it had gone well and there were no problems so

I could go back into the room. I believed this to be against COVID guidance so asked if Andrew was fully sedated, as he was I saw no point in putting myself at further risk. As I left the ward, I observed an elderly male patient in the room next door to Andrew – he was fully dressed and eating his evening meal. These rooms have no positive pressure lobby and no specialist ventilation, nor was there HEPA filtration in Andrew's room, therefore the elderly patient was at risk of contracting COVID from Andrew. On returning home, I checked the relevant guidance in place for procedures such as ventilation. Doors should not be held open and the room should have been allowed to settle for a minimum of 15 minutes prior to individuals entering.

70. ICU clinical notes revealed that a second procedure took place late that evening. The records state, "Uncomplicated procedure. Difficulty aspirating distal lumen. CXR confirmed line position, however line 16cm in length, felt possibly not in central vein, thus discussed with Dr Wright. Plan resite a RIJ CVC and remove LIJ CVC". I was never informed about the misplacement of the line nor this second procedure, as Andrew's representative, I would suggest this was done in the absence of consent.

71. On Sunday 22 November I received 4 calls over the course of the day from NHS Contact tracing regarding a positive COVID test for Andrew. This was two sets of two calls – each set was a 'first contact call' followed by an update call confirming that contact tracing was not required. Contact tracers said they were contacting myself as the patients representative but did not know Andrew was ventilated and had been in the QEUH for 4 weeks. I tweeted the experience out of anger and frustration at having to explain my husband's situation twice on the same day and in front of my children. Scottish Government were alerted to my tweet. Following receiving an uninitiated call from the Director of Test and Protect at Scottish Government later that week, the explanation provided was that the hospital failed to a tick a box indicating that contact tracing was not required.

72. From 24 November I received daily calls from ICU to update me on Andrew's condition. He remained stable until 29 November. The nature of the updates I

received was quite variable to the doctor phoning and again what information I was given was dependant on who it was. I also had to phone the nurses to receive further information. It was only once suggested putting the phone to Andrew. There were issues about what personal information they had about Andrew, despite giving it on admission to ICU, they didn't record it until a few days later having asked me again.

73. On 29 November I was notified in the morning of a serious deterioration in Andrew's condition. I was told he was not yet at end of life and therefore hospital policy did not permit his 5 children and wife visiting. I raised the possibility of accessing ECMO and was simply told that Andrew was not eligible. I was not given a reason for his ineligibility. I also discussed with the doctor on the phone the possibility of writing up Andrew's case due to the limited studies of COVID in patients with mantle cell lymphoma. I was keen that something positive came about from Andrew's situation. The doctor said he would carry out a literature search and take this forward. I have not seen an article published that resembles Andrew's case to date. Andrew's condition remained static over the next few days.

74. On 30 November ICU notes state that "Left ankle very lax compared to right. internally rotated and plantar flxed". It is noted that a discussion was had with the consultant and a referral to orthotics, however neither investigation of causation is noted nor the potential of this being symptomatic of a stroke.

75. Also on this date, 30 November, Microbiology advice to check galactomannan twice weekly. The first galactomannan test was carried out the following day, 1 December.

76. Two galactomannan tests were carried out 1 December at 04:21 and 17:07 respectively. The results for both tests were reported at 15:07 on 3 December following authorisation by Dr Laura Cottom. The values were 1.870 and 3.820 for the first and second test respectively. A positive result is when the value exceeds 0.5.

77. Visiting specialities notes record a subsequent conversation on 3 December between Dr Anne Parker (Haematology) and ICU in respect of the result: “Contacted to discuss galactomannan result and advice micro re: ambisome. Dr Parker advised will have significant impact on renal function and K. Also likely very poor prognosis if true positive.” As the communication notes support, I was told nothing about the tests or the impact on prognosis. The communication record that references this is attached to this statement at (**LS/07-appendix 7**).

78. Medical records show that a Beta Glucan test was carried out early morning of 4 December and sent to the Public Health Mycology reference laboratory. There was subsequently a delay of over 72 hours between the sample being taken and it being received by GGC microbiology. The sample was the only received by the PHE lab on 8 December after Andrew’s death.

79. In the afternoon of 4 December I received a later than normal update call from ICU, around 4:30pm, to say that Andrew was less well. ICU communication notes state that I was told there was, “the potential for additional infection” - this is over 24 hours after they had received two positive galactomannan test results, this information was hidden from me. This communication record is attached to this statement at **(LS/08-appendix 8).** They were concerned and would try to arrange a compassionate visit for myself, only, over the weekend. At 10:30pm I received the final call to say Andrew may not make it through the night and to come in. Had I been informed on 3 December, with full transparency on what was known at that time, the way in which Andrew’s family had to say goodbye could have been very different.

80. Myself, my two stepsons and my friend, [redacted], arrived at CCU reception around 12:30am on 5 December. [redacted] stayed in the relatives room while myself and the boys sat with Andrew. When someone came to take myself and the two boys into the clinical area to see Andrew, I requested FFP3 masks that were available on the table. I was told by the woman that as we had not been fit tested for them we were not allowed and that a wrongly fitting FFP3 would fail to protect us as much as a surgical mask. We then each had

to complete a contact tracing form before reaching an area for donning and doffing PPE. A nurse then showed us the correct routine for donning and doffing PPE, including mask, gloves and aprons before taking us through to Andrew. I had not been shown the PPE process when I attended HDU for ventilation.

81. Having said their final goodbyes, Kyle and Glen left the hospital at around 4am. I spent the remainder of the night between the relatives room and Andrew's ICU room, using the ladies toilet in the relatives room area. Spending this time period around CCU, [redacted] and I made observations regarding cleaning. One example is on arrival there was a Biro on the toilet floor along with other rubbish. The cleaners attended around 7 am yet the Biro remained in the same location throughout our attendance.

82. Around 6.30am I went back into Andrew's room, medical staff were handling Andrew and I was told not to enter, I remember being shocked in respect of the angry tone with which this was said. When I returned, the day staff were in and asked if anyone was with me and they would come and speak to me in the relative's room soon.

83. Later Dr Pam Doherty and Andrew's nurse came to the relatives room, introduced themselves to [redacted] and relayed the news that Andrew was "actively dying" and they would be turning off ventilation shortly. It was explained that patients take a varying amount of time to die following this and I would be alone in the room. [redacted] accompanied myself and Andrew.

84. Andrew died at 11:36am on 5 December 2020. Dr Doherty and the nurse would come and speak to myself and [redacted] in the relatives room following Andrew's death.

85. Following Andrew's death, Dr Doherty informed me that I should expect the medical death certificate by 9am Monday 7 December and contact from the Registrar that same day. [redacted] and I left the hospital with all Andrew's

belongings at 1.30pm. [redacted] had never been asked to complete a contact tracing form.

86. Around 8pm on 7 December I was phoned by an ICU doctor regarding the delay in issuing the death certificate. I was told then that the delay was due to all COVID-19 deaths requiring to go to the Procurator Fiscal (PF) but as the PF had now signed off the death, I would receive emails for the death registration by 9am Tuesday.

87. As part of this conversation, I was asked whether I had any concerns or questions regarding Andrew's death. I explained that my main issue was to identify how Andrew had contracted COVID within the protective environment of Ward 4B and to ensure that the appropriate infection prevention and control measures were in place to ensure no other transplant patient succumbed to the same fate. In addition, I asked whether whole genome sequencing (WGS) had been carried out to identify the source of the COVID. The doctor did not know but said he would find out. I was now informed I would have the death certificate by 9am Tuesday 8 December. Having not received the death records the following morning, I was again surprised to receive a further call from the ICU doctor at 1:30pm on 8 December. It was then explained to me that due to the comments I had made in the previous conversation, they had delayed issuing the death certificate while they made further enquiries into infection prevention and control procedures in place on Ward 4B. It was at this time I was told of three clinical staff on Ward 4B being found to be positive for COVID-19 at the time Andrew was found to be COVID positive. The ICU doctor carried on by saying that he was happy with the infection control measures in place on the ward and saw no reason for an autopsy to be carried out as, "it wouldn't tell us anything we didn't already know". He asked whether I was in agreement with this. Prior to this there had been no suggestion that a post mortem would be required, certainly there was no clear context as to where this autopsy comment had come from. He made no reference to the WGS I had requested in the previous conversation.

88. I was offered to speak to transplant straight after Andrew's death, I declined at that time. On 7&8 December when ICU rang me transplant's offer to speak to me was repeated, I again declined. I was angry that transplant had said so many times that the transplant had been a success, as Andrew said in a text to me, "making the point they've done their bit to the letter!!", yet he contracted COVID while under their care and died. After Christmas 2020 I received a letter repeating the offer and saying sooner rather than later is better, I did not respond as I was waiting to see the medical records.

89. It was 8 December at 14:11 that I eventually received the death certificate. The death certificate form is attached to this statement at **(LS/09-appendix 9)** It listed the primary cause of death as COVID19. But it also listed the time interval between onset and death as 1 month and 9 days, which takes you back to the date of admission. It is evidenced in negative test results that Andrew did not have COVID-19 on admission. In addition, ICU clinical reports clearly report the length of illness prior to admission to ICU as well as the length of time the patient was there. In part 2a of the Death certificate it states that Mantle Cell Lymphoma was a cause of death with a time interval between onset and death of 4 years. Andrew was diagnosed in 2015 so this was also inaccurate. Part 2b listed stem cell transplant time between onset and death - one month. The question on the certificate that asked if the body was a public health hazard was initially ticked no, subsequently crossed out and then the yes box was ticked. Following a conversation with COVID Deaths Investigation Unit (CDIT), it emerged that the report to them in respect of Andrew's death, on 7 December 2020, stated that the family had no concerns around the circumstances of Andrews death. This resulted in the investigation being closed at the time. Since the call with CDIT I have received a copy of this form through SAR. I assume this is the copy that was sent at this time, however an internal email from Dr Andrew Mackay on 24 November 2021 states that he will complete the form to report to PF via SFIU. It is unclear when the only version I have was submitted. The form as stated was not true, I expressed concerns to them in response to NHS GGC posing the question. They made no attempt to correct the record.

90. In paragraph 84 I stated the reason I was given for the death referral to the PF; all COVID-19 deaths required reporting. The Mortality and Morbidity (M&M) presentation of January 2021 states, “been reported to the Procurator Fiscal as possible hospital acquired infection (HAI). Been reviewed by local infection control team who say indeterminate as was still in window to become positive after admission”. Internal NHS GGC emails state this was not HAI, long past January 2021. The UK wide definition for HAI COVID-19 was >7days probable hospital acquired. Furthermore, a COVID 1st stage mortality review has “IPCT discussion / assessment – No" and “MM Datix – NO".

Medical Records and Aspergillus test results

91. Shortly after Andrew’s funeral I still had substantial concerns around the decision to proceed with the transplant, in light of COVID and the negative biopsy results. As a result of this I requested all of Andrew’s medical records from both NHS Lothian and NHS GGC on 22 December 2020.

92. Shortly after, I received some medical notes from NHS GGC through the post. Having reviewed what had been sent, it was immediately obvious that this was not a complete set of records. I emailed NHS GGC on 18 January 2021, specifying the exclusion of scans, x-rays, cultures and the clinical notes from his time within the care of the Bone Marrow Transplant (BMT) team.

93. At the end of January 2021, I received a second tranche of notes through the post. The covering letter referred to lab results that would be emailed in due course. The email was received on 1 February 2021. Contained in the second tranche of notes were positive aspergillus tests results, including the 2 positive galactomannan tests carried out on 1 December 2020 which had both come back positive and the beta D Glucan test carried out by the Public Health England Mycology Reference Laboratory. At the point these tests had been conducted Andrew was already in ICU and was ventilated and paralysed. This was the first time I had ever heard of aspergillus. No one had advised me at the time and Andrew was not able to receive information like this. I also still did not have any clinical notes from the BMT team.

94. I conducted my own research online and found that this was a fungal infection that can prove fatal in immunosuppressed patients. This is why the protective environment of Ward 4B and the appropriate use of anti fungal prophylaxis are crucial in mitigating this risk.

95. I was aware of what medication Andrew should have been on as on Andrew's admission he received a copy of his treatment protocol which he'd sent me at the time. This lists all the medication that Andrew should be on with dates bar anything additionally required for emerging infections or other clinical need during the admission.

96. According to his protocol, Andrew should have started Posaconazole on day 0 which is the day of infusion of the stem cells, 4 November 2020. The protocol states that the levels should be checked on day 7, 11 November. However, when looking at the blood science spreadsheet, I could see that the level was not taken.

97. There was a gap in information and there were no notes regarding prophylaxis and any clinical decision making surrounding it. As I did not have BMT notes, I had no medication charts nor clinical notes which may have described the stoppage.

98. I would like to point out that when I had requested the records I had received the assistance from a medical colleague to assist in filling out the request for Andrew's notes to ensure I received all the notes. Despite this I was not provided with everything I requested.

99. I subsequently spoke to Linsay Allan from NHS GGC legal aspects team on the phone. Ms Allan told me that the BMT notes were <u>not</u> on the portal and that the service manager for haematology would need to be contacted and she provided me with the phone number.

100. In July 2021 I met with Anas Sarwar about my concerns about the QEUH. I was aware he had taken an interest around what had happened at the hospital and due to his knowledge I wanted to engage with him. Jackie Ballie also became involved at this stage lodging parliamentary questions for answer by the Scottish Government, namely the Cabinet Secretary for Health, Humza Yousaf. She also wrote letters to members of the Senior Management Board for the Greater Glasgow and Clyde Health Board. None of these referred directly to Andrew's case at this time. No substantial answers were received. Anas also raised the issue at First Ministers Questions (FMQs) on the 18/25 November and 2 December 2021.

101. I did not contact NHSGGC again until 23 September 2021, when I again raised the issue of missing medical records specifying the bone marrow transplant notes. I had emailed Linsay Allan directly, as the person I had been in contact with to date, however, I later became aware that Linsay had left NHS GGC earlier in the year despite the email address still being active and there being no out of office reply. I therefore emailed the generic email address for patient access to medical records on 8 November 2021 raising the lack of any bone marrow transplant clinical records.

102. On 9 November 2021 I received a ZIP file by email containing all the ICU medical notes. These notes were very detailed and contained minute by minute notes, including care, contact with myself and decisions. There was an entry in the ICU communication notes that mentioned that Dr Pam Docherty had told me on the 4 December that there was, "potential for an additional infection," as well as noting the two positive galactomannan tests in the clinical notes. The two positive results are received and referred to in notes of the previous day, 3 December.

103. Again, no BMT notes though. On this day I also received an apology from a supervisor in the team for anything that had previously been missed and that this had now been processed for me.

104. Following interviews between myself, the Daily Record and BBC Scotland, the story of my husband's death was run on 18 November, along with Anas Sarwar asking FMQs in the Parliament on the same day. A letter dated the same day was sent to me from Dr Margaret McGuire, the Director of Nursing at NHS GGC. In her letter Dr McGuire wrote that following the media coverage she would like to offer to meet with me, with senior clinicians and nurses. However, an email from Dr Andrew Mackay to Scott Davidson on 24 November 2021 states, “I remain happy to meet Mrs Slorance, but understand that we are likely well past the point where that would have been of assistance to either party.”

105. Dr McGuire went on to assure me that they will be open and honest and they do not wish me to have doubts or unresolved concerns. Dr McGuire then stated that this would be better held face to face. As a family we were still limiting contacts and avoiding crowded places so the emphasis on face to face felt inappropriate and honestly, unacceptable in the circumstances. In my response to Dr Margaret McGuire’s letter of 18 November 2021, I again requested GGC provide the acute notes from transplant along with other missing records. I also made a subject access request for both myself and Andrew.

106. On 25 November 202, I received a voicemail from the First Minister’s Private Secretary stating that the First Minister (FM) had emailed me a letter that morning regarding Andrew’s case. I attach a copy of this letter to the statement as (**LS/10-appendix 10**). The letter outlined the initial actions that the Scottish Government would take. An external review would be carried out by NHS Lothian, commissioned by the Chief Nursing Officer (CNO) Alex McMahon and Health Improvement Scotland (HIS) would carry out a general review of aspergillus in the QEUH. In earlier versions of this letter it was stated that the Cabinet Secretary for Health had instructed HIS to carry out the aspergillus review. I would be kept updated. I replied to the FM that day requesting actions to be taken immediately to ensure the safety of all haemo-oncology patients at the QEUH, both paediatrics and adults. This would not be replied to until April 2022 following further correspondence from myself.

This is despite a draft response from the FM being submitted to her private office on the same day. Government communication received through SAR, highlights that the FM failed to respond to the proposed draft and subsequently the letter was pulled due to a delay on the Lothian review.

107. On 6 December 2021, I was contacted by Stewart Whyte from NHS GGC Information Governance to advise that he would be taking forward the Subject Access request aspect of my letter to Dr McGuire.

108. On 22 January 2022 I received a reply from Dr McGuire. Dr McGuire stated in this that I had been provided with the BMT notes in the notes posted to me on 5 January 2021, i.e. the first batch of notes I was sent.

109. On 25 January 2022 I received the SAR response from Stewart Whyte. This contained a further four files of clinical records. There were still no acute records from BMT.

110. On 30 January 2022 I requested a review of the SAR, specifying among other things the retrieval of the missing BMT notes. In Stewart Whyte's response to this on 31 January, he highlighted that clinical notes would normally be provided by the legal aspects team. This is my reply to this: "*In regard to the BMT notes, yes they should be provided by legal aspects but have not been and this forms part of the reason for my subject access request, as I stated in my letter to Dr McGuire. An email from Jennifer Hayes on 061221 in Correspondence 4 may provide part of the answer to this issue – "Re inpatient stay, when I looked on Track Care, it looked like he spent all of it in ICU – is that incorrect or is there a bit behind the scene that I can't see?*"".

111. On 7 February 2022, Mr Whyte emailed again stating that, "the BMT records are kept in the clinical portal system, all of which were provided on 5 January 2021". Mr Whyte went on to explain why the CareView notes (ICU) had taken 3 follow ups by me to receive: *"CareView records were provided to you by email on 9 November 2021. CareView records cover ICU beds but this was overlooked as Andrew was in an ICU bed but our system had the bed marked*

as CCU therefore the records staff did not check for CareView records for the original response." This reason is not supported by an email from Dr Andrew Mackay to Scott Davidson saying: "T*he potential for additional infection is a direct quote from the patient's communication notes on Careview. This section is not routinely printed out via portal so I can only assume that a formal request for Careview notes was made*". In my response, I outlined that there was evidence that the BMT notes were not on the portal in January 2021 so I could not have received them.

112. On 11 February Mr Whyte emailed stating that he had reviewed the portal with the clinical service manager and both, "the nursing notes and some medical notes were uploaded to the system in December 2020". They should have been provided on 5 January but they would reprint and review before sending to me.

113. On 22 February 2022, I received another letter from Dr McGuire which states the following: "*When you advised us again on the 30th January 2022 that you still did not have the BMT records, a further investigation was undertaken and the team reviewed Clinical Portal to print all records which could be identified as relating to Bone Marrow Transplant. A clinical review of the records was undertaken to check for accuracy, which was completed on the 16th February 2022. On the 17th February a Clinical Portal audit was performed at which point it was confirmed that the records in question were not scanned until 12th January 2021 and therefore could not have been included in the original records sent on 5th January 2021. The records had been quarantined in the scanning folder for a period due to Covid measures. The Health Records Team had mistakenly assumed that the BMT records had been uploaded to the Clinical Portal when the notes were printed and sent to you on the 5th January 2021."*

114. By the end of February 2022, I finally received a paper-based copy of the BMT nursing and medical notes.

115. Despite the onerous journey I have been on to obtain the medical records I now have, I have no confidence that this is a complete set. Missing information has been outlined throughout this statement.

116. I would also like to point out that there are glaring errors in the records that remain without explanation. For example, the infection control form lists COVID 19 tests and sampling method differs from the information contained in the excel spreadsheet provided by Margaret McGuire. For example on 27 November 2020 the spreadsheet states they took a throat and nose swab. This couldn't have happened as Andrew was ventilated at this point. The infection control form however states that a nasopharyngeal swab was taken which makes sense with Andrew circumstances at this point. How can two sets of 'records' have different 'facts' about the method of sampling that occurred?

117. I am also aware that there are specific documents for the reporting of M&M meetings and for recording decision making, such as a preadmission multi-disciplinary meeting. I do not have these documents.

118. This year I have become aware, through a further subject access request, that there are full notes from microbiology, Infectious Diseases and respiratory that I have also not received. I submitted another request for this and any other forgotten records on 22 February 2023. I received a response on 22 March 2023 stating that, "*the board have complied with its obligations to provide you with all the information you are entitled to receive in response to the requests you have submitted"*. I requested all medical notes in December 2020. The response, and all previous documentation received, fails to provide documentation of the microbiology team's daily input into the decision making while Andrew was on ITU, which was referenced in an internal email from microbiology that I received through SAR.

119. To further illustrate the significant problems with how NHS GGC are maintaining their records. I wish the Inquiry to consider the following. As a result of one of the SAR requests, I have received extracts from BMT forward

planning lists. This document includes planning for Andrew's transplant however the dates on it are incorrect. They seem to be planning for the transplant to take place as early as July 2019 when Andrew was on "watch and wait". They record commencement of Ibrutinib six months earlier than this actually occurred. Had NHS GGC been working to the correct timelines and ensured accurate record keeping, then the transplant could have taken place up until May 2021. This would have allowed Andrew to have proceeded with the transplant when COVID did not present the high risk it did from October to December 2020.

Internal Case Review

120. I attach a copy of the NHS GGC Case Review on Andrew's case to this statement as **LS/11-appendix 11.** It must be noted first and foremost in respect of the NHS GGC case review that this was initiated in response to media coverage on 18 November 2021, not proactively by the health board following a patient death from an HAI, at the time of death, as should be the case. This is despite NHS GGC statements to the media:

BBC Scotland on 18 November: "After an initial clinical review, we are confident that the care and treatment provided was appropriate and we do not recognise the claims being made."

Daily Record on 18 November: "There has been a clinical review of this case and we would like to reassure the family we have been open and honest and there has been no attempt to conceal any information from them."

121. *Learning from adverse events through reporting and review* is the national framework developed by the Adverse Events Programme Board, for which Dr Margaret McGuire was the Co-chair. In Andrew's case, NHS GGC did not classify his death as an adverse event. In a letter from GGC's Director of Nursing, Dr Margaret McGuire, on 21 January 2022 she states: *"We do have robust systems and processes in place to investigate when there has been an*

adverse incident or event for a patient, and there are clear criteria for a situation like this. Whilst I do not wish to upset you any further, or be at all insensitive, we did not undertake one of those processes at the time of Andrew's death, as we did not believe there to have been any failures in Andrew's care."

122. During Andrew's admission he contracted two hospital acquired infections – these are clearly incidents or adverse events as defined by the national framework for adverse events.

123. Conversely, NHS GGC looked to reassure the public at the time of writing using the concurrent media attention and issued the following statement to the media.

124. NHS GGC said, "There has been a clinical review of this case and we would like to reassure the family that we have been open and honest and there has been no attempt to conceal information from them." The media were also sent background information including: "After being diagnosed with COVID, Mr Slorance was moved to a negative pressure room within the same ward." Ward 4B does not have a negative pressure room, placement in a negative pressure room would have been against NHS GGC's own BMT Policy and Patient Placement Policy and in fact, Andrew was never in a negative pressure room. There was an e-mail from Dr Christine Peters on 18 November 2021 to Professor Angela Wallace who was Director of Infection Prevention Control at Greater Glasgow. This states that a negative pressure room would be against patient placement policy. I attach a copy of this e-mail to this statement at **(LS/12 – appendix 12**).

125. Subject access information has confirmed that NHS GGC began the internal review of Andrew's case on 19 November 2021 and finished on 25 November 2021. The review gives the impression that Andrew was covered by anti fungal prophylaxis throughout however after reviewing the medical records and subject access information I have identified 3 occasions where the medication was not given, following initiation. I have created a chart which

sets out the medication he was given and when at **LS/13-appendix 13)**. Given that Andrew had 3 positive aspergillus tests results and clinical presentation suggestive of invasive aspergillosis I expected that the case review would cover this absence of anti fungal medication, particularly as Andrew was an immunosuppressed patient that was housed outside of the appropriate protective environment, in order to consider its significance in the death of a patient. The GGC Review chose not to cover this. I have created a chart based on the test results that demonstrates the gaps and the associated range for incubation of aspergillus. I attach this chart to the statement at **(LS/14 – appendix 14).**

126. During the construction of the review, the absence of anti-fungals was raised in an email from Dr Clark to Dr Mackay on 21 November, “the Posaconazole was only given for 2 days and there was a break of 4-5 days with no antifungal therapy. I do not think this made any difference and am relaxed about it but I think we should not have the statement you made about Posaconazole prophylaxis throughout the stay in BMT unit – he was not there from day 0, posa started on day +1 and finished after a dose on day +2”. The chart reveals the extent of Andrew’s vulnerability during his admission.

127. An internal report was submitted for the NHS GGC case review by Dr Andrew Clark. I attach a copy of this report to the statement as **(LS/15-appendix 15)**. This references that the period of pancytopenia was particularly stormy for Andrew and was almost certainly not related to COVID. He then references that this was most likely to be bacterial though other atypical infections can never be excluded 100%. The information is omitted from the GGC case review. Dr Clark also states in his report that it looks as if Andrew, “could have developed a co-infection with Aspergillus. Tests became positive despite being on ISA [Isavuconazole] which could mean resistance to Fungi Azoles [Isavuconazole is an azole]. The AG [galactomannan] test can be falsely positive but his levels were high as was his Beta, D Glucan.” Again this specialist opinion is not reflected in the review. Through making a number of SAR requests I obtained an internal version of the NHSGGC Case Review

which differs from the version I received which I attach to this statement as **LS/16-appendix 16.**

128. The GGC review states that, “repeat aspergillus antigen serology”, was performed on 1/12/20. The meaning of this statement is unclear. ‘Repeat’ tests were done 18 days after, the initial (negative) test, however escalation of anti-fungal medication, with the initiation of Isavuconazole at the time of the initial test. The review does not provide adequate reasoning for the tests on this date, nor does it address the high and increasing value of the results of the 2 tests. With the review stating empirical treatment as the reason for the escalation of anti-fungal treatment in mid November, why were the repeat tests not conducted earlier?

129. The GGC Review states that the clinical picture was suggestive and not diagnostic of aspergillus. Diagnosis for this group of immunocompromised patients post-transplant is particularly difficult as they receive prophylaxis treatment, diagnosis should therefore be defined by the EORTC (European Organisation of Research and Treatment of Cancer) guidance. This is not referred to in the GGC Review.

130. Outlining relevant epidemiology within the hospital at the time, Dr Christine Peters, clinical lead of microbiology, stated the following in an internal email on 18 November 2021: *“I was involved in the microbiology advice for the patient that is being discussed in the press and recall the case very clearly. We were treating the patient for presumed Aspergillosis based on clinical findings and galactomannan (antigen) positive tests. This is not a definitive diagnosis, but was the most likely cause of infection at the time of demise and he was on full treatment with antifungal agents. The negative PCR that came back after death does not rule out the diagnosis. “Re aspergillus I am aware that in Nov 2020 there was a paediatric haemonc case who died of aspergillosis who had also been housed in 4B, and we highlighted fungal infections in the paeds group to the IPCT at the time. I think this may be relevant in any retrospective assessment of the fungal infection risk as well as*

the fact that he was not housed in a positive pressure room throughout his neutropenic stage." This was not included in the case review, nor did records show that further investigation occurred, and Dr McGuire's letter stating there was no need for further investigation.

131. On 2 December 2021, the First Minister, Nicola Sturgeon told the Scottish Parliament, *" I asked NHS Greater Glasgow and Clyde to do an internal review. It has advised me that, based on the work that it has done so far, there is no child who had Aspergillus noted on their death certificate as a direct or contributory cause of death".*

132. Not only was this key epidemiological information and opinion excluded from the review, as was Dr Peters clinical involvement, but the addendum on aspergillus in the review was authored by Dr Laura Cottam, Consultant Microbiologist at the Glasgow Royal Infirmary.

133. The Review also references the absence of BAL or tissue sampling making confirmation very difficult. BAL sampling was suggested on two occasions, it was not carried out on either. Andrew was aware of the first occasion as he text me to tell me. On the second occasion he was ventilated and not deemed stable enough for the procedure.

134. Tissue sampling is a key element of a post mortem and NHS GGC have suggested that this type of sampling is required for a confirmed diagnosis of aspergillus. Without there being a previous opportunity to obtain these necessary tissue samples, why was I advised by an ICU doctor that, "a post mortem would not tell us anything that we didn't already know?". According to the NHS GGC case review this is factually untrue, a post mortem would have confirmed, or otherwise, the diagnosis of aspergillus. At the time I agreed to not having a post mortem. I was completely unaware of any test or treatment for aspergillus, the only named infection I had been given was COVID 19. Had I been informed of the positive galactomannan results and the need for tissue samples for confirmation, I would have definitely requested the post mortem.

135. There was no post mortem to confirm diagnosis and no investigations took place on or around the time of Andrew's death. The NIPCM stated in 2020: "The Healthcare Infection Incident Assessment Tool (HIIAT) should be used by the IPCT or HPT to assess every healthcare infection incident i.e. all outbreaks and incidents including decontamination incidents or near misses in any healthcare setting (that is the NHS, independent contractors providing NHS Services and private providers of healthcare). NHSGGC failed to do this for both infections. In respect of aspergillus, GGC's failure to report single cases was highlighted by the latest Health Improvement Scotland inspection report for the QEUH. The HIS report also describes the Health Board's evidence that the IPC team would review potentially related aspergillus cases 30 days either side of the positive test. The IPC review would therefore be expected to cover both the patients highlighted by Dr Peters yet this, again, was never done.

136. Fundamental to the case review and more specifically incident management, is the rooms and wards Andrew was housed in and the dates of these. The timeline and ward movements outlined in the review is factually inaccurate. These inaccuracies include wrong dates and the complete omission of two rooms on Ward 4B and 4A respectively. The actual timeline is as follows:
    - Ward 4B: 26/10 - 3/11/20 Moving 4 hours before the positive COVID result.
    - Ward 4B: 03/11-3/11 AM-PM
    - Ward 4B: 3/11 - 4/11 To be closer to the nursing station due to COVID positive.
    - Ward 4A: 4/11 - 5/11 As referred to following my telephone call with Dr McQuaker.
    - Ward 4A: 5/11 - 17/11 Moved to room 9.
    - HDU: 17/11- 20/11
    - HDU: Moved rooms at a point unknown before I attended on 20 November, single room, no lobby
    - ICU: 20/11 - 5/12 Single side room with lobby.

I cannot confirm the majority of room numbers as Andrew only told me a room number in the case of room 9 on 4A and I do not recall seeing room numbers when accessing HDU or ICU.

137. The case review also fails to explicitly state the type of rooms and the protection they offer to different patient cohorts. However, it is clear from the NHSGGC SOP for patient placement, active at the time, that Ward 4A and HDU did not provide any specialist ventilation and were therefore of general room specification. In addition, the NHS GGC SOP does not state COVID 19 as a contraindication to placement within a BMT room. Key to the placement of a patient who was known to become pancytopenic within a couple of days is full risk assessment of potential options and communication with the patient and relatives to seek agreement and consent. I have no evidence that this risk assessment was carried out, nor that these issues were discussed with Andrew, they were not discussed with me. In my view, and in regard to the consent forms that Andrew signed, once he was placed outside of the protective environment, he was being treated without consent. Neither supplementary COVID consent nor the BMT consent covered this possibility.

138. There are other examples of inaccuracies and missing information from the case review that I have not detailed in this statement but would be happy to provide to the Inquiry if that would be of interest to them.

External Case Review (NHS Lothian)

139. The completed NHS Lothian review was received by Scottish Government on 20 December 2021 and emailed to me on 19 January 2022. I attach a copy of this Review to the statement at **(LS/17 – appendix 17).** .

140. The First Minister, Nicola Sturgeon stated in the Scottish Parliament on 25 November 2021, “Those actions include an independent external review of Andrew’s case notes.” The NHS Lothian report states on page 1, “No

reviewer had the opportunity to examine the records of care" and "The method used has limitations, most notably that case notes and actual records were not seen, which would be the normal way expert opinion is usually given." An internal Scottish Government email states "the primary focus of the review was one of communication" not the HAIs I was primarily concerned with.

141. All information and opinion provided in the external case review has been based on the limited and in some cases inaccurate information, contained in the case review carried out by NHS GGC. It is also clear from information received by SAR that a direct communication line between Lothian and GGC did not exist, all communications went through the Chief Medical Officer at Scottish Government, Professor Alex McMahon. This included extensive follow up questions from NHS Lothian for NHS GGC.

142. There are other examples of inaccuracies and information omitted from the case review that I have not detailed in this statement but would be happy to provide to the Inquiry if that would be of interest.

MEETINGS

143. At the point the Reviews were published I was invited by the CMO to attend a meeting with himself, NHS Lothian and NHS GGC about the case reviews. The first meeting was agreed to take place on the 28 February 2022, which was subsequently postponed due to me raising concerns about the lack of appropriate attendees. On 21 March 2022 I received a letter from Alex McMahon advising that no further meetings would be offered on the basis that I wished legal representatives to attend. Essentially that if I wished a meeting to go ahead, it would have to be without my solicitors, I agreed to this. A further meeting was agreed for 1 April 2022 but again this was withdrawn, this time due to the attendance of Jackie Baillie who had been noted as an attendee in the first proposed meeting. In the letter from Alex McMahon withdrawing the offer of the Scottish Government led meeting, I was directed

to Scott Davidson at NHS GGC, “who stands ready as your point of contact going forward to arrange a meeting.”

144. At this point, my main focus was the aspergillus and understanding the microbiology aspect of Andrew’s care. As a result, I contacted Dr Christine Peters directly as Andrew’s treating microbiologist. Dr Peter’s replied, commenting that she was always happy to meet families and would escalate my request. On Saturday, 30 April, I received an email from Gareth Bryson, Clinical Director for Laboratory Medicine, saying that Scott Davidson would be happy to arrange a meeting between Dr Mackay and Dr Clark. Several emails later it was clear I would not be allowed to meet with Dr Peters and was again contacted by Dr Davidson.

145. By mid May 2022, Dr Davidson had proposed GGC attendees as Dr Mackay, Dr Clark, Prof Leonard (infection control) and Dr Peters and requested my attendees. He mentions in this email that he has copied in Alex McMahon “for awareness”. I confirmed my attendees as Jackie Baillie and a friend. My attendees were rejected stating that this changed the intention of the meeting and I was informed I may bring “appropriate family / loved one”, the meeting was about my deceased husband. Regarding Ms Baillie an internal GGC email comments in June 2022, “I think we should say she wants to bring [redacted]...let folk see how political she is.” A further email from Scott Davidson in regard to attendees stated his duty of care to staff due to the media and political scrutiny. My initial request was a one to one meeting with Dr Peters. Further emails were exchanged until a final email from Prof Angela Wallace, Executive Nurse Director, in August 2022 referring me to the NHS GGC complaints service. Suffice to say there has been no meeting with either Scottish Government, NHS GGC or NHS Lothian to discuss Andrew’s care or the case reviews to date.

146. [redacted]

[redacted]

Political Intervention

147. As I have stated previously to the Procurator Fiscal, I have messages on both Andrew's phone and my own regarding the involvement of Ministers and senior Scottish Government Civil Servants, namely the CMO and National Clinical Director, during Andrew's admission.

148. Prior to his admission in October 2020, there was involvement of Scottish Government officials as far back as March 2019. Following offers of support and help from colleagues, Andrew emailed Shirley Rogers and Jason Leitch regarding several months of difficulties his clinical team were facing in their attempt to secure a urgent colonoscopy. This led to Andrew having to sign a consent document to allow Scottish Government to access his medical records. This was then sent to his government email address and subsequently to Shirley and Jason. Following the medical records consent, [redacted] reportedly led to a review of how colonoscopy referrals from haemo-oncology could be expedited where necessary.

149. In July 2020, Andrew was notified by NHS GGC that his stem cell transplant was being provisionally booked for October 2020 and baseline tests, in the form of a CT scan and colonoscopy, would be carried out prior to admission. The baseline tests inform the decision making to proceed with the transplant, as well as providing a baseline to measure the success of treatment.

150. In August / September 2020, prior to those baseline tests Andrew was in a face to face meeting with Jason Leitch, National Clinical Director. Andrew reported to me that night, that Mr Leitch was 'absolutely sure' that the transplant would go ahead in October. I would expect Mr Leitch, in his position of National Clinical Director, to be aware of NICE guidance in place at

the time - COVID-19 rapid guideline: haematopoietic stem cell transplantation (nice.org.uk) as well as the clinical decision making process required for treatment of this kind at any time. How could Jason Leitch be so sure? The rates of COVID were increasing, reported by the National Clinical Director at the time, and restrictions were put in place. Even without the risk posed by COVID, Mr Leitch was sure in the absence of baseline tests and associated clinical decision making.

151. Following receipt of the medical notes I have looked for documentation of the MDT meeting to discuss Andrew's case and achieve consensus, in line with NICE guidance, as to whether to proceed with the transplant. There is no record of an MDT or the clinical decision-making process. This constitutes medical negligence as care falls below standards.

152. On 5 November, following Andrew's COVID positive test, Jeane Freeman, the current Cabinet Secretary for Health at the time, sent Andrew the following message: "*I know Jason and others are in touch and on the case to make sure everything that needs to happen to wrap around and protect you does happen. But I'm your Cabinet Secretary my dear so anything you need, you tell me and don't footer around on it. You're a bit precious and you matter to very many of us*." It would appear that even the Cabinet Secretary for Health cannot protect patients from the effects of a substandard hospital.

153. Jason Leitch, National Clinical Director, also contacts Andrew directly the same day, with the messages offering a view different to the official classification HAI COVID. Having confirmed Andrew was tested pre-admission, he goes on to say: "*You could have been incubating. Stragglers incubate longer than 14 days. What are the staff saying? And what can I do?? Negative doesn't mean you weren't incubating. I know you know that."* Andrew's response, "Not dwelling on how I got it", must have been reassuring to Mr Leitch.

154. I had had a phone conversation with Jason Leitch earlier the same day. In that call, the message had been similar regarding incubation comparing Andrew to

an “elite sportsman” where incubation had apparently been seen to be longer, Andrew was no elite sportsman. I had also asked him about WGS of Andrew’s PCR due to the potential for the source to be either the Edinburgh Cancer Centre or the QEUH but was told this was a decision for the GGC Health Board. We continued to exchange text messages and WhatsApps between 5 November 2020 until 18 November 2020. I heard nothing more until 5 December 2020 at 15:33, just 4 hours after Andrews death, *“How are things?? Any change?”*.

155. Professor Sir Gregor Smith had also communicated his influence at Health Board level stating in a message to Andrew prior to admission, *“That’s what we are here for – to breathe fear of god into the teams looking after the people that matter.”*

156. Following the CNO’s final withdrawal of the offer of hosting a meeting with myself, Prof McMahon directed me to liaise solely with NHS GGC and specifically Scott Davidson. However, it soon emerged that this was not the end of Scottish Government’s involvement. In May 2022, an email from Dr Davidson stated “I have copied in Alex McMahon”, in June, “I have had the opportunity to discuss the current situation with Professor McMahon who is supportive of this proposal, and I hope that we will be able to move forward as proposed” and in July, “I have discussed the content and approach outlined within this letter with the CNO and he is in agreement with this course of action.”

157. Furthermore, subject access request information demonstrated co-ordinated working between Scottish Government and NHS GGC from November 2021 onwards. From this, it is apparent that Scottish Government were seeking sight of all external communications regarding Andrew’s death, including the case reviews, media statements and communication with myself. Scottish Government oversight remains to the present day. Scottish Government were also kept up to date by NHS GGC on offers of meetings, calls and their content. This information would form part of the 27 FMQ briefings I have

received. (I was not sent the briefings for 18, 25 November or 2, 9 December 2021.

158. Within Scottish Government, evidence shows that my activity is monitored; from my tweets, to my allocation as Core Participant on this Inquiry. As these are published, officials write submissions on the content with advice on a potential response. The lists of people in receipt of this information include the FM (Nicola Sturgeon), Cabinet Secretary for Health (Humza Yousaf), Special Advisors and the Director General for Health. All required to respond to a widow only seeking factual answers.

Overall impact

159. By the time Andrew died, our 3 children had not seen him for six weeks. They had said goodbye on the stairs at home at 7:30am on 26 October 2020. The wider family had not seen him since a garden visit in July 2020.

160. When the first phone call came in the night of 4 December to say he wouldn't survive the night, my 9, 10 and 13-year-old rushed to dress and pack a bag each, they wanted to say goodbye to their dad. Each one of them had packed a mask, hand sanitiser, a clean set of clothes and a bottle of water and were sitting on my bed when the second call came in. The children could not go into ICU. Ten minutes later, I left them, still sitting on my bed crying uncontrollably. This image will never leave me.

161. After his death, we mourned his COVID death. This was during a period where there were strict COVID restrictions. You could not have people in your home, meaning that throughout Andrew's time in the QEUH and following his death, the support from friends and family was incredibly limited. For myself, at home, I was a single parent, but the reality was I was also supporting my scared and now, ill husband remotely while trying to keep up to date about his medical situation and treatment without ever being in the hospital. Looking

back I have no idea how we managed to get through the admission in these circumstances.

162. His funeral was limited to 20 people but we didn't mind. Andrew had shielded from the outside world and within his home, from his family, since March 2020 - this was how you kept the vulnerable, safe. I know the whole family questioned the sacrifices we had made for many months to ensure Andrew's safety and yet the hospital had not managed to protect him at all, but not one of us said it out loud. It was a burden we took on individually from the youngest member, aged 9, to the oldest, aged 81. With the information divulged in the medical notes, this all changed.

163. With full lockdown in place from January – March 2021, I read the medical records when the children were in bed. As issues arose, all I could do was internet research to understand the implications in rare moments alone. (As NHS GGC have criticised the use of internet based research by families in a previous concluding statement, I wish to highlight that I have sought expert opinion since.) During this time, I was isolated and supporting my grieving children alone.

164. As restrictions lifted, the implications of the positive aspergillus tests became clearer, and the question of why I was never told, louder. Knowing ICU had been told of the likely outcome on 3 December, I thought a lot about how that would have changed the way Andrew's family got to say goodbye. The trauma of a late night call to say get here now is difficult to put into words, the logistics are, however, easier.

165. Only two, at a push three people were allowed into ICU. Having been told the younger 3 could not go, at 10:30pm that Friday night I had to choose who could see Andrew in his final hours – his parents, his sister or his two sons? I wouldn't ask my worst enemy to make this choice. My two stepsons, with enormous brevity, sat beside their dad and said their goodbyes. Andrew's parents and sister said their goodbyes via a mobile phone on loudspeaker. I

cannot imagine the pain you must feel saying your final goodbye to your child over the phone.

166. In the medical notes ICU are told of this potential outcome on 3 December, he died nearly 48 hours later on 5 December. Each and every member of the family could have had some time with Andrew to say goodbye in person, IF, this had been communicated to us.

167. Our grief has been suspended since finding out that Andrew had contracted a fungal disease. The expression of grief is partially reliant on understanding the circumstances and causes of the persons death. Once it was clear that details from Andrew's time in the QEUH had been hidden from us, we could no longer mourn a solely COVID death – were we a COVID bereaved family like so many others over the last three years or are we a bereaved family from an avoidable death? Where do we belong? Without answers to our questions, we will never know.

168. Trust was lost. We, confidently, placed trust in the hospital and the clinicians treating Andrew to deliver his life prolonging treatment. Every member of the family, from the youngest to the oldest, was aware of the risks of the treatment and we each prepared ourselves for the worst, while hoping for the best. Since the initial media coverage we have lost trust in information given to us by NHS GGC or Scottish Government. We have watched as false statements are given to the media, spoken in Parliament and communicated directed to us, the bereaved family. It would appear that the whole truth, cause and effect, is not an objective of any review into Andrew's case.

169. Since January 2021 there has been a huge psychological impact on myself specifically. Much of the communication I have received has been sent, around or after, close of business, or to put it another way, our family's teatime and sometimes after 7pm at night. Other communication has been sent on a Friday night, a well commented on strategy, that maximises the negative impacts whilst minimising any immediate action a receiver may take. A Scottish Government email states, "*Can you send the following three*

attachments to Mrs Slorance tonight from CNO, please?". This is referring to CNO's email containing the NHS GGC case review and NHS Lothian case review. The email was sent at 7.41pm.

170. Processing these communications needed to be as internal as possible to protect my children and left me, again, feeling very isolated. I am sure that my grieving children felt the stress I was enduring at times and my guilt over that will remain with me for the rest of my life. I did not give them my full attention and support during one of the worse times in their lives.

171. The sequence of events I experienced to receive the transplant notes involved many GGC emails questioning my ability to recognise the notes in question. I am not a health care professional and despite knowing I had not received them, the constant questioning makes you doubt you own judgement. This was the case, not just with the transplant notes, but with many other issues as well, particularly when inaccurate statements were made by others. You doubt everything you know to be true, you even doubt what you see despite it being in black and white in front of you. I cannot underestimate the effect on myself and my family, it is a truly devasting addition to grieving the loss of your father, husband and son.

172. Then there is the realisation that Andrew died from avoidable harm, the consequences of a substandard hospital. Some of Andrew's friends and colleagues had known for years about theses issues yet, waved him off with fanfare. Primary systems, ventilation and water, were way below acceptable standards but here they were encouraging him into this building to have his immune system actively destroyed, the risk could be no bigger. Patients had already died and they did nothing. That is manslaughter.

173. Much of what has happened since the first media story, only serves to compound the anger and strengthen this view. The Health Board continues to withhold information, give inaccurate public statements, withdraws meetings and constructs a case review that is limited on actual fact. All this with the full support and weight of Scottish Government behind them. One could be

forgiven for believing this is a cover up in the highest echelons of our most powerful establishments.

174. The information I have received through SAR's has reinforced just how many people, both at Scottish Government and NHS GGC are involved in monitoring what I say and controlling the information I receive, in private, in public and in the Scottish Parliament, in regard to Andrew's time and death at the QEUH.

175. Both organisations have called into question my character and intruded into my personal life. As an example, this is the content of an NHS GGC email chain:

Person 1: Can we please add Louise Slorance on to our list for social listening?

Person 2: Sure do you just want social? Also do you want mentions of her or her posts?

Person 1: [redacted]. Both please. Her Twitter handle is @Louise Slorance

Person 2: Ok no worries. I'm also going to include content around Andrew as he can get mentioned without her too. Will add to daily alerts.

There is not one aspect of my life that has been left unaffected.

176. All this grieving family asks for, and has ever wanted, is the whole truth and nothing but the truth. It would appear that, that is just too much to ask.

177. I believe that the facts stated in this witness statement are true. I understand that this statement may form part of the evidence before the Inquiry and be published on the Inquiry's website.

LIST OF EXHIBITS

LS/01 – appendix 01 : Louise Slorance timeline

LS/02 – appendix 02: COVID-19 consent form

LS/03 – appendix 03: list of COVID PCR tests

LS/04 – appendix 04 e-mail chain about COVID wing –

LS/05 – appendix 05 staphylococcus epidermidis test result

LS/06 – appendix 06 : morbidity & mortality presentation:

LS/07 – appendix 07 communication record: galactomannan test

LS/08 – appendix 08: communication record: additional infection

LS/09 – appendix 09 : Death certificate form

LS/10 – appendix 10 : Nicola Sturgeon letter

LS/11 – appendix 11: NHSGGC Case Review

LS/12 – appendix 12: Angela Wallace and Christine Peters e-mail

LS/13 – appendix 13 : Chart: Antimicrobial medications

LS/14 – appendix 14: Chart: incubation period aspergillus

LS/15 – appendix 15 Internal report: Dr Andrew Clark report

LS/16 – appendix 16 Internal version of NHSGGC Review

LS/17 – appendix 17 Lothian Peer Review

COVERING SHEET – Louise Slorance

LS/01 – appendix 01 : Louise Slorance timeline

Andrew and Louise Slorance Timeline **LS/01 – appendix 01**

2019

- In 2019 Andrew relapses with Mantle Cell Lymphoma (MCL) which he was originally diagnosed with in 2015. A "wait and see" approach is adopted due to the low prevalence of MCL. At this time a referral to NHS GGC was made for sibling donor testing for the transplant.
- Following an enlargement of a pelvic lymph node in November 2019, Andrew commences treatment on ibrutinib as a bridge to allogenic stem cell transplant (SCT). A referral to NHS GGC for the transplant was made in November.

2020

21st January:

- Andrew and Louise attend the first pre-admission meeting at the QEUH with the transplant team and Dr Grant McQuaker. A transplant date of March 2020 is proposed and Louise and Andrew were advised that the transplant would be taking place at the QEUH and not the Beatson Cancer Centre.
- A further meeting took place during this week and it was then agreed that the transplant would take place in April 2020.

20th March:

- Due to the country going into lockdown and the emerging COVID pandemic, NHS GGC record Andrew's transplant as delayed.

May

- First CT since commencing Ibrutinib

September – October

- Andrew undergoes a colonoscopy and CT scan in order to prepare him for transplant in November 2020.

October

13/10:

- Andrew attends the second pre-admission meeting at the QEUH with Dr Anne Latif. Louise attends by telephone. Louise raises concerns around the COVID-19 risks with cases being very high in Glasgow at this point. The concerns are dismissed.
- Andrew is presented with two consent forms; a transplant consent form (which he was already aware of) and a supplementary COVID consent form (which he was unaware of).

21/10:

- Two entries in Andrew's medical records confirm that the CT scan has been reviewed and that the two doctors reviewing it have differing views on Andrew's liver health. Protocol dictates that a clinical decision making process should have been conducted weighing out the risks and benefits of proceeding with a stem cell transplant. There are no records available supporting that this process occurred.
- Andrew attends the Western General Hospital, Edinburgh, for a colonoscopy. The results noted that there were no signs of lymphoma and there was a normal presentation of the colon. GGC received the results on the same day.

23/10:

- A pre- admission COVID test was conducted by the Western General Hospital, Edinburgh. The result is negative.
- Andrew's Hickman line is also inserted.

26/10:

- Andrew is admitted to the QEUH ward 4B to undergo the allogenic Stem Cell Transplant (SCT). Louise says goodbye to him at the ward door. Due to COVID restrictions she is not allowed to enter the ward.
- A COVID swab is taken.
- Andrew texts Louise telling her the room he is in is incredibly warm.

27/10:

- The COVID swab taken on 26/10 is negative.
- A doctor tells Andrew that there is a bug in his Hickman line. Later that day he is told that this is a mistake and that it was the patient next door that had a bug in his Hickman line. This patient was moved.

28/10:

- Andrew starts his conditioning treatment for the Stem Cell Transplant.
- A second COVID PCR test is taken

29/10:

- The COVID PCR test taken on the 28/10 is negative.

November

1/11:

- Andrew texts Louise saying "*I just want a bit of fresh air!!". "I will try to be positive but I really do miss just a bit of fresh air and a comfy seat".*

2/11:

- Andrew is administered with a conditioning medication and for the first time spikes a temperature, developed hives and suffered respiratory distress. The temperature spike demanded that a repeat COVID test was taken.
- The medical records show that Andrew was started on a 3-day course of Tazocin. No reason for this is given in the records.

3/11:

- Overnight into the 3rd Andrew is started on dexamethasone and ciclosporin as part of the conditioning regime.
- Andrew texts Louise that morning telling her he is being moved rooms within ward 4B telling her it was "something to do with COVID". He believed that the hospital was creating a wing for transplant patients with COVID.
- Late in the afternoon Andrew is informed that he is COVID positive. A second test is taken to confirm.

- The first room move occurs before the first test result is reported. Andrew is told it is too late to stop the transplant. Andrew moves rooms again in the evening to be closer to the nurses station. No one from the hospital phones Louise.

4/11

- The COVID test taken on 3/11 is confirmed as being positive.
- The transplant takes place and the stem cells are infused on this day.
- Louise speaks to Dr McQuaker in the afternoon to discuss the situation. She is informed that Andrew is being moved out of ward 4B into Ward 4A. There was no access to bottled water in 4A.
- It becomes apparent that the hospital had not been contacting Louise because they held the wrong telephone number for her.

5/11:

- Dr McQuaker suggests to Andrew during a ward round that there is a possibility that he could be discharged while COVID positive.
- Andrew is moved to room 9.

7/11:

- Andrew becomes neutropenic

9/11:

- As well as being neutropenic Andrew becomes pancytopenic. He remains in ward 4A which has no specialist ventilation and no HEPA filtration.
- Andrew is started on teicoplanin and vancomycin.

10/11:

- Andrew texts Louise advising her that the nurses have told him his blood cultures have grown a bug.

11/11:

- Teicoplanin is stopped. Vancomycin medication is started. No reason for the medication change is given in the records.

12/11:

- Andrew's oxygen saturation levels drop in addition to temperature spikes. The transplant team confirm that Andrew has a bug in his Hickman line.
- The medical records support that a positive sample taken on 9/11 grew staphylococcus epidermidis which was reported on 12/11. A further Hickman line test result (taken on 10/11) was negative for infection.
- Andrew tells Louise that he is feeling the effects of COVID now and becomes quiet.

13/11:

- Andrew's Hickman line is removed due to the possibility of a bacterial infection from the line.
- A CT scan report confirms that Andrew's presentation was more in keeping with atypical pneumonia and less likely COVID 19.This information has been removed from the GGC Case Review. There are no records to investigate the cause of atypical pneumonia.

14/11:

- Andrew starts on teicoplanin again and remains on this until his death apart from 1 day on the 4/12 when it was stopped briefly. Vancomycin is discontinued on 14/11. – No reasons for the medication change are given in the records.
- Dr Clark writes in the clinical notes: "*Maybe 2nd source infection*".

15/11:

- Andrew receives reassuring news that there has been no escalation in his condition however by the afternoon this changed and he is put on a nasal prong for oxygen requirements.

16/11:

- Andrew texts Louise advising her that he is being moved to the High Dependency Unit (HDU) shortly. Louise is not advised by the hospital when this move occurs.
- The NHS GGC Review states that Andrew was moved to HDU room 78. This room does not have specialist ventilation.

17/11:

- Andrew is started on Continuous Positive Airway Pressure (CPAP). Louise was under the impression that moving Andrew to HDU was precautionary however the records reflect that it was due to his oxygen requirements. This was a single room with no lobby and no specialist ventilation.

18/11:

- Louise requests for a Microsoft Teams meeting with the Transplant and CCU teams to fully understand the situation. Prior to this Andrew was dialling her into the ward rounds to listen to the discussion but Louise could not hear what was being said due to the machinery and background noise. The request for a meeting is denied by Dr Andrew Clark saying that the team did not have the time with the comment "there are other patients in the hospital".

19/11:

- Andrew isn't able to phone Louise anymore, he is now struggling to speak. He tells Louise via text that he could overhear the nurse conversations talking about him having an increased need for ventilation.

20/11:

- Louise receives a phone call from Dr Appleton in ICU advising her that Andrew needed to be ventilated that day. Andrew was given a 1 in 12 survival chance. Louise is advised to come through to the hospital as soon as possible.
- She immediately travels through and meets with Dr Andrew Clark and an ICU doctor to discuss the ventilation. He is ventilated while Louise waits outside the room. Medical notes showed that a line later had to be re-sited due to an error in positioning.
- As Louise leaves the ward she witnesses another patient in the room opposite Andrew. These rooms had no lobby and no specialist ventilation. This patient was at risk of contracting COVID from Andrew as a result.

22/11:

- Louise receives 4 phone calls from Track and Trace as a result of a positive test for Andrew carried out in the QEUH. In anger she tweets about the situation and the Scottish Government are alerted to her tweet.

24/11:

- From this day onwards Louise receives daily phone calls from ICU to update her on Andrew's condition. He remains stable until 29/11.

29/11:

- Louise is notified in the morning of a serious deterioration in Andrew's condition. She is advised that he is not yet at end of life and therefore hospital policy does not permit her and Andrew's 5 children a compassionate visit.

30/11:

- Microbiology advice is recorded as being to check Andrew's galactomannan twice weekly.

December

01/12:

- Two galactomannan tests are carried out on Andrew. These tests are used to detect invasive aspergillosis.

3/12:

- Galactomannan test results are reported this day as being positive. A conversation is noted in the records between Dr Parker (Haematology) and ICU to discuss. It is recorded that there would be a poor prognosis if this was a true positive. Louise was not advised of this at the time.

4/12:

- A Beta D glucan is carried out.
- Louise receives a phone call from ICU to say that Andrew was less well. A compassionate visit would be organised for Louise at the weekend, however at 10:30pm that night she receives a further call advising her to come through to Glasgow immediately. Only 2 of Andrew's children are permitted to attend as well forcing Louise to leave 3 of their children at home in deep distress.
- The medical records record that Dr Docherty tells Louise that there was "potential for an additional infection". The two positive aspergillus results are noted by Dr Doherty on this day. Nothing was communicated about aspergillus to Louise.

5/12-

- Louise and her two stepsons arrive at the QEUH at 12:30am. Andrew dies at 11:36am.
- Dr Doherty speaks to Louise about the death certificate. She is advised that she could expect it by 9am on 7/12.

7/12:

- No death certificate arrives. At 8pm that night she is phoned by an ICU doctor telling her that there has been a delay in releasing the certificate due to all COVID-19 deaths requiring to go

to the Procurator Fiscal (PF) but as the PF had signed off the death, she would receive emails for the death certification by 9am on 8/12

- During this conversation Louise raises that she wishes to identify how Andrew contracted COVID within the protective environment of Ward 4B and to ensure that the appropriate IPC measures are in place in future. She also asks whether whole genome sequencing has been carried out. The doctor did not know but would find out.

8/12:

- Louise receives a phone call at 1:30pm from the ICU doctor. It is explained that due to her comments there has been another delay in releasing the death certificate. Louise is then advised that 3 staff members had tested positive for COVID-19 at the same time Andrew tested positive. The doctor suggests that there is no need for a post mortem. Prior to this no suggestion of a post mortem had been raised.
- WGS is not mentioned.
- Andrew's death certificate is released to Louise at 14:11.

22/12:

- Louise requests all of Andrew's medical records from both NHS Lothian and NHS GGC.

2021

January

- Louise receives the first tranche of medical records in early January. She reviews these and it becomes immediately clear that the records are not complete.

18/1

- Louise e-mails NHS GGC notifying them that in the request for records they had failed to provide her with the scans, x-rays, cultures and clinical notes from his time within the BMT team.

End of January:

- Louise receives a second tranche of medical records via post, the covering letter advising that lab results would be e-mailed in due course. Contained within the clinical notes are two positive aspergillus test results.

July

- Louise meets with Anas Sarwar and raises her concerns about the QEUH. Jackie Ballie starts to lodge parliamentary questions to the Scottish Government. She writes letters to members of the Senior Management Board for NHSGGC. Replies were received from the board but the answers were not comprehensive, some of the Parliamentary Questions were answered.

September

23/9:

- Louise again raises the issue about the missing medical records contacting NHSGGC.

November

8/11:

- Louise becomes aware that the person she e-mailed on 23/9 no longer works for NHSGGC so she e-mails the generic e-mail address for patient access.

9/11:

- Louise receives a ZIP file with all the ICU medical notes.

18/11:

- Anas Sarwar raises the issues for the QEUH and Andrew's case at First Ministers Questions.
- A story on Andrew's death is run by the Daily Record and the BBC.
- Louise receives a letter sent by Dr Margaret McGuire, the Director of Nursing offering to meet Louise and senior clinicians. Louise responds again requesting for the missing medical records.
- Dr Peters states in an e-mail on this day that "*we were treating the patient for presumed aspergillosis based on clinical findings and galactomannan (antigen) positive tests"…"The negative PCR that came back after death does not rule out the diagnosis"*.

19/11:

- An internal review of Andrew's case begins.

21/11:

- During this review process an internal email from Dr Clark to Dr McKay notes that Posaconazole was only given for 2 days with a break of 4-5 days with no antifungal therapy. ***Please refer to the prepared antifungal chart.***

25/11

- The internal review of Andrew's case concludes.
- Louise receives a letter from the First Minister via e-mail. This letter outlines the initial actions that Scottish Government will be taking; an external review would be carried out by NHS Lothian and Health Improvement Scotland would carry out a general review of aspergillus in the QEUH.
- Anas Sarwar again raises the issues at First Ministers Questions.
- Louise responds to the FM's letter requesting actions to be taken to immediately ensure the safety of all haemo-oncology patients at the QEUH.

December.

2/12:

- Anas Sarwar again raises the issues at First Ministers Questions

20/12

- Scottish Government receives the completed NHS Lothian review

2022

January

22/1:

- Louise receives a letter from Dr McGuire stating that she had received all of Andrew's BMT notes on 5/1/21 and that Andrew's death is not an adverse event.

25/1:

- Louise receives a response to a SAR request she has made to NHSGGC. This contains four files of clinical records that she previously had not received.

February

22/2:

- As is described in the statement, there is an ongoing discussion about the medical records which leads to the discovery that the BMT notes were quarantined after Andrew's death and as such never provided to Louise. This is set out in a letter to Louise from Dr McGuire.
- Louise receives the BMT records by the end of this month. She remains unconvinced that these are the full records.

28/2

- After the Reviews are published, Louise is invited to a meeting to discuss them. The first meeting date was proposed on 28/2 which was then postponed due to Louise raising concerns about the attendees.

March

21/3:

- Louise is advised that no further meetings will be offered on the basis that there is a disagreement about who should attend the meeting. Louise is ultimately referred to Scott Davison at NHSGGC as a point of contact. To date no meeting has occurred.

2023

February

22/2:

- Louise has become aware through the subject access requests she has made, that there are full notes from microbiology, infectious diseases and respiratory departments that she has not received. A further request has been made on this day.

March

22/3:

- Louise receives a response from NHSGGC stating that the "*board have complied with its obligations to provide you wish all the information you are entitled to receive*".

COVERING SHEET – Louise Slorance

LS/02 – appendix 02 : COVID-19 consent form

FORM No. BMT 103 119 01

NHS Greater Glasgow and Clyde

COVID19 Supplementary Consent form for Transplantation

Due to the current situation in relation to the SARS-CoV-2 (coronavirus) – COVID19 pandemic we have required to make significant changes to our transplant and cellular therapy service.

As a consequence of COVID19 and its effect on our healthcare system patients undergoing transplant at this time will be at much greater risk than would normally be the case. We need to discuss this extra risk and weigh it against the risk of delaying transplant at this time. For some patients it may be better to delay transplant until the virus situation is under control, for other patients, where there is a narrow window of opportunity to proceed with transplant and there is a high risk of relapse or progression it will still be possible to proceed if all parties agree. This document serves as a record of acknowledgement of the key risks involved in delaying or proceeding at this time.

KEY RISKS OF PROCEEDING

1. Transplantation will cause profound damage to your immune system. This damage will last for many months and during this time you will be susceptible to infection. Transplant patients are likely to be at the highest risk of both becoming infected with the pandemic COVID19 virus and from developing severe and potentially fatal COVID19 virus complications. This risk will be ongoing for many months post-transplant during which time patients will require be in protective self-isolation.
2. Our service is likely to be affected by staff shortages as a consequence of infection and requirement for isolation due to the COVID19 virus, as such there may be less doctors, nurses and other members of staff to look after you while you are in hospital.

3. The hospital is under sustained pressure due to the pandemic and as such it may be more difficult to arrange investigations, specialist consultations and tests than it would normally be, and these may take longer or be unable to be provided.

4. Most transplant patients will not require intensive care during their admission, however for a minority of patients who become very unwell it may be appropriate to consider transfer patients to critical care or intensive care. The reason for doing so is to provide intensive monitoring and organ support such as breathing support using a mechanical ventilator, medicines to improve blood pressure or dialysis to support kidney function for a short period of time while the underlying problem is treated.

   Critical care areas will be under intense pressure due to the number of patients with severe COVID19 virus infection – this means that it may not be possible for you to receive intensive care support or be transferred to intensive care if you become very unwell. If this is the case, then you will be supported on the transplant unit as far as is possible. However, this support will not include measures normally available in intensive care and therefore in these circumstances you are likely to have a significantly reduced chance of survival.

Additionally, due to the pandemic COVID19 virus situation

1. Patients will be tested for COVID19 virus twice on admission to the ward and will not proceed with the transplant if found to be COVID19 virus positive.
2. Due to the risk of COVID19 virus infection, visitors for adult patients on the BMT unit will not be permitted.
3. Transplant is a very complex therapeutic process, given the evolving situation, there may be last minute disruption that prevents the transplant proceeding as intended, it is therefore possible that your transplant may need to be cancelled at short notice.

NHS Greater Glasgow & Clyde **FORM No. BMT 103 119 01**

Haemopoietic Stem Cell Transplantation Services

COVID19 Supplementary Consent form for Transplantation

I acknowledge the statements above; I am happy that there has been enough time for discussion of these matters, am happy to proceed with the transplant as planned and I agree to abide by the directions of the transplant team.

Patient	
Name: X	[redacted]
Signature	[redacted]
Date: X	13/10/20

Clinician	
Name:	ANNE-LOUISE LATTA
Signature	[redacted]
Date:	13/10/20

COVERING SHEET – Louise Slorance

LS/03 – appendix 03 : List of COVID PCR tests

Date	SARS-CoV-2 PCR result	Pre-conditioning regimen	Day
23/10	Negative	-	-12
26/10	Negative	Hospital admission	-9
28/10	Negative	Fludarabine starts	-7
02/11	POSITIVE*	Alemtuzumab/MP	-2
03/11	POSITIVE	Alemtuzumab/Melphalan	-1
04/11	-	PBSC transplant	0
10/11	POSITIVE		+6
16/11	POSITIVE		+12
20/11	POSITIVE		+16
27/11	POSITIVE		+23
03/12	POSITIVE		+29
05/12	death		+31

* 8 days following admission

COVERING SHEET – Louise Slorance

LS/04 – appendix 04 : e-mail chain about COVID wing

[redacted]

From: [redacted]
Sent: 18 December 2020 11:03
To: Joannidis, Pamela
Cc: Halliday, Lisa; Clark, Andrew; Campbell, Myra
Subject: RE: 4B QEUH patient covid positive timeline

Hi Pamela,

Yes A.S. tested positive on the 2/11/2020 but was not reported till 3/11/2020 afternoon. He was swabbed that day due to being pyrexial with his chemotherapy as part of his sepsis screen.

[redacted]

From: Joannidis, Pamela
Sent: 18 December 2020 09:30
To: [redacted]
Cc: Halliday, Lisa <Lisa.Halliday[redacted]>; Clark, Andrew <Andrew.Clark[redacted]>; Campbell, Myra <Myra.Campbel[redacted]>
Subject: RE: 4B QEUH patient covid positive timeline

Thank you [redacted] good to speak to you yesterday.
This is very helpful. Pt was first +ve on 02.11.2020.

Pamela

From: [redacted]
Sent: 18 December 2020 09:02
To: Joannidis, Pamela <Pamela.Joannidis[redacted]
Cc: Halliday, Lisa <Lisa.Halliday[redacted]; Clark, Andrew <Andrew.Clark[redacted]; Campbell, Myra <Myra.Campbel[redacted]
Subject: 4B QEUH patient covid positive timeline

Hi Pamela,

I am just replying to your email following your telephone call yesterday (17/12/2020) regarding Patient A.S. CHI [redacted] whom tested COVID positive in ward 4B QEUH.

A.S. notes are not yet scanned on portal but looking at his BMT protocol I can give you the date that I was in his room. I went into his room to introduce myself to him on Tuesday 3/11/2020 and was standing inside his room near the door, that was closed with full PPE – Gloves, apron and mask, and he was sitting on his chair. I was then in his room a further twice that day. I put his chemotherapy on a flush (Melphalan) as his nurse was on her break. I then went in later that day with his nurse to check his second chemotherapy (Alemtuzamab). All times we had full PPE on. The ward was contacted on that day to say that he tested positive for COVID. Following discussions with the medics we moved A.S. to room 76 so that he could get his stem cells by our team then transfer to a covid ward after his cells the following day. We ensured that the same nurse looked after him and minimised the other staff members contact with him following the positive result. I tested positive on my weekly asymptomatic staff test on the 9.11.2020 I was tested every Monday and my last test prior to this result was on the 2.11.2020 and was negative.

The other member of staff that tested positive was [redacted] She had face to face contact with A.S. on 28.10.2020 and tested positive herself on 5.11.2020. She was picked up via our weekly asymptomatic staff testing programme.

Hope this information helps. If you need anything else please let myself [redacted] know.

Kind Regards,

[redacted]

COVERING SHEET – Louise Slorance

LS/05 – appendix 05 : Staphylococcus epidermidis test result

B.cult-Hickman line

Time Collected	09-Nov-2020 15:07	Time Received	09-Nov-2020 18:27
Time Reported	12-Nov-2020 16:37	Order Number	M,20.5524401.H
Status	Final	Source System	Telepath

Microbiology Final

```
Report issued by NHS GG&C Microbiology South Sector
                        Enquiries 0141 354 9132
** FINAL REPORT **

INVESTIGATION: Blood Culture
SPECIMEN TYPE: B.cult-Hickman line

CONS/GP: Dr Anne Parker       Order No:L17RX8V
LOCATION: Ward 4A Ren. HighAcu QEUH
-----------------------------------------------------

Aerobic   Bottle: POSITIVE
Anaerobic Bottle: No growth 2 days

CULTURE RESULTS:                          FROM BOTTLE:

a)Staphylococcus epidermidis              Aerobic
b)
c)
d)
e)
f)

          ANTIBIOTIC   a) b) c) d) e) f)
 Teicoplanin           S
 Vancomycin            S

Clinical microbiology advice can be obtained by calling
0141 354 (8)9132 or the on-call Microbiologist

-----------------------------------------------------
Senders ref. no.

Authorised by: Dr Alison Balfour
Date/Time authorised: 12.11.2020  16:37
** END OF REPORT **
```

COVERING SHEET – Louise Slorance

LS/06 – appendix 06 : Morbidity & Mortality report

AS [redacted]

Dr Pavlina Spiliopoulou, ST6 Medical Oncology

AS - background

- 49 yo patient
- Referring source: Edinburgh
- Diagnosis of stage IV Mantle cell lymphoma in 2015
- Previously fit and well
- Anxiety/depression – diet controlled NIDDM
- Citalopram and propranolol
- Works for Scottish Government press office
- Married with 3 children

AS - presentation

- Bloody diarrhoea (2015)
- Rectosigmoid lymphomatous disease, widespread lymphadenopathy and hepatosplenomegaly. Bone marrow involvement 20%.
- Nordic protocol and LEAM autograft in May 2016
- **April 2019:** first recurrence with bloody diarrhoea
- Wait and watch approach initially but when symptoms progressed → **Ibrutinib** (Oct'19).
- Whilst on Ibrutinib: referred for allogeneic transplantation by primary consultant

Pre- transplant

- Jan'20: BMT clinic, thought to be fit with good transplant donor options
- Plans for allogeneic transplant delayed to second half of '20 due to COVID-19 pandemic
- Throughout this time patient remained clinically and radiologically stable

Allogeneic transplant

- **Pre-transplant disease status:**

Sigmoidoscopy - no macroscopic/microscopic disease

CT scan only minor changes in area of previous inguinal LNpathy – excellent response to Ibrutinib.

- ECHO: normal-sized LV with overall good systolic/diastolic function
- PFTs: FEV 91% predicted and 100% predicted

- **Conditioning regimen:** Fludarabine – Melphalan - Alemtuzumab

Matched unrelated donor: 10/10 match, A+/O+, $CMV^{-/-}$

Inpatient

- Admitted on 26/10/2020, day -9 prior PBSC infusion
- Preconditioning regimen starts with Fludarabine on day -7
- Gliclazide (PRN fast-acting insulin) was introduced for better glycaemic control. Propranolol dose increased due to sinus tachycardia (anxiety-related)
- Isolated episode of pyrexia on day -2 was thought to be sec to Alemtuzumab reaction – Tazocin started.

On day -2: SARS-CoV-2 result is positive

Asymptomatic

Date	SARS-CoV-2 PCR result	Pre-conditioning regimen	Day
23/10	Negative	-	-12
26/10	Negative	Hospital admission	-9
28/10	Negative	Fludarabine starts	-7
02/11	POSITIVE*	Alemtuzumab/MP	-2
03/11	POSITIVE	Alemtuzumab/Melphalan	-1
04/11	-	PBSC transplant	0
10/11	POSITIVE		+6
16/11	POSITIVE		+12
20/11	POSITIVE		+16
27/11	POSITIVE		+23
03/12	POSITIVE		+29
05/12	death		+31

* 8 days following admission

Early days post transplant

- **Day -1:** SARS-Cov-2 result reported and discussed with patient, decision to continue with transplant in BMT unit and then move to dedicated ward. *Remains afebrile*
- **Day 0:** asymptomatic of COVID19
- **Day +1:** asymptomatic of COVID19 - Tazocin stopped. Mild liver function derangement
- **Day +2:** asymptomatic of COVID19 - Posaconazole withheld (bilirubin 53umol/L)
- **Day +3:** asymptomatic of COVID19 – no VOD clinically.

Early days post transplant

- **Day +4:** asymptomatic of COVID19 – early mucositis
- **Day +5:** asymptomatic of COVID19 but CRP doubled to **260**, neutropenic (neuts=N/A) - not clinically septic. LFTs static

  ⟹ Tazocin restarted.
- **Day +6:** New pyrexia, **CRP 360. Bilirubin 64 (56).**

Gentamicin added, Viral hepatitis screen, Posaconazole withheld again.

Blood cultures from Hickman line show Gram (+) cocci, Teicoplanin added.

1 dose of G-CSF dose given as per post-BMT protocol

Early days post transplant

- **Day +7:** Pyrexia continues; Hyperbilirubinemia worsens 78 (64)

Clinically looks more "septic" and mildly jaundiced

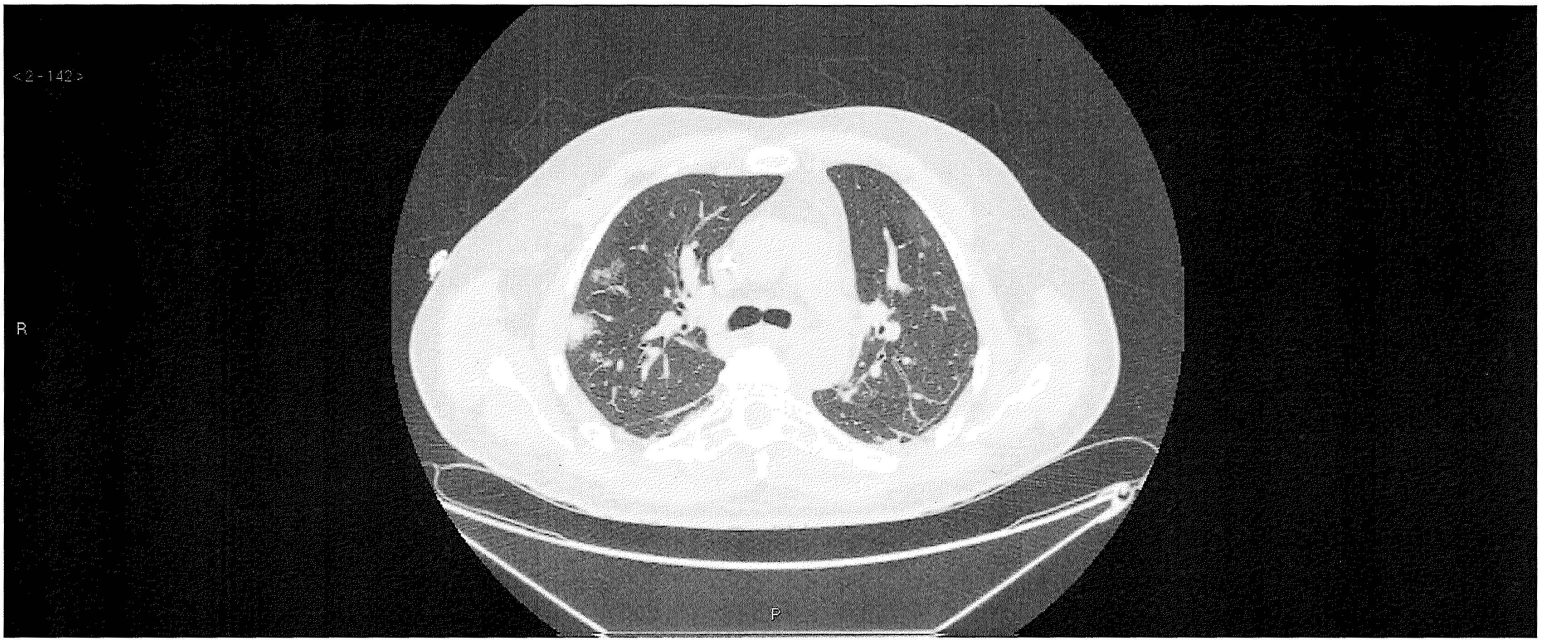
⟹ Antibiotics changed to Mero/Vanc;

plans to remove HL and perform hepatic US.

G-CSF discontinued in view of concurrent COVID19.

- **Day +8:** Pyrexia persists albeit not as high a temperature but develops new O2 requirement

Non-contrast enhanced CT CAP as new AKI on day +8 (though to be secondary to nephrotoxics).


<2-142>
R
P

Day 10 – starting to engraft….neutrophils 0.2

- **Day +10:**
  - Staph. epidermidis sensitive to Abx; CRP improving.
  - Hyperbilirubinemia improving
  - AKI worsens: ciclosporin interrupted, vancomycin changed to teicoplanin
  - First signs of engraftment
  - Discussed with Respiratory: not for BAL
- **Day +11:**
  - Creatinine continues to rise – Remdesivir stopped after d/w ID (4/5 days)

Early days post transplant

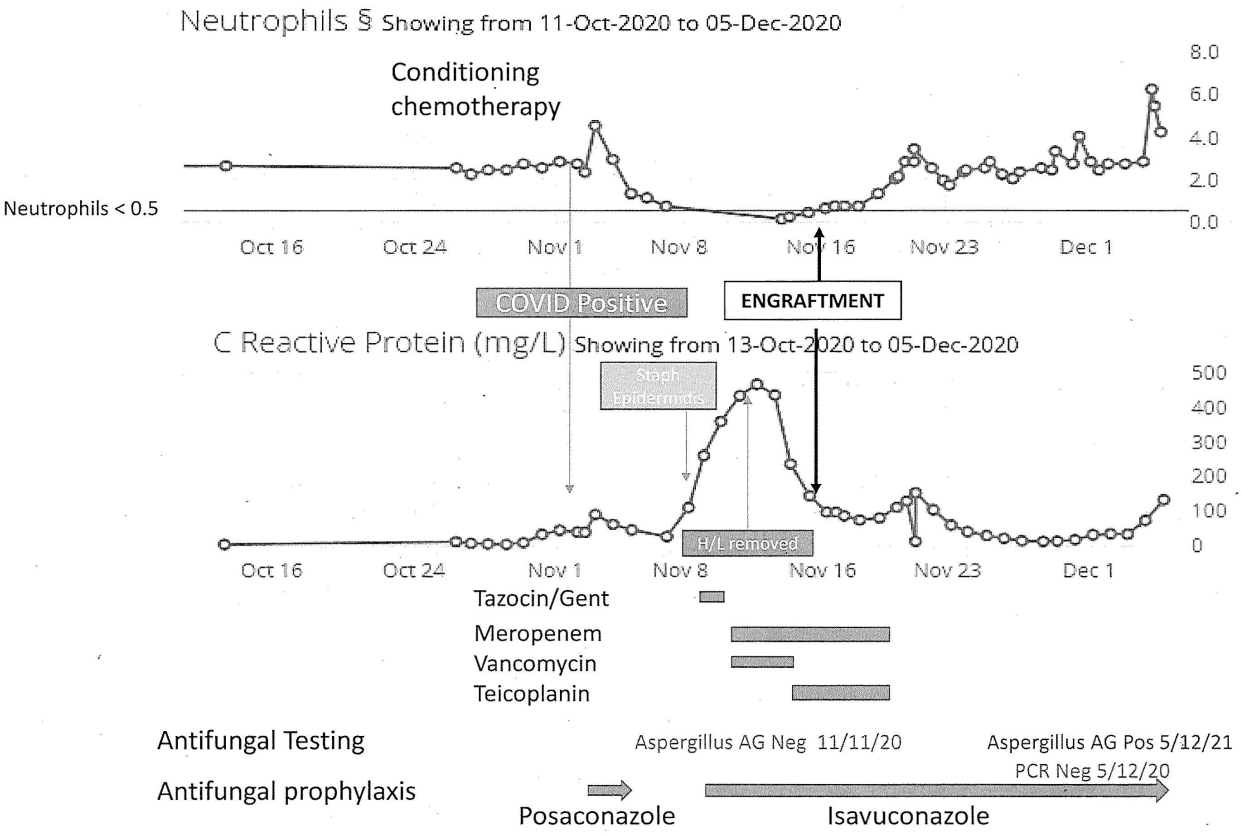
- Dexamethasone and Remdesivir started on Day 8 (ID team). Isavuconazole started too – bilirubin still deranged but static.

  HL removed

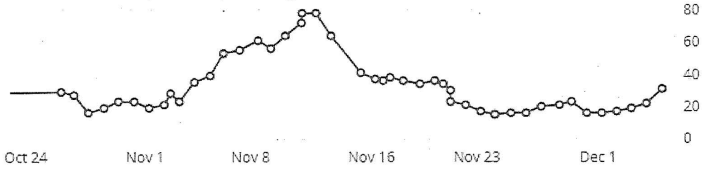
- **<u>Day +9: Clinically stable – pyrexia settling;</u>**

On antibiotics, steroids, remdesivir, isavuconazole, prophylactic aciclovir plus ciclosporin for GvHD prevention

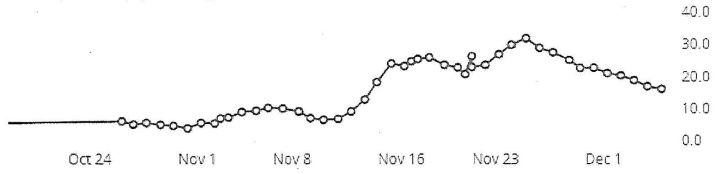
Respiratory team review of images: not typical of SARS-CoV-2-induced lung changes, more in keeping with atypical pneumonia….


Neutrophils § Showing from 11-Oct-2020 to 05-Dec-2020
Conditioning chemotherapy
Neutrophils < 0.5
8.0
6.0
4.0
2.0
0.0
Oct 16
Oct 24
Nov 1
Nov 8
Nov 16
Nov 23
Dec 1
COVID Positive
ENGRAFTMENT
C Reactive Protein (mg/L) Showing from 13-Oct-2020 to 05-Dec-2020
Staph Epidermidis
H/L removed
500
400
300
200
100
0
Tazocin/Gent
Meropenem
Vancomycin
Teicoplanin
Antifungal Testing
Aspergillus AG Neg 11/11/20
Aspergillus AG Pos 5/12/21
PCR Neg 5/12/20
Antifungal prophylaxis
Posaconazole
Isavuconazole

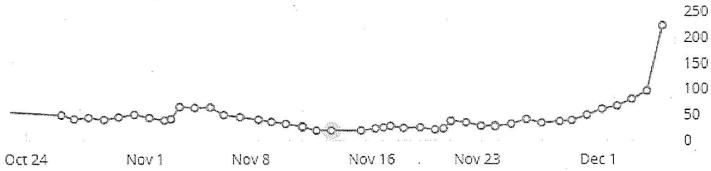
Total Bilirubin (umol/L) Showing from 23-Oct-2020 to 05-Dec-2020



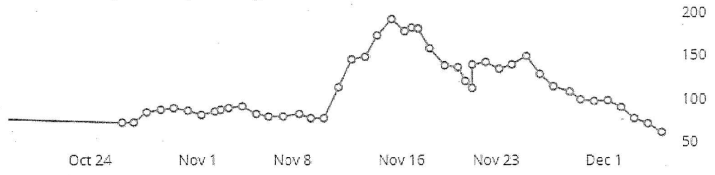
Urea (mmol/L) Showing from 18-Oct-2020 to 05-Dec-2020



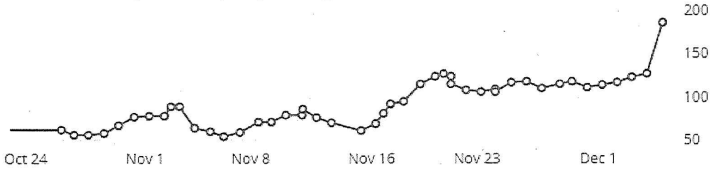
ALT (U/L) Showing from 23-Oct-2020 to 05-Dec-2020



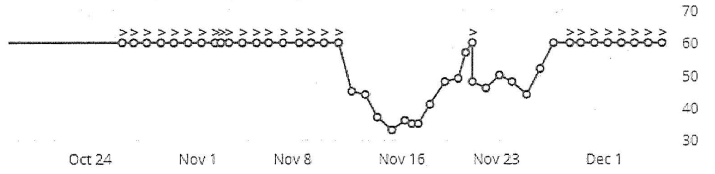
Creatinine (umol/L) Showing from 18-Oct-2020 to 05-Dec-2020

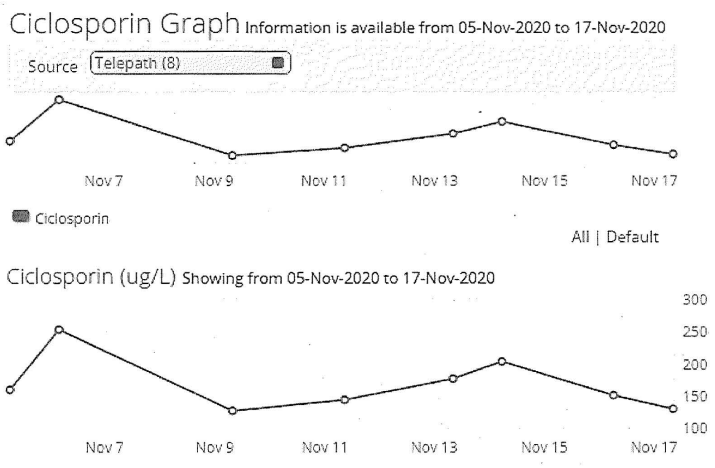


Alkaline Phosphatase (U/L) Showing from 23-Oct-2020 to 05-Dec-2020



Estimated GFR (ml/min) Showing from 18-Oct-2020 to 05-Dec-2020




Ciclosporin Graph Information is available from 05-Nov-2020 to 17-Nov-2020
Source Telepath (8)
Nov 7
Nov 9
Nov 11
Nov 13
Nov 15
Nov 17
Ciclosporin
All | Default
Ciclosporin (ug/L) Showing from 05-Nov-2020 to 17-Nov-2020
300
250
200
150
100
Nov 7
Nov 9
Nov 11
Nov 13
Nov 15
Nov 17

Medical HDU

- **Day +12:** Oxygen requirements increase, on Venturi mask 35%;
  MMF started (off ciclosporin).
  Continues antibiotics + isavuconazole + steroids + prophylactic aciclovir
  Extensive respiratory viral PCR; negative.
  ID: ? PCP prophylaxis

- **Day 13:** medical HDU transfer in view of O_2 requirements going up
  Engraftment (neut 0.7) – MMF continues + steroids
  CRP improving
  ID team concerned over PCR values (C_t 22) being indicative of on-going viral replication - **Remdesivir restarted**

Medical HDU

- **Day 14:** Renal function improving – CRP reduced even further

Hypoxaemia persists and worsens; target O_2 saturations gradually lowered – some improvement with proning and intermittent CPAP

Neuts = 0.7

Patient remarkably comfortable.

Overall clinical picture increasingly resembles COVID19 respiratory failure.

Efforts to offer convalescent plasma as part of compassionate use not materialised as patient had anaphylactic reaction to PLTs in the past

Medical HDU

- **Day 16:**

Neut 2.1 - Type 1 RF worsens further

Steroids increased to MP 75mg to abrogate hyper acute GvHD affecting lung

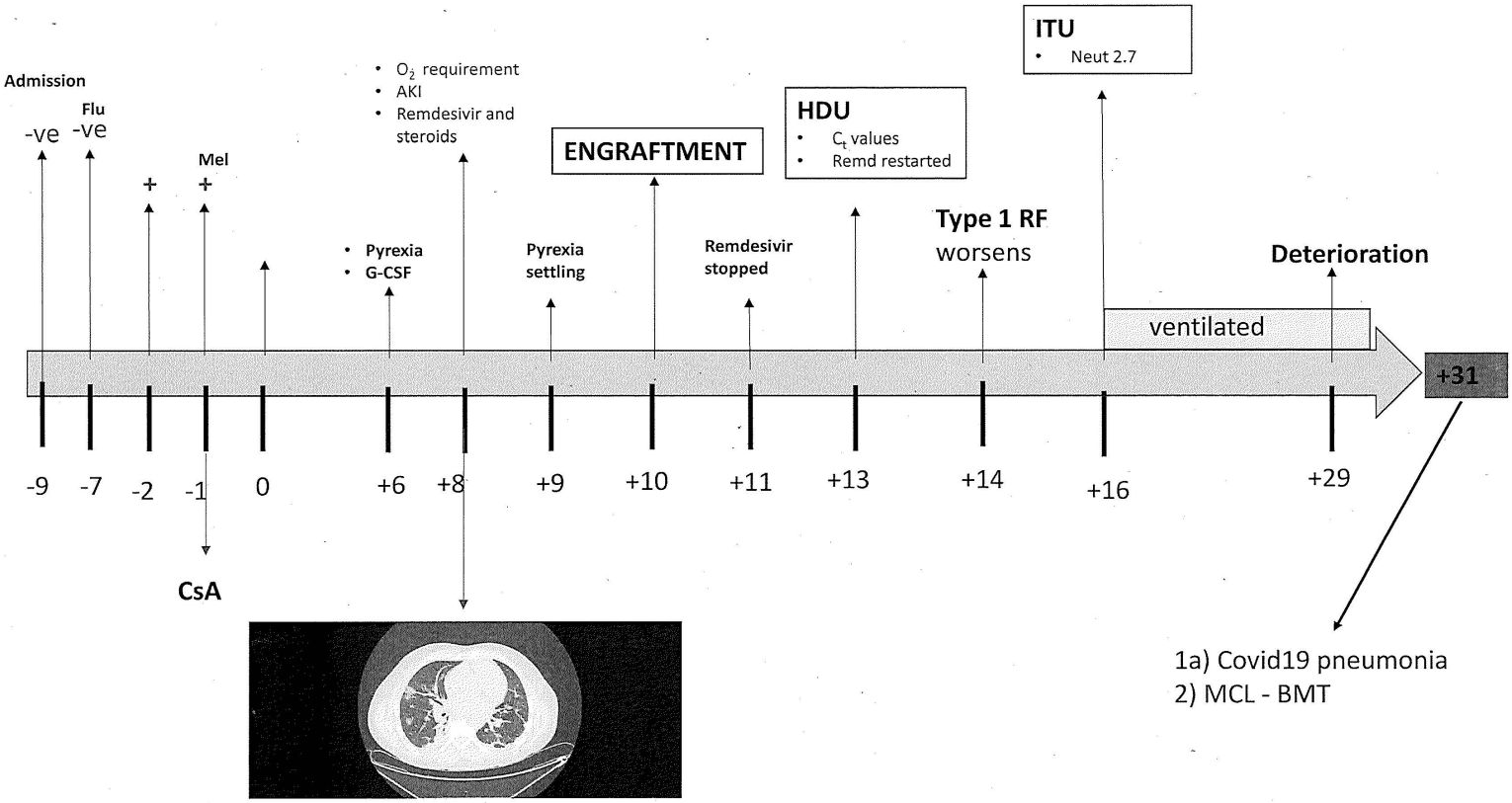
Transfer to ITU and intubation

Although initially was deemed not eligible for RECOVERY trial, eligibility was re-assessed (only for the monoclonal antibody arms of the trial) and recruited study - standard arm (remdesivir and steroids).

ITU

- High-dose steroids - frequent proning – LMWH. No signs of GvHD.
- Throughout admission: procalcitonin normal
- Day +28 Meropenem stopped – Teicoplanin stopped day +29
- Oxygenation deteriorated on day +29
- Day +29 **POSITIVE** galactomannan antigen test ⟹ **Caspofungin added**
- Day +30 **POSITIVE** Beta glucan antigen test (170pg/ml)*
- Day +30: haemodynamically unstable – CRP rise – antibiotics restarted
- Day +31: Patient passed away in the presence of partner

*Aspergillus PCR was NEGATIVE (reported after death)
Beta glucan test reported after death too



1a) Covid19 pneumonia
2) MCL - BMT

Considerations - questions

- COVID19 and HCT recipients

  6-week mortality 19% in autologous and 24% in allogeneic HCT (n=500)[1]

- **Remdesivir:** Overall, combined data from a meta-analysis of 4 trials showed no significant impact on death rate ratio (0.91, 95% CI 0.79-1.05) – no reduction in hospitalization duration or initiation of ventilation[2]

  Q: is it beneficial for immunocompromised patients ??

- **Steroids:** meta-analysis showed OR for mortality 0.64 (95% CI, 0.50-0.82; $P < .001$) for dexamethasone[3]

  Q: data on transplant patients ??

[1] EBMT registry [2] WHO Solidarity Trial Consortium, NEJM, Dec '20
[3] The WHO Rapid Evidence Appraisal for COVID-19 Therapies (REACT) Working Group, JAMA Sep '20.

Considerations - questions

- **Convalescent plasma** (high-titre) some benefit when given to older patients within 72 hours of symptoms[1]. No much benefit in overall population in observational studies.

- **Tocilizumab:** On the biggest phase 3 randomised trial, some reduction in the probability of progression to intubation but no effect on overall patient survival[2].

*REMAP-CAP trial (ahead of print) – Tocilizumab (or Sarilumab) have a positive effect on survival of ICU patients

[1] Libster et al, NEJM, Jan '21; [2] Salama et al, NEJM Jan '21;

EBMT guidance

- Limited data: Remdesivir perhaps some benefit; steroids definite benefit in non-transplant patients.

- Anti-coagulants; vitamin D; treatment of co-pathogens

- **Immunosuppressive prophylaxis/treatment to be continued through Covid19 as no data supporting against it.**

❖**Pre-print (MSK) on G-CSF in cancer patients and Covid19:**

nHL (n=6/36) receiving G-CSF with Covid19 infection

HR 4.62 ($P<0.05$) for respiratory failure in the overall cancer population

Conclusions

- Already received all conditioning regimen by the time first positive result received so facing significant prolonged period of cytopenia unless went ahead with allograft
- Been reported to the procurator Fiscal as possible hospital acquired infection
  - Been reviewed by local infection control team who say indeterminate as was still in window to become positive after admission
- Multiple records of discussion with patient and wife
- Offered entry into all available clinical trials

COVERING SHEET – Louise Slorance

LS/07 – appendix 07 : Communication record galactomannan test

CHI	[redacted]
Patient Name	Andrew Slorance
Age (Admission)	49 years

[redacted]	
	Clinical Grade: NNP
	Referred yesterday for PN as high aspirates on enteral nutrition persist. PN 6g as prescribed not administered, RD advised given <24hr not tolerating feed could see how they progress with enteral for longer. Temperature 36.5 degrees. Proned overnight. Fluid balance -ve 253ml. Enteral rate currently at 15ml / hour, yesterday reduced from 65ml following aspirate of 340ml. enteral remained on at 45-50ml until another aspirate of 220ml obtained described as faecal smelling. Propofol infusion reduced to 18ml / hour, atracurium off. For discussion at NST MDT today.
	Date: 03/12/2020 Speciality: Haematology Reviewed By: Dr Parker Clinical Grade: Consultant
	Discussed situation. Little progress. Platelets have fallen, some clots in NG aspirates. Plan Transfuse 1 pool platelets then check FBC 1 hour after to assess for platelet increment. If the platelet count is falling after the platelets then rediscuss with haematology team Withold further clexane dose this evening Reduce methylpred to 40mg
	Date: 03/12/2020 Speciality: Haematology Reviewed By: Dr Parker Clinical Grade: Consultant
	Contacted to discuss galactomannan result and advice of micro re: ambisome. Dr Parker advised will have significant impact on renal function and K. Also likely very poor prognosis if true positive. Dr Parker will d/w haematology ward ?can draw up there to give dose tonight ?need sterile prep. Dr Appleton subsequently d/w micro team- can instead add in caspofungin for now in addition to isavuconazole.
	Date: 04/12/2020 Speciality: Nutrition Reviewed By: P Hood Clinical Grade: NNP
	PN commenced last night at 32mls /hr . Enteral feed reduced to 25mls/hr due to high aspirates . Generally 200mls every 4

CHI	[redacted]
Patient Name	Andrew Slorance
Age (Admission)	49 years

[redacted]	Mantle Cell Lymphoma NORDIC protocol and LEAM autograft completed May 2016 Returned to full employment Recurrence of GI symptoms April 2019 Progressive disease evident Nov 2019 Started on Ibrutinib Referred for BMT Jan 2020

[redacted]

Problems/Diagnosis 1	Problem/Diagnosis: COVID-19 Status: Active
Problems/Diagnosis 2	Problem/Diagnosis: Relapsed Mantle Cell Lymphoma - Admitted 26/10 - Allogenic BMT 4/11 - NEEDS WASHED PLATELETS + IRRADIATED BLOOD PRODUCTS Status: Active
Problems/Diagnosis 3	Problem/Diagnosis: AKI Status: Active
Problems/Diagnosis 4	Problem/Diagnosis: Vitamin D deficiency (new) Status: Active
Problems/Diagnosis 5	Problem/Diagnosis: Positive galactomannan x2 (3/12) Status: Active
Problems/Diagnosis 6	Problem/Diagnosis: Status:
Problems/Diagnosis 7	Problem/Diagnosis: Status:
Problems/Diagnosis 8	Problem/Diagnosis: Status:
Problems/Diagnosis 9	Problem/Diagnosis: Status:
Problems/Diagnosis 10	Problem/Diagnosis: Status:
Problems/Diagnosis 11	Problem/Diagnosis: Status:
Problems/Diagnosis 12	Problem/Diagnosis: Status:
Problems/Diagnosis 13	Problem/Diagnosis: Status:
Problems/Diagnosis 14	Problem/Diagnosis: Status:
Problems/Diagnosis 15	Problem/Diagnosis: Status:

[redacted]

Operations/Procedures	

[redacted]

COVERING SHEET – Louise Slorance

LS/08 – appendix 08 : Communication record additional infection

CHI	[redacted]
Patient Name	Andrew Slorance
Age (Admission)	49 years

	EOLC. She understands this and is very realistic regarding continung on whilst there is some reaslistic possiblity of a positive outcome however not persisting when the situation is clearly futile. I explained plan to continue on supportive care whilst keeping under review the prognosis. All questions answered and she was grateful for care and discussion.
Communication 8	Date: 01/12/2020 Persons Present: Louise Spoken to by: Appleton
Communication 8 Note	Explained essentially static last 24 hours. Explained oxygenation at level of considering further episode of proning. Exaplined supportive care including further blood product support, removal of PICC line, rationalisatio of antibioitics. She understands where we are at and the slow nature of changes. All questions answered.
Communication 9	Date: 02/12/2020 Persons Present: Louise Spoken to by: Appleton
Communication 9 Note	Explained remains quite static. We have chenged ETT because of cuff leak. Variable though suboptimal absorption of feed so we are liaising with our dieticians and considering supplemental PN. Ongoing support from haematology and GVH is in our though there are other causes of suboptimal EN absor we are trying to address prior to escalating to increasi We are trialing period off paralysis to assess response, I explained there is a reaosnable chance that this may not be successful and they may need recommenced. Otherwise continuing of support explained, all questions answered.
Communication 10	Date: 03/12/2020 Persons Present: Louise Spoken to by: Appleton
Communication 10 Note	Update of last 24 hours. Paralysis had to be restarted last evening with deterioratino in gas exhange and then ANdrew was turned prone. This had little if any benefit on oxygenation. Now supine. His platelet count has dropped with some blood clots in NGS apsirate so risk/beenfit we are witholding this evenings dose of clexane. Haematology support with Andrews care and we are reducing his methylpred. I explained the concerns regarding a lack of progress and the risks associated with this and need for Andrew to begin to improve soon if there is any chance for him to survive. She is understanding of this and the poor prognosis. All questions answered.
	Date: 04/12/2020 Persons Present: Louise Spoken to by: Doherty
	Andrew less well. Potential for additional infection. Oxygen levels

COVERING SHEET – Louise Slorance

LS/09 – appendix 09 : Death certificate form

MEDICAL CERTIFICATE OF CAUSE OF DEATH (Form 11) ***Serial number:*** [redacted]

(Section 24(1) of the Registration of Births, Deaths and Marriages (Scotland) Act 1965)

The completed certificate should be taken to the Registrar of Births, Deaths and Marriages and will be retained by them.

GUIDANCE FOR COMPLETION OF THIS FORM IS AVAILABLE AT www.nrscotland.gov.uk/MCCDGuidance

PLEASE PRINT CLEARLY IN BLOCK CAPITALS AND DO NOT ABBREVIATE

PART A - DETAILS OF DECEASED

Name of deceased	ANDREW SLORANCE
Date of death *(dd/mm/yyyy)*	05/12/2020
Time of death *(24-hour clock – hh:mm)*	1136
Place of death	INTENSIVE CARE UNIT 4 QUEEN ELIZABETH UNIVERSITY HOSPITAL
Health Board area in which death occurred	GREATER GLASGOW AND CLYDE
Community Health Index (CHI) number	[redacted]
Date of birth *(dd/mm/yyyy)*	[redacted]1971

PART B - DETAILS OF CERTIFYING DOCTOR

Name	KATHRYN HARPER
GMC number	6073025
Business address	C/O ANAESTHETIC DEPT / QEUH / 1345 GOVAN ROAD / GLASGOW / G51 4TF
Business contact telephone number	0141 201 1100
For a death in hospital **Name of the consultant** responsible for the deceased	DR P DOHERTY

I hereby certify that to the best of my knowledge and belief the information contained in this Medical Certificate of Cause of Death is correct.

Signature of certifying doctor	[redacted]
Date	05/12/2020

For registration office use	RD Number	Year	Entry number
A50625965			

PART C - CAUSE OF DEATH

PLEASE PRINT CLEARLY IN BLOCK CAPITALS AND DO NOT ABBREVIATE

	Approximate interval between onset and death Years	Months	Days
I Disease or condition directly leading to death * **(a)** COVID PNEUMONIA		1	9
Antecedent causes – Morbid conditions, if any, giving rise to the above cause, stating the underlying condition last			
due to (or as a consequence of) **(b)**			
due to (or as a consequence of) **(c)**			
due to (or as a consequence of) **(d)**			
II Other significant conditions contributing to the death, but not related to the disease or condition causing it			
MANTLE CELL LYMPHOMA	4		
BONE MARROW TRANSPLANT		1	

* *This does not mean mode of dying, such as heart or respiratory failure; it means the disease, injury or complication that caused death.*

PART D - HAZARDS

To the best of your knowledge and belief;		Y	N
DH1	Does the body of the deceased pose a risk to public health: for example, did the deceased have a notifiable infectious disease or was their body "contaminated", immediately before death?	✓	
DH2	Is there a cardiac pacemaker or any other potentially explosive device currently present in the deceased?		✓
DH3	Is there radioactive material or other hazardous implant currently present in the deceased?		✓

PART E – ADDITIONAL INFORMATION

Post mortem examination by a pathologist (*tick one*)		
PM1	Post mortem has been done and information is included above	
PM2	Post mortem information may be available later	
PM3	No post mortem	✓

Attendance on deceased (*tick one*)		
A1	I was in attendance upon the deceased during last illness	✓
A2	I was not in attendance upon the deceased during last illness: the doctor who was is unable to provide the certificate	
A3	No doctor was in attendance on the deceased	

Procurator Fiscal (*tick if applicable*)		
PF	This death has been reported to the procurator fiscal	✓

Extra information for statistical purposes (*tick if applicable*)		
X	I may be able to supply the Registrar General with additional information	

Maternal Deaths (*tick if applicable*)		
M1	Death during pregnancy or within 42 days of the pregnancy ending	
M2	Death between 43 days and 12 months after the end of pregnancy	

COVERING SHEET – Louise Slorance

LS/10 – appendix 10 : Nicola Sturgeon letter

Rt Hon Nicola Sturgeon MSP
First Minister of Scotland

St Andrew's House, Regent Road, Edinburgh EH1 3DG
T: 0300 244 4000

Scottish Government
Riaghaltas na h-Alba
gov.scot

25 November 2021

Dear Louise

I cannot begin to imagine the grief that you and your family have endured in the last year since Andrew's death. While I know there are not words I can express that can help ease that pain, I hope you know that you continue to have my heartfelt condolences.

As you know, Andrew was a friend and colleague to a huge number of people across the Scottish Government and we all still miss him.

I am writing today to set out some of the initial actions we have instructed to try and get answers to the questions you have asked.

Our Interim Chief Nursing Officer, Professor Alex McMahon, has commissioned the Medical Director of NHS Lothian to provide an external review of Andrew's care and treatment and the communication of his care with your family. This is distinct from any internal process being carried out by NHS Greater Glasgow and Clyde. Both the external and internal case note review will be reported directly to Professor McMahon and will, of course, be shared with you.

In addition, we have tasked Healthcare Improvement Scotland (HIS) to carry out a more general review of aspergillus in the Queen Elizabeth University Hospital to assess and determine if there are any broader concerns requiring action.

We will of course keep you updated as these reviews proceed and I understand that Professor McMahon has asked NHS Lothian to undertake its part of the review as a matter of urgency. Should you have any further questions, please do not hesitate to get in touch.

I know that none of these steps will, of themselves, immediately resolve the issues you have raised - but I hope the action that will flow from this work will help do so.

You and the children are in my thoughts. With my best wishes

NICOLA STURGEON [redacted]

COVERING SHEET – Louise Slorance

LS/11 – appendix 11 : NHSGGC Case Review

Mr Andrew Slorance
DOB [redacted]/1971
CHI [redacted]

The below review is a summary of the care of the above patient based upon information available via Clinical Portal ,TrakCare and ICU ICCA (Careview) systems.

*The review has been conducted by **Dr Andrew Mackay** (Clinical Director, Critical Care, QEUH) and **Dr Andrew Clark** (Clinical Lead, Bone Marrow Transplant Unit, QEUH) with additional information from IPCT and microbiology teams.*

Summary of Mr Slorance's care prior to ICU

Andrew was admitted to hospital on 26/10/20 electively ahead of transplantation for mantle cell lymphoma (MCL). He also had a past medical history of anxiety, depression, diet-controlled diabetes mellitus and had initially had MCL treated in 2016 (NORDIC protocol and LEAM autograft) with recurrence in April 2019 (GI symptoms - progressed in November so started on Ibrutinib to control his disease ahead of referral for BMT in Jan 2020).

He received an allograft from a well matched 10/10 HLA antigen matched unrelated donor. CMV status was host negative / donor negative. Andrew was Toxoplasma IgG negative, HIV negative, Hep B/C negative. He required washed platelets in Edinburgh.

He was admitted on 26/10/20. He started transplant conditioning on 28/10/20, using fludarabine/ melphalan chemotherapy and alemtuzumab (anti-CD52 monoclonal antibody). This antibody is used for T cell depletion (to deplete recipient T-cells), to prevent graft rejection and ameliorate post-transplant graft versus host disease (GVHD). This is a 7-day course. The condition therapy renders patients profoundly pancytopenic for 7-14 days but more profound deficiencies in B and T cell function last for 6-18 months after transplant.

Andrew tested negative for COVID on PCR sampling on 26/10/20 and 28/10/20. He was first noted to be COVID positive on 3/11/20 from a sample taken the day before. This was his 8th day in hospital and 7th day from admission with no outside contact.

By the time the COVID result was known he had received all his conditioning chemotherapy. As such, he would be rendered pancytopenic within 2-3 days and this would be life threatening without stem cell rescue. He required to proceed to the stem cell reinfusion which he received on 4/11/20. It was felt important to deliver these cells within the transplant unit, in a controlled specialist environment but it was also decided to transfer the patient out of this unit following successful reinfusion to protect remaining patients. Post infusion he was treated in a single room in ward 4A. He was managed by the BMT team during this admission but nursed by 4A staff.

Andrew became febrile at day +5 (9/11/20) when he was profoundly neutropenic (neutrophils undetectable). He was started on tazocin and gentamicin. This is standard therapy for neutropenic sepsis. Blood culture on this day grew *Staph.epidermidis*. His CRP was 261. He became increasingly unwell over the next few days, with fever and increasing respiratory

symptoms. He developed an acute kidney injury (AKI) and hepatic impairment. His antibiotics were changed to meropenem and vancomycin once the blood culture results were known. Vancomycin was changed to teicoplanin when extended sensitivities were known in the face of renal impairment. His CRP peaked at 468. His Hickman line was removed.

A non-contrast CT scan was performed to avoid compounding his AKI with nephrotoxic contrast medium. This scan was reported as:
Consolidation in the right lower lobe and widespread pulmonary infiltrates throughout both lungs. Appearances are concerning for atypical infection. Viral and fungal (inclusive invasive aspergillosis) pathogens should be considered in the differential diagnosis. Respiratory review and potentially bronchoalveolar lavage (BAL) were recommended.

Serum aspergillus antigen (by virtue of the galactomannan antigen assay) was negative at this time, but antifungal therapy was started using isavuconazole on 12/11/20. Posaconazole had been discontinued due to abnormal LFTs. An extended panel of respiratory viruses were negative on PCR. He was discussed with respiratory medicine and in particular their opinion on his suitability for broncho- alveolar lavage was sought. It was felt this was not required. His case was discussed with the infectious diseases team, and he was discussed at the QEUH COVID escalation MDT. They confirmed his suitability for escalation to HDU/ITU if symptoms dictated and suggested he started corticosteroids and a 5-day course of remdesivir. He was treated with methylprednisolone as he had had his ciclosporin stopped due to AKI and the MDT was concerned about GVHD prophylaxis. His fever and CRP settled after his Hickman line (Tunneled central venous catheter) was removed and as he engrafted but he remained hypoxic.

He was transferred from Haematology BMT Unit to Medical HDU on 17/11/20 due to increasing oxygen requirements and developing further renal impairment. He remained on meropenem and teicoplanin as cover for neutropenic sepsis alongside empirical isavuconazole and prophylactic aciclovir. He started MMF and continued steroids as initially there was some concern that he was having a brisk engraftment syndrome/ hyperacute GVHD, although no other manifestations of GVHD were subsequently seen. His neutrophil count slowly improved. He was given only one dose of G-CSF. He was treated as part of a multidisciplinary/multispecialty team.

The infectious diseases team became concerned over SARS-CoV-2 PCR values (CT 22) being indicative of ongoing viral replication. Remdesivir was restarted on 17/11/20. His renal function improved, and CRP reduced even further but hypoxaemia persisted and worsened. Target O2 saturations were gradually lowered. Andrew experienced some improvement with proning and intermittent CPAP. He remained remarkably comfortable considering the degree of hypoxia. His case was discussed with SNBTS directly regarding non-trial use of convalescent plasma for compassionate reasons, but this was refused as patient had had an anaphylactic reaction to platelets in the past. His condition continued to deteriorate, and he required high flow nasal oxygen with a non-rebreathing O2 mask and intermittent CPAP.

Summary of Mr Slorance's care whilst in ICU

He was reviewed by an ICU consultant on 20/11/20. He was struggling at this point on maximum oxygen therapy and a discussion was had with Andrew about the risks and benefits of invasive ventilation with a quoted mortality of up to >90%. His wife was also updated via phone and invited to attend. Following this discussion, he was admitted to ICU in the evening on 20/11/20. He was intubated and ventilated for progressive respiratory failure due to COVID. He was paralysed and ventilated using standard lung protective ventilation. He received otherwise standard ICU care of stress ulcer prophylaxis, thromboprophylaxis (COVID dosing), and physiotherapy.

His condition initially improved, and his oxygen requirements decreased, and his paralysis was removed. His ongoing haematological care of immunosuppression, regular blood, and platelet infusion and standard post-BMT care were directed by the haemato-oncology team. He had aciclovir and isavuconazole added on 24/11/20 empirically as per microbiology and haematology advice. He developed polyuric renal failure causing a rise in urea and creatinine which settled over a few days and was accompanied by hypernatremia. This trend of gradual and slight improvement continued until 28/11/20 when he had an acute deterioration overnight and his oxygen requirements increased. He required an FiO2 of 1.0, paralysis and proning to achieve adequate ventilation and oxygenation. He became very labile with intermittent tachycardia and hypertension. His oxygenation was variable with a further requirement to be proned overnight from 2/12/20 into 3/12/20, with limited improvement in oxygenation.

Throughout Andrew's stay in ICU, he did not have any positive microbiology from 21/11/20 until 3/12/20 and after discussion with microbiology colleagues, his meropenem and teicoplanin were stopped on 3/12/20. He remained positive for SARS-CoV-2 throughout his stay but was negative for other respiratory viruses. He had serology sent for aspergillus antigen (galactomannan assay) on 11/11/20 which was negative, further samples on 1/12/20 were both positive but results were not available until 3/12/20. As he was already on isavuconazole, microbiology advice was to add caspofungin, send samples for aspergillus PCR and consider a bronchoalveolar lavage (BAL). On 4/12/20, in the face of worsening tachycardia and a rising CRP, he was restarted on teicoplanin with aztreonam. A blood (plasma sample) for aspergillus PCR was sent on 4/12/20 and was negative but was not reported until 9/12/20.

His condition deteriorated on 3/12/20 and he had a further significant increase in his FiO2 with dramatic worsening of his P/F ratio. He would not have been fit for BAL sampling. Despite ongoing ventilation, his condition worsened on 4/12/20. At 1900 he was reviewed by two ICU consultants who felt that he would not be suitable for further proning (tachycardia and previous failure to improve with it). By 2230, he was reviewed by two ICU consultants and a senior trainee, and a decision was made that it was likely that Andrew would continue to deteriorate and his wife was called to attend.

On 5/12/20, Andrew was reviewed on the ward round and felt that given the likelihood of a new infection (noting the positive galactomannan results, rising CRP and tachycardia) despite appropriate antimicrobial treatment alongside persistent COVID pneumonitis with critical hypoxia and recent stem cell transplantation, Andrew was now dying on maximal support. His wife was in attendance and, following MDT discussion, a decision was made to move to end-of-life care.

Andrew died at 1136 on 5/12/20.

Patient journey through QEUH

Mr Slorance was admitted to the QEUH Wd 4B (Bone Marrow Transplant) on 26th October 2020. Ward 4B is a Bone Marrow Transplant Unit comprising of 24 Single Rooms with ensuite facilities. He had a nose and throat swab undertaken on admission for COVID-19 on 26/10/20 which was negative as was his screen on 28/10/20. A further screen on 02/11/20 returned a positive result. IPCT were alerted to this on 03/11/20 and Ward 4B was contacted and advised that the patient was at the time pyrexial but no other COVID-19 symptoms. Ward 4B was contacted initially by phone and was advised on IPCT Transmission Based Precautions (TBP) as per national guidance, but due to complex chemotherapy treatment the patient was to remain in Ward 4B overnight. Ward 4B was visited the following morning to discuss the movement of the patient to Ward 4A. Medical staff have agreed for patient transfer out of Ward 4B, but currently was being nursed by a member of nursing staff on a 1:1 ratio. Patient was transferred to Ward 4A on 05/11/20 and continued to be nursed in a single room with TBP as per national guidance. Mr Slorance continued to screen positive for COVID-19 throughout his stay until he passed away on 05/12/20.

Time Line / Ward Movements

Ward	From	To	Bed	Room type
Wd 4B	26/10	04/11	78	BMT room. 1-2-1 nursing following positive result on 02.11.21
Wd 4B	04/11	05/11	76	BMT room.
Wd 4A	05/11	17/11	9	SSR used for isolation of Ward 4b Haem-onc isolation
Unit 7 HDU	17/11	20/11	78	COVID Hub
Unit 4 ICU	20/11	05/12	31	Isolation PPVL

Acquisition of COVID-19

Andrew was tested for COVID-19 by PCR on 26/10/20 and 28/10/20. He was tested again on 2/11/20 and PCR was now positive and remained positive until his death. The interval from admission to testing positive was 7 days. Andrew would be classified as a probable healthcare associated COVID-19 infection. Within the BMT unit, Andrew was cared for in a positive pressure HEPA filtered room. There were no visitors during his stay, standard PPE was used, social distancing was enforced, and every attempt was made to prevent transmission from staff to patients. Over an 18-month period, the BMT unit has had 3 cases of COVID-19 on the ward. All were sporadic with no more than one patient at any time testing positive. Some staff did become positive. Unavoidable contact between asymptomatic positive staff and patients prior to staff members testing positive almost certainly occurred at times but the measures listed were successful in protecting both patients and staff and minimising transmission of the virus.

Aspergillus assessment and antifungal treatment

Andrew was initially on Posaconazole as prophylaxis during his admission for transplant but this was stopped due to derangement of liver function tests. Aspergillus antigen serology was sent on the 11/11/20 which was negative. A CT scan performed due to persistent pyrexia on

12/11/20 (as above) showed appearances suggestive of atypical infection and it was suggested that fungal pathogens (including aspergillus) should be considered. Andrew was started on isavuconazole on 12/11/20 empirically. Respiratory consultant opinion at the time was that a BAL was unnecessary and microbiology and infectious disease colleagues were comfortable with his current antimicrobial therapy. Repeat aspergillus antigen serology was performed on 1/12/20 which was reported 48h later as positive.

On 3/12/20, upon receiving these results, his treatment was amended upon microbiology advice to add caspofungin to his isavuconazole. They suggested sending samples for aspergillus PCR and a BAL sample (for culture and galactomannan antigen testing). The blood sample sent for PCR on 4/12/20 was negative although not reported until 9/12/20 and Andrew was too hypoxic for a BAL to be undertaken. Given the clinical picture, radiological appearance and positive galactomannan, Andrew's presentation was suggestive but not diagnostic of COVID-19 associated pulmonary aspergillosis. The absence of BAL or tissue sampling makes confirmation very difficult. The subsequent negative aspergillus PCR serology is of unclear significance. Overall, Andrew may have either been colonised or had a secondary infection with aspergillus as up to 33% of critically ill COVID-19 patients do. He was treated with appropriate antifungal therapy under microbiological advice throughout his stay.

Communication with patient / next of kin

Prior to intensive care, there are multiple entries in the note describing discussions with Andrew's wife and Andrew but without extensive detail of the contents of these discussion beyond an update regarding treatment. In ICU, there are communication entries from medical staff on all but 3 days of his stay. These conversations were primarily over the phone due to the ongoing restrictions on visiting. Andrew's wife was kept up to date with his current condition, prognosis, and treatment throughout.

With regards an update regarding aspergillus infection, there is a communication entry on 4/12/20 detailing "potential for additional infection". It would not be routine practice to differentiate between groups of microorganisms unless the family member had clearly demonstrated some subject matter knowledge or had asked for specific details. There are also daily entries of communication with relatives documented in the nursing notes section of ICCA. Overall, the standard of documented communication appears to be of the same high level that is expected for all our critical care patients.

Death Certification

A death certificate was issued with cause of death as:
1a) COVID Pneumonia
2 - Mantle Cell Lymphoma, Bone Marrow Transplant

As was standard practice, a death certificate was completed on 5/12/20 but not issued until 7/12/20 when it could be discussed with the Procurator Fiscal's office. This discussion took place due to concerns regarding the timing of COVID positivity and the potential for this to be a case of nosocomial acquisition. Although there is no record of the discussion with the PF,

the certificate was issued the same day which suggests that the PF was happy with the case and the absence of any concerns regarding care being expressed by the family.

Addendum

Serological testing for Aspergillus (Dr Cottam, Consultant microbiologist)

There are caveats/limitations to any diagnostic test, with the Galactomannan antigen/ Beta-D-Glucan assays being no exception in the assessment of aspergillus infection.

Unfortunately, no respiratory tract specimens were received for either culture or fungal biomarker/PCR testing.

An important caveat to consider when interpreting serum GM and the beta-D-glucan assay, is that they are non-specific.

False positive results can be seen in patients with gastrointestinal tract mucositis caused by chemotherapy or GVHD, with the postulated mechanism being that galactomannan in food or bacteria can behave as cross-reactive epitopes and may translocate across the intestinal mucosa if there is compromise to the mucosal integrity. Furthermore studies have demonstrated false positive results in patients who have received immunoglobulin therapy and/or transfused blood products. Lastly, and equally important, is that the beta-D-glucan assay can be positive in patients with candidiasis.

Overall, my understanding is that the diagnostic utility of serum biomarkers in the setting of COVID-19 and IPA/CAPA is less certain, particularly in this case it is additionally challenging as we have no respiratory tract samples. As it stands, in my opinion, the diagnosis of invasive aspergillosis would seem possible, with appropriate empirical antifungal treatment being instigated.

COVERING SHEET – Louise Slorance

LS/12 – appendix 12 : Angela Wallace and Christine Peters e-mail

[redacted]

From: Peters, Christine
Sent: 18 November 2021 17:54
To: Angela Wallace (NHS Forth Valley)
Subject: Press today

Tracking: **Recipient**
Angela Wallace (NHS Forth Valley)

Hi Angela,

I am sure the last 24 hours have been difficult for you and the IPCT regarding the adverse publicity and headlines once again, as I know this is so difficult for the clinical teams as well. I hope you are all ok.

I was involved in the microbiology advice for the patient that is being discussed in the press and recall the case very clearly.

We were treating the patient for presumed Aspergillosis based on clinical findings and galactomannan (antigen) positive tests. This is not a definitive diagnosis, but was the most likely cause of infection at the time of demise and he was on full treatment with antifungal agents. The negative PCR that came back after death does not rule out the diagnosis.

There are a few issues to bring to your attention as I recall we discussed the case extensively at the time in handovers and Buzz meeting:

1. Re hospital acquired COVID, at 8 days the probability of it being hospital versus community is very high (up to 0.75), being immune compromised the incubation could be quicker and I recall discussing this particular case at the time and given the negative testing and isolation prior to admission HOCI seems highly likely. I do recall there were staff in the unit infected in 2020 but unsure as to the timing or the when policy to screen was put in place. There was discussion re WGS, and I am not sure if that could really be interpreted fully without screening being in place.

2. Re aspergillus I am aware that in Nov 2020 there was a paediatric haemonc case who died of aspergillosis who had also been housed in 4B, and we highlighted fungal infections in the paeds group to the IPCT at the time. I think this may be relevant in any retrospective assessment of the fungal infection risk as well as the fact that he was not housed in a positive pressure room throughout his neutropenic stage. Of course this was at the peak of the second wave when beds were very tight, but I assume that one of the reports that claimed he had been housed in a negative pressure room was wrong as that would be against the patient placement policy.

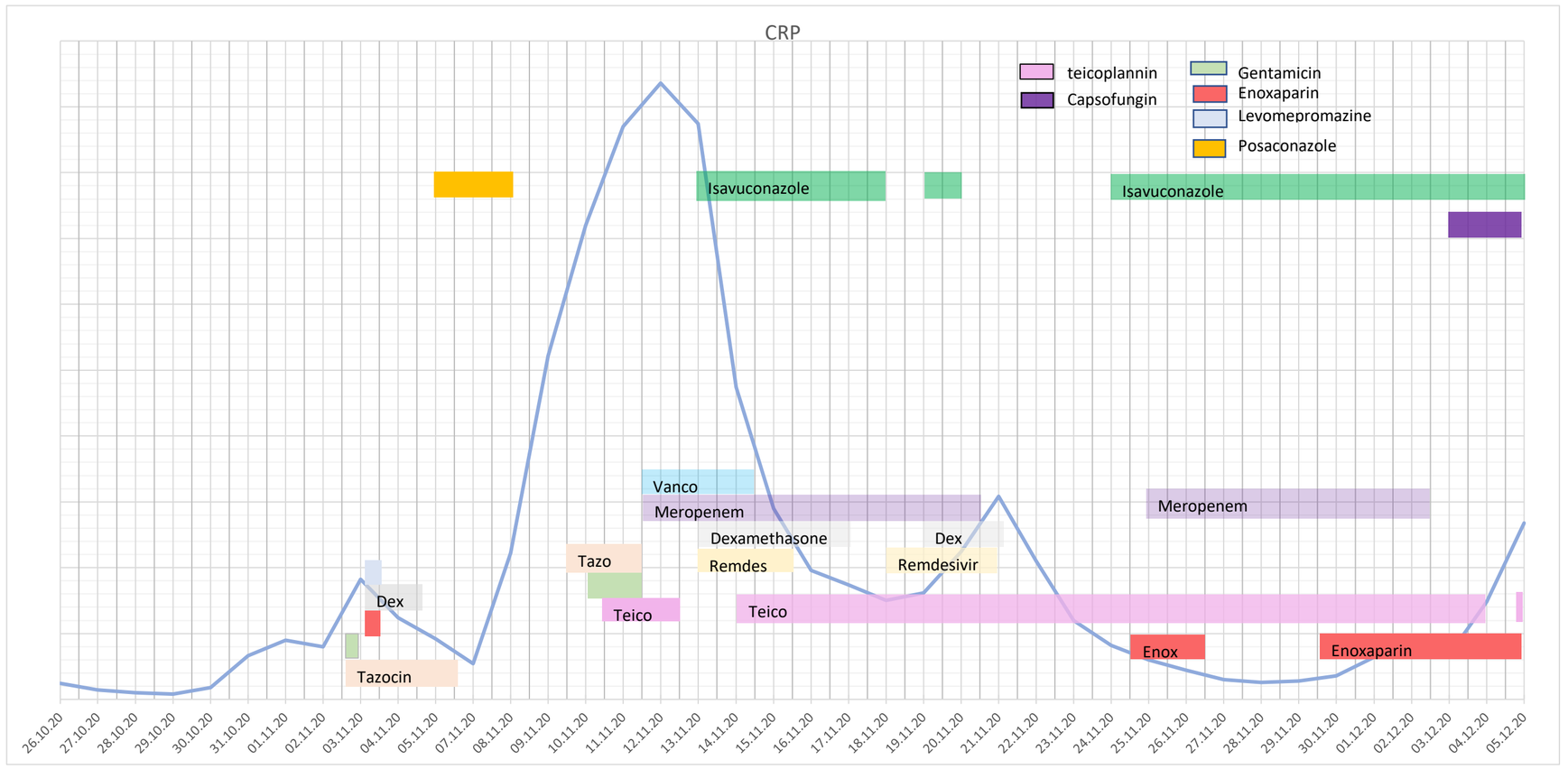
It is so sad to hear of the passing of any person from COVID and its complications and thoughts are with the family and also the teams who work so hard throughout the whole pandemic to treat and save patients' lives.

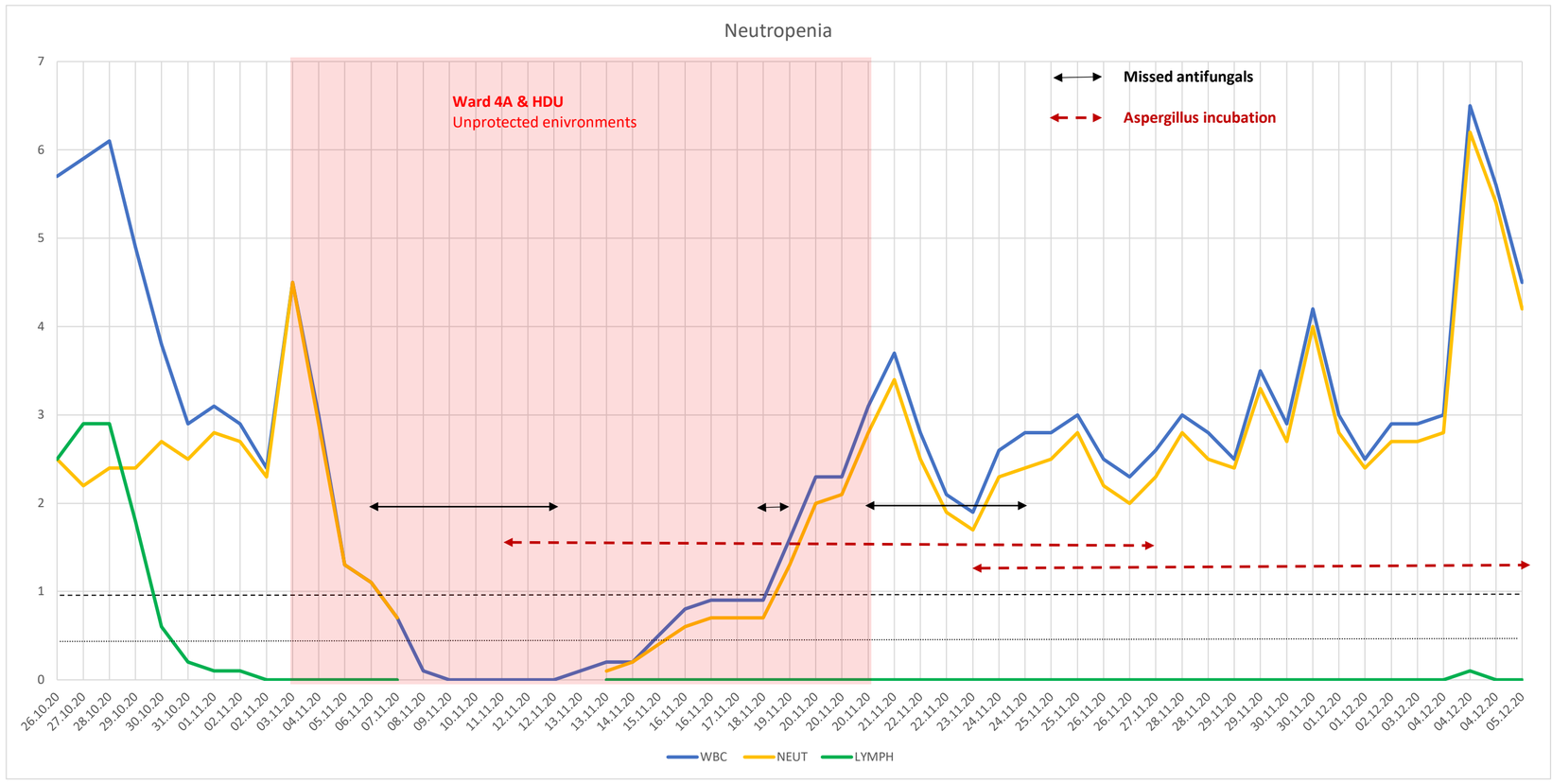
Kind regards,

Christine

Dr Christine Peters
Clinical Lead
Consultant Microbiologist
QEUH

Date	CRP
26.10.20	12
27.10.20	7
28.10.20	5
29.10.20	4
30.10.20	9
31.10.20	33
01.11.20	45
02.11.20	40
02.11.20	39
03.11.20	91
04.11.20	62
05.11.20	46
07.11.20	27
08.11.20	111
09.11.20	261
10.11.20	360
11.11.20	435
12.11.20	468
13.11.20	437
14.11.20	237
15.11.20	145
16.11.20	98
16.11.20	98
17.11.20	87
18.11.20	75
19.11.20	81
20.11.20	112
20.11.20	130
21.11.20	154
22.11.20	105
23.11.20	60
24.11.20	41
25.11.20	30
26.11.20	22
27.11.20	15
28.11.20	13
28.11.20	13
29.11.20	14
30.11.20	18
01.12.20	32
02.12.20	35
03.12.20	34
04.12.20	74
05.12.20	134




Neutropenia
Ward 4A & HDU
Unprotected enivronments
Missed antifungals
Aspergillus incubation
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NEUT
LYMPH

COVERING SHEET – Louise Slorance

LS/15 – appendix 15 : Internal Report: Summary of care

Brief clinical history and commentary - AS CHI [redacted]

Compiled by- Dr Andrew Clark. BMT Programme Director.

There is a powerpoint presentation which accompanies this word document- first presented 21/1/21 by haem/Onc Fellow and presented at the unit morbidity and mortality meeting. Update by A.Clark 20/11/21. Original scanned onto portal.

History pre- stem cell reinfusion.

A.S. was a 49 year old man with mantle cell lymphoma. He was treated with ibrutinib pre transplant to control his lymphoma and had good disease control at time of transplant. He received an allograft from a well matched 10/10 HLA antigen matched unrelated donor. CMV status was host neg / donor neg. AS was Toxoplasma IgG neg, HIV neg Hep B, C neg. He required washed platelets in Edinburgh. He had diabetes mellitus.

He was admitted on 26/10/20. He started transplant conditioning on 28/10/20, using Fludarabine/ Melphalan chemotherapy and Alemtuzumab anti CD52 monoclonal antibody. This antibody is used to T deplete the recipient, to prevent graft rejection and ameliorate post-transplant graft versus host disease (GvHD). This is a 7 day course. The condition therapy renders patients profoundly pancytopenic for 7-14 days but more profound deficiencies in B and T cell function last for 6-18 months post transplant.

A.S.was noted to be COVID positive on 3/11/20 from a sample taken the day before. Positive sample collected on 2/11/21. This was the 8th day in hospital and the 7th day from admission with no outside contact.

> ***Comment- BMT unit and staff protocols*** The BMT unit comprises positive pressured HEPA filtered single rooms. These provide a constant stream of clean air but do push air into the corridors making it dangerous for staff (at that time unvaccinated) and other patients to look after a COVID 19 positive patient in these rooms. We had a 'No visitors' policy at that time and a raft of measures to protect staff and patients alike. These included the use of PPE at all times, as laid down by contemporaneous government rules- at least mask, apron and gloves. Social distancing was enforced with patients and social distancing and masks mandated to be worn during all breaks and mealtimes. Staff were discouraged from meeting socially with each other to avoid direct transmission. In 18 months we have had 3 cases of COVID 19 on the ward, none of whom were demonstrated to be hospital acquired. All cases were sporadic with no more than one patient at any one time positive, no patient to patient transfer and no outbreaks. Some staff did become positive. Unavoidable contact between asymptomatic positive staff and patients prior to staff members testing positive almost certainly occurred at times but the measures listed were successful in protecting both patients and staff and minimising transmission of the virus. In AS's case I think one staff member did subsequently become positive but I do not know the full details.

By the time the COVID result was known he had received all his conditioning chemotherapy. As such, he would be rendered pancytopenic within 2-3 days and this would be life threatening without stem cell rescue. He required to proceed to the stem cell reinfusion which he received on 4/11/20. It was felt important to deliver these cells within the transplant unit, in a controlled specialist environment but it was also decided to transfer the patient out of this unit following successful reinfusion to protect remaining patients. This followed our emergency SOPs , which were informed by NICE and BSBMT guidance

Pancytopenic management

A.S. became febrile at day +5 (9/11/20) when he was profoundly neutropenic (neutrophils undetectable). He was started on Tazocin and Gentamicin. This is standard therapy for neutropenic sepsis. Blood culture on this day grew Staph. Epidermidis. His CRP was 261. He became increasingly unwell over the next few days, with fever and increasing respiratory symptoms. He developed acute kidney injury (AKI) and hepatic impairment. His antibiotics were changed to Meropenem and vancomycin once the blood culture results were known. Vancomycin was changed to Teicoplanin when extended sensitivities were known in the face of renal impairment. His CRP peaked at 468. His Hickman line was removed. A non-contrast CT scan was performed to avoid compounding his AKI with nephrotoxic contrast medium. This scan was reported as

' Consolidation in the right lower lobe and widespread pulmonary infiltrates throughout both lungs. Appearances are concerning for atypical infection. Viral and fungal (inclusive invasive aspergillosis) pathogens should be considered in the differential diagnosis. Respiratory review and potentially BAL were recommended'.

Aspergillus Ag was negative at this time but antifungal therapy was started using Isavuconazole on 12/11/20. Posaconazole had been discontinued due to abnormal LFTs. An extended panel of respiratory viruses were negative by PCR. He was discussed with respiratory medicine and in particular their opinion on his suitability for broncho- alveolar lavage (BAL). It was felt this was not required. His case was discussed with the ID team and he was discussed at the QEUH COVID escalation MDT. They confirmed his suitability for escalation to HDU/ITU if symptoms dictated and suggested he started corticosteroid and a 5 day course of Remdesivir. We used methylprednisolone as he had had his ciclosporing stopped due to AKI and we were concerned about GvHD prophylaxis. His fever and CRP settled after his Hickman line (Tunneled central venous catheter) was removed and as he engrafted. However, he remained hypoxic

Comment- Management during pancytopenic phase.

This period of pancytopenia was particularly stormy for AS. This was, almost certainly, not directly related to COVID. He engrafted neutrophils promptly (day +12). It may be important to say that I felt that the complications that he suffered during this period were to be expected and most likely bacterial, though other atypical infections can never be excluded 100%. This is the most common clinical scenario at this stage. We see this pattern often. His infective episode came on suddenly, was associated with multifocal consolidative changes in his lungs and we grew Staphlococcus Epidermidis. The fact that he became so much better so quickly- from the point of view of the acute septic episode- after line removal and engraftment, is more in keeping with this diagnosis (Staph Epidermidis pneumonia with multiple emboli from line) rather than viral, fungal or PCP diagnoses. Of note Aspergillus Ag was negative at a time of likely septicaemia. No definitive CT changes were seen (but it was non contrast) and the respiratory viral screen was negative. BAL was discussed but the respiratory team felt that BAL was not necessary, as he was on optimal antimicrobial therapy and there was a risk of performing an aerosolising procedure and transmitting virus when no change in management would ensue. Isavuconazole was chosen as antifungal therapy at this stage as it is less hepatotoxic, while retaining good anti mould activity. All our patients would have been on an azole at this stage post-transplant, most commonly Posaconazole and we did not start Isavuconazole because we thought it likely A.S. had Aspergilllus.

Progressive Respiratory decline Day +12 to day + 16

Despite engraftment and an improvement in A.S's inflammatory markers, his oxygen requirements increased. He continued on all antimicrobial therapy, namely antibiotics (meropenem and teicoplanin) + isavuconazole + prophylactic acyclovir. He was transferred to medical HDU transfer in view of further increase in oxygen requirement. He started MMF and continued steroids as initially there was some concern we may be seeing a brisk engraftment syndrome/ hyperacute GVhD, although no other manifestations of GvHD were seen. His neutrophil count slowly improved. We gave only one dose of G-CSF. He was treated as part of a multidisciplinary/mutispecialty team. It was essential that A.S. was considered for all available therapeutic options so we liaised regularly with ID and pushed for him to be discussed for trial eligibility and review at the hospital COVID MDT meetings.

ID team became concerned over PCR values (CT 22) being indicative of on-going viral replication - Remdesivir restarted on 17/11/20. His renal function improved and CRP reduced even further but hypoxaemia persisted and worsened. Target O2 saturations gradually lowered. Some improvement with proning and intermittent CPAP. Patient remarkably comfortable. Discussed with SNBTS directly off trial convalescent plasma as part of compassionate. This was refused as patient had had an anaphylactic reaction to PLTs in the past.

On day +16 (20/11/20) Type 1 RF worsens further. Steroids increased to MP 75mg to abrogate hyper acute GvHD affecting lung .Transfer to ITU and intubation. Although initially was deemed not eligible for RECOVERY trial, eligibility was re-assessed (only for the monoclonal antibody arms of the trial) and recruited study - standard arm (remdesivir and steroids).

Comment - Management after engraftment

At the time we felt that, although he continued to improve from his acute post- transplant septic illness, another process was declaring itself. Overall clinical picture increasingly resembled COVID19 respiratory failure. We continued antimicrobial agents including antifungals. We looked into trial involvement and convalescent plasma but were unsuccessful. There was a co-ordinated multispecialty team approach. He did receive high doses of steroid. Antifungal therapy – prophylaxis but same dose as has been used in previous treatment studies (SECURE).

Management in ITU

Comment ITU care

I was not directly involved in this part of his care. I can see that Dr Parker and Dr McQuaker gave advice. I am happy to discuss with them next week. In my opinion he had COVID as the major driver of illness. It looks as if he could have developed a co –infection with Aspergillus, which has been described to complicate a significant number of cases worldwide. This mould is everywhere – including potentially in the gut flora- but microbiology would be better to comment on this aspect. The Ag test can also be falsely positive but his levels were high as was Beta –D- Glucan. This combination of Aspergilllus co-infection in COVID patients seems to have become an increasingly recognised combination since AS 's death. The fact that these tests became positive, despite being on Isavuconazole, could mean resistance of fungis to azoles, but more likely reflects his profound T cell immunity post- transplant His case was discussed with the Procurator Fiscal after his death. I am not clear of the content of that call.

As I discussed above he had been in hospital for only 8 days and had had no outside contact for 7 days. So he was well within the incubation period.

Communication

We spoke to his wife everyday, with AS's permission and often while in his room as a three way call.

I offered to come to discuss matters with his wife

After he died, (13/12/20) I wrote to his wife Louise asking if she wanted to come and discuss any aspect of his care with us. I did say " I am very sorry that Andrew eventually lost his fight against COVID recently". This is because I knew he had COVID, I didn t know, at that time, that he had the positive Aspergillus Ag, despite Isavuconazole therapy (I did know he had previously negative). I thought he had died of progressive COVID, and I still do. This may have been complicated by a fungal infection, as is common with COVID or Flu, but I do not think that was why he died. I did not intend to be deceptive. I have no recollection of knowing this and only found out at the mortality and morbidity meeting in January. I did not think it changed what happened significantly so I did not rediscuss with his wife.

COVERING SHEET – Louise Slorance

LS/16 – appendix 16: Internal version of NHSGGC

Case Review

Mr Andrew Slorance DOB [redacted]/1971 CHI [redacted]

The below review is a summary of the care of the above patient based upon information available via Clinical Portal ,TrakCare and ICU ICCA (Careview) systems.

*The review has been conducted by **Dr Andrew Mackay** (Clinical Director, Critical Care, QEUH) and **Dr Andrew Clark** (Clinical Lead, Bone Marrow Transplant Unit, QEUH) with additional information from IPCT and microbiology teams.*

1. Summary of Mr Slorance's care prior to ICU –

Andrew was admitted to hospital on 26/10/20 electively ahead of transplantation for mantle cell lymphoma (MCL). He also had a past medical history of anxiety, depression, dietcontrolled diabetes mellitus and had initially had MCL treated in 2016 (NORDIC protocol and LEAM autograft) with recurrence in April 2019 (GI symptoms - progressed in November so started on Ibrutinib to control his disease ahead of referral for BMT in Jan 2020).

He received an allograft from a well matched 10/10 HLA antigen matched unrelated donor. CMV status was host negative / donor negative. Andrew was Toxoplasma IgG negative, HIV negative, Hep B/C negative. He required washed platelets in Edinburgh.

He was admitted on 26/10/20. He started transplant conditioning on 28/10/20, using fludarabine/ melphalan chemotherapy and alemtuzumab (anti-CD52 monoclonal antibody). This antibody is used for T cell depletion (to deplete recipient T-cells), to prevent graft rejection and ameliorate post-transplant graft versus host disease (GVHD). This is a 7-day course. The condition therapy renders patients profoundly pancytopenic for 7-14 days but more profound deficiencies in B and T cell function last for 6-18 months after transplant.

Andrew tested negative for COVID on PCR sampling on 26/10/20 and 28/10/20. He was first noted to be COVID positive on 3/11/20 from a sample taken the day before. This was his 8th day in hospital and 7th day from admission with no outside contact.

By the time the COVID result was known he had received all his conditioning chemotherapy. As such, he would be rendered pancytopenic within 2-3 days and this would be life threatening without stem cell rescue. He required to proceed to the stem cell reinfusion which he received on 4/11/20. It was felt important to deliver these cells within the transplant unit, in a controlled specialist environment but it was also decided to transfer the patient out of this unit following successful reinfusion to protect remaining patients. Post infusion he was treated in a single room in ward 4A. He was managed by the BMT team during this admission but nursed by 4A staff.

Andrew became febrile at day +5 (9/11/20) when he was profoundly neutropenic (neutrophils undetectable). He was started on tazocin and gentamicin. This is standard therapy for neutropenic sepsis. Blood culture on this day grew *Staph.epidermidis*. His CRP was 261. He became increasingly unwell over the next few days, with fever and increasing respiratory

symptoms. He developed an acute kidney injury (AKI) and hepatic impairment. His antibiotics were changed to meropenem and vancomycin once the blood culture results were known. Vancomycin was changed to teicoplanin when extended sensitivities were known in the face of renal impairment. His CRP peaked at 468. His Hickman line was removed.

A non-contrast CT scan was performed to avoid compounding his AKI with nephrotoxic contrast medium. This scan was reported as:
Consolidation in the right lower lobe and widespread pulmonary infiltrates throughout both lungs. Appearances are concerning for atypical infection. Viral and fungal (inclusive invasive aspergillosis) pathogens should be considered in the differential diagnosis. Respiratory review and potentially bronchoalveolar lavage (BAL) were recommended.

Serum aspergillus antigen (by virtue of the galactomannan antigen assay) was negative at this time, but antifungal therapy was started using isavuconazole on 12/11/20. Posaconazole had been discontinued due to abnormal LFTs. An extended panel of respiratory viruses were negative on PCR. He was discussed with respiratory medicine and in particular their opinion on his suitability for broncho- alveolar lavage was sought. It was felt this was not required. His case was discussed with the infectious diseases team, and he was discussed at the QEUH COVID escalation MDT. They confirmed his suitability for escalation to HDU/ITU if symptoms dictated and suggested he started corticosteroids and a 5-day course of remdesivir. He was treated with methylprednisolone as he had had his ciclosporin stopped due to AKI and the MDT was concerned about GVHD prophylaxis. His fever and CRP settled after his Hickman line (Tunneled central venous catheter) was removed and as he engrafted but he remained hypoxic.

He was transferred from ~~Haematology BMT Unit~~ward 4A to Medical HDU on 17/11/20 due to increasing oxygen requirements and developing further renal impairment. He remained on meropenem and teicoplanin as cover for neutropenic sepsis alongside empirical isavuconazole and prophylactic aciclovir. He started MMF and continued steroids as initially there was some concern that he was having a brisk engraftment syndrome/ hyperacute GVHD, although no other manifestations of GVHD were subsequently seen. His neutrophil count slowly improved. He was given only one dose of G-CSF. He was treated as part of a multidisciplinary/multispecialty team.

The infectious diseases team became concerned over SARS-CoV-2 PCR values (CT 22) being indicative of ongoing viral replication. Remdesivir was restarted on 17/11/20. His renal function improved, and CRP reduced even further but hypoxaemia persisted and worsened. Target O2 saturations were gradually lowered. Andrew experienced some improvement with proning and intermittent CPAP. He remained remarkably comfortable considering the degree of hypoxia. His case was discussed with SNBTS directly regarding non-trial use of convalescent plasma for compassionate reasons, but this was refused as patient had had an anaphylactic reaction to platelets in the past. His condition continued to deteriorate, and he required high flow nasal oxygen with a non-rebreathing O2 mask and intermittent CPAP.

Questions of clarification

1. On what date did AS first become hypoxic

   AS had occasional isolated readings at 93% saturation by finger probe (2-3 readings, spontaneously returned to normal by next set of standard observations, over time from admission 27/10/20 – 11/11/20)

   On night of 11/11/20 into the morning of 12/11/20 he became more hypoxic with 3 readings at 94% followed by a reading of 89%. Oxygen therapy was started at 35% by venturi mask at 0200 on 12/11/20. His oxygen requirement fell during that day to 24% , then 3L by nasal cannulae by 1900h on the same day.

   He remained stable for 4 days before deteriorating and requiring increased flow by NC on 16/11/20. This was the start of a progressive deterioration, albeit with a stuttering and partially responsive initial phase.

2. When was remdesvir and steroids first started and what was the plan for duration of therapy

   He was started on Remdesvir and steroids on 12/11/20. Until that time he had not been hypoxic and had had an alternative cause for his illness. Plan was for 5 days of therapy as that was standard of care at the time. This aspect of his care was co-ordinated by our colleagues in ID.

   Is Posaconazole the only antimicrobial prophylaxis recommended for this type of treatment?

   Post allogeneic stem cell transplant there are a variety of regimens used as fungal prophylaxis. We have chosen posaconazole as it is a very active, well tolerated azole antifungal. However, during a period of neutropenic sepsis if liver function tests are abnormal and the cause of sepsis is felt to be much more likely to be bacterial (rapid rise in CRP with a pro inflammatory clinical picture that usually settles on use of correct antimicrobials and engraftment) , then a short pause in the antifungal posaconazole (which worsens liver function) can be indicated, although early re-institution of treatment is indicated as soon as possible. This is what happened with Mr AS. We sometimes use caspofungin or ambisome if there is not early clinical response to antibiotics.

3. Please clarify the statement "He required washed platelets in Edinburgh", was this the reason for the delay in admission and the beginning of treatment?

AS had had transfusion reactions to platelets in Edinburgh (referring team). He had been investigated there and a decision made to use washed platelets, if he was thrombocytopenic. This is a treatment usually used if the patient is experiencing a reaction to plasma in the platelet product, rather than platelets themselves. There are several causes but often the exact nature of the reaction is not elucidated. He did not need platelets in Glasgow before he started conditioning and it was not the reason for the delay. The reason for mentioning this is that it was that he was considered for convalescent plasma later in the admission but the requirement for washed platelets excluded him from receiving that treatment.

4. Why did the patient require admission 2 days prior to commencing transplant conditioning?

   The delay was to allow for a second pre transplant COVID PCR test to be performed, and for us to get the result prior to starting conditioning chemotherapy. At the time, we mandated that all patients had two negative tests prior to starting chemotherapy. One was done by the referring team and one on admission. Turnaround times were slower and no POC machines were available in Oct 2020.

5. It would be necessary to understand the nursing and medical staff arrangements (including staff testing etc) and visiting access for relatives prior to patient testing positive for COVID 19.
   This is a summary of precautions. There was an SOP outlining precautions attached:

   All nursing, medical and AHP staff were tested weekly by PCR.
   This was before the introduction of lateral flow testing
   All staff had to use Gloves, mask and apron at all times in the rooms and wore masks in the corridors.
   Masks were worn at all times in the communal areas of the ward
   Social distancing was enforced in all communal areas and mealtimes
   Staff were encouraged to eat alone when on shift
   Contact with patients was reduced and numbers of doctors entering the rooms on ward rounds was reduced to a single person.
   Allied healthcare professionals contact was cut to a minimum.
   Any symptomatic staff self-isolated until a negative test returned
   All contacts of COVID 19 positive patients or staff isolated for 14 days.

   All staff had to have a NEGATIVE PCR prior to returning to work and had to be asymptomatic for 7 days. This was an exception to the standard hospital policy which we fought to be able to introduce in the stem cell transplant unit.

   No relatives were allowed unless the patient was terminal and even then we looked to move patients out of the ward.

The following is for the contemporaneous unit SOP:

Minimising risk of staff exposure to and transfer of SARS-CoV-2 in the Adult Haemopoietic blood and marrow stem cell transplant unit (BMT unit.

1.0 General procedures

1.1 Staff must follow all national UK and Scottish Government rules

1.2 Personal protective equipment will be worn at all times

1.3 Social distancing and masks will be worn during all breaks and mealtimes

1.4 Staff are encouraged to download the NHS protect Scot App

1.5 Staff are discouraged from meeting socially with each other to avoid direct transmission

1.6 Staff are encouraged to engage with Trak and Trace services whenever they go out to hospitality premises

1.7 Any staff who have had 'significant' contact with positive cases of COVID i.e. > 15 mins of contact < 2m apart, must self-isolate for 14 days. There is no utility of testing in asymptomatic cases in this context.

1.8 Symptomatic staff with a new cough, fever or anosmia will require testing and self isolation until test results are known.

1.9 Asymptomatic staff will be regularly tested in a screening programme

2.0 Screening programme

2.1 All staff who work on the BMT unit (Ward 4B at QEUH) will be asked if they would be tested weekly for the presence of COVID 19 by nasal and oropharyngeal swabs. This test is voluntary, but refusal may necessitate temporary redeployment.

2.2 Test results are sent by text message to the individual who has been tested. Ideally results should be available within 24 hours but often take 48-72 hours to return.

2.3 Staff continue to work normally if asymptomatic

2.4 All BMT patients are also tested twice prior to admission prior to chemotherapy commencing and weekly thereafter to prevent 'retrograde' transmission

2.5 No relatives are allowed to visit during high risk periods when restrictions are in place

3.0 Managing staff who test positive

3.1 Staff must self-isolate for at least 10 days if they test positive

3.2 Staff are given a dedicated telephone number to support their mental wellbeing and are encouraged to communicate their progress to clinical managers during their absence

3.3 Staff will receive a self-testing kit through the post or will be given a kit prior to leaving work.

3.4 Following a positive test staff will be removed from the screening programme for 90 days. Thereafter they may be re-enrolled as it is not yet clear if second infections occur.

4.0 Return to work

4.1 Strict criteria must be met prior to staff returning to patient contact activities in the BMT unit.

- Staff must be symptom free for 7 days
- Staff must test NEGATIVE for SARS-CoV- 2 prior to return to direct patient contact on the BMT unit. (NICE Guidance: COVID19 rapid guideline: Haemopoietic stem cell transplant)

4.2 To minimise extended absence after self-isolation BMT staff will self-test on the day of their proposed return

4.3 Sealed, alcohol wiped sample bags will be collected from the front door by a member of ward staff wearing a mask and gloves

4.4 Samples will be analysed using a rapid test with a 4 hour turnaround or point of care testing if this becomes available. Testing will be arranged by email using the clinical virology service, west-ssvc@nhs.net or west-ssvc@nhs.scot after migration

4.5 Alternatively, staff could be redeployed to other clinical areas or work from home after self-isolating in line with UK government guidance (COVID19) on management of staff and exposed patients or residents in health and social care settings (July 2020)

4.6 Asymptomatic staff who continue to test positive will be tested weekly

4.7 All cases who are persistently positive will be discussed with the occupational health team on a case by case basis. Asymptomatic shedding is a recognised feature of the disease but is less likely in young fit staff members. In addition, the

longer the individual sheds the less likely this is to represent transmissible disease.

As was stated in the initial report it was impossible to avoid contact between asymptomatic staff and patients.

A timeline of staff who tested positive after AS was admitted was looked at:

One staff member had protected contact on 28.10.2020 and tested positive on 5.11.2020. One other staff member had contact on 3/11/20 and subsequently tested positive on 9/11/20

6. More clarity on acuity of Ward 4A. Is it an HDU or Level 1 area? Is the single side room that the patient was nursed in a negative or positive pressure room?

   Ward 4A is a single room on the renal unit. The room is neither positively nor negatively pressurised. In contrast, the rooms in ward 4B (BMT Unit) where Mr AS was being treated prior to testing positive for COVID, are positively pressurised and would have resulted in potential contamination of the corridor areas with virus if he had stayed in that area- potentially cross-contaminating the unit. The aim of moving Mr AS was primarily to protect other patients in the transplant unit.

   Ward 4A is next to ward4B and was chosen for several reasons. AS would be close to medical and nursing staff with transplant experience day and night who could both review the patient and advise the ward nursing team quickly in the case of a problem. The ward is also a renal ward. The renal team have a very strong clinical background with a high quality nursing team with experience of managing patients on immunosuppression and post renal transplant.

   AS was reviewed each day by a dedicated registrar and was seen by the attending consultant after an MDT discussion on a near daily basis

7. More information on the patient's status between the 4th and the 9th of November. Was his respiratory status and other blood results stable?
   As noted in response to Q1, AS did not become hypoxic until 12/11/20.

   Haematology 4/11/20 -9/11/20
   He rapidly became pancytopenic, as is to be expected. See summary slide.
   Neutrophils fell from normal on 4/11/20 to $< 0.5 \times 10^9$/l by Day +5 on 9/11/20.
   He was 'well' during this time. He experienced mild mucositis and lethargy.
   Afebrile. NEWS 0-2 (3 max on rare occasions)

He then entered a period of 1 week where he was profoundly neutropenic with neutrophils not detectable. He engrafted to neutrophils > 0.5 x 10^9/l on 16/11/20 and a further 3-4 days when he had Neut < 1.0 x 10^9/l
It was during this time that he became acutely unwell
This is a classical episode of neutropenic sepsis and is most likely bacterial

Liver function 4/11/20 -9/11/20
During this initial period post-transplant (Day 0 – Day +5), his bilirubin rose from 20 to 60 . There is often a concern about Liver function at his time post-transplant, as some patients can develop veno-occlusive disease (VOD) of the liver. AS had had the risk factor of significant previous chemotherapy including a previous autologous PBSC transplant in 2016. So we were careful with hepato toxins – including posaconazole. An ultrasound scan of liver was requested to exclude hepatomegaly, ascites and reverse flow in portal veins – signs of VOD

Renal function 4/11/20 -9/11/20

Renal function was normal during this time

8. When was the Hickman Line inserted and removed? Were antibiotics given down the Hickman line?

   The Hickman line was inserted by the referring team in Edinburgh on 23/10/20, 3 days prior to admission and was removed during the episode of neutropenic sepsis on day +8 – 12/11/20.

9. Is it possible that the *Staph Epidermidis* was a blood culture contaminant? Were samples taken via the Hickman line and was the line itself sent for culture when removed?

   Staph epidermidis is a potential contaminant.
   On the other hand, this was a Hickman line culture, not direct contact with skin. In addition, staph epidermidis infections including pneumonia are well described in immunocompromised hosts with indwelling, tunnelled central venous catheters. Colonisation of lines with this bacteria are quite common. The CT images would be consistent with septic emboli from an infected line. The time course of rapid onset of infection during the neutropenic phase, rapidly rising CRP and resolution with antibiotics, line removal and engraftment of neutrophils strongly argues for a bacterial cause. (See attached powerpoint slide)

10. More information on the extent of the initial AKI would be desirable. In particular did this have any influence on the number of doses of Gentamicin given.

    AS became septic on 9/11/20 when profoundly neutropenic. His condition deteriorated, in terms of worsening sepsis for 48-72 h before stabilising

Renal function deteriorated from the time of this septic insult and deteriorated as the infection caused more profound fever, suggesting an element of pre- renal hypovolaemia. However, he was on concurrent nephrotoxins- initially Ciclosporin A and Gentamicin. The gentamicin was stopped and vancomycin added.
The decision to stop Gentamicin was not based on renal function.
Ciclosporin level were within the range 150-250 except 1 reading of 253 on 6/11/20
Gentamicin levels were not 'toxic' and can be seen on the gentamicin prescription chart. Vancomycin levels were not high either at any time.

After this toxic insult the renal function initially deteriorated and then slowly recovered.

11. It is unclear on what date the antibiotic change to Vanc and Mero was made and the rationale. Was it better sensitivity for a Staphlococcal infection?

    AS became septic and developed a temperature overnight 9/11/20 – 10/11/20 NEWS 3-4. He started Tazocin and Gentamicin as this is our first line therapy for neutropenic sepsis and he was not profoundly unwell. Initially, even though his temperature did not fully settle, it looked like it might be settling so he stayed on these antibiotics but he re-spiked to 39.4 on 12/11/20. His NEWS at this time had deteriorated to 7-8. It is standard practice to make a change in antibiotics in neutropenic patients after 48 hrs if no improvement and in this case when there was actually deterioration, so his antibiotics were 'escalated'. This process of escalation takes into account several factors including:

    - The most likely organisms involved and the most dangerous- even when we have no cultures. In neutropenic sepsis we only grow an organism from cultures 35-50% of the time.
    - Any positive cultures

    Rationale for escalation- Gram negative sepsis is a feared complication so Tazocin and gentamicin were changed to meropenem due to its' broader spectrum of activity on 12/11/20.
    The vancomycin was added, again on 12/11/20, because we had grown a Staph. Epidermidis , but also to broaden the gram positive cover. The hickman line was also removed. It is standard practice to remove indwelling catheters if sepsis is worsening or resistant to fist line antibiotcs.

12. It is not clear if the isuvaconazole was started to replace Posaconazole and were any dose considerations e.g. prophylactic versus treatment dose.

    Posaconazole was given from 4/11/20- 6/11/20 inclusive. This was discontinued in the face of a rising bilirubin and concerns about veno-occlusive disease, as discussed in more detail above.

Isavuconazole was started on 12/11/20. This drug is less hepatotoxic. The drug dose we use is the same whether used for treatment or prophylaxis. Our policy is to use this drug at the same dose that was used in treatment trials. There is limited good quality data from using the drug as prophylaxis at a lower dose. It is better tolerated than Posaconazole, specifically it is less hepatotoxic and has good efficacy versus Voriconazole in treatment trials.
Isavuconazole was not primarily started as a treatment but as prophylaxis, as bacterial infection is much more likely to describe the events that AS presented with but would ensure fungal pathogens were treated if occult. This is again standard practice. CT reports for transplant patients not infrequently include a statement about aspergillus, as this falls within the radiological differential diagnosis- but on this occasion no characteristic lesions associated with fungal infections were seen and the findings are non-specific. The aspergillus antigen test was negative at this stage.

13. . Given Remdesivir is postulated to be more efficacious earlier in COVID 19 disease was any consideration given to starting it in an immunosuppressed patient at the time of diagnosis?

The optimal management using this drug was not known at that time. For instance, breaking news was presented in The New England Journal of Medicine on 5/11/20 which carried at least two high quality publications and an updated editorial on the

AS was treated for 5 days, initially, which was abbreviated by 1 day due to concerns about renal function. Remdesivir was restarted on 17/11/20, as CT values were rising- both interventions were advised by ID.

14. What date was the extended panel of respiratory virus testing undertaken?

An extended respiratory virus screen was sent on 10/11/20 and 16/11/20

Summary of Mr Slorance's care whilst in ICU

He was reviewed by an ICU consultant on 20/11/20. He was struggling at this point on maximum oxygen therapy and a discussion was had with Andrew about the risks and benefits of invasive ventilation with a quoted mortality of up to >90%. His wife was also updated via phone and invited to attend. Following this discussion, he was admitted to ICU in the evening on 20/11/20. He was intubated and ventilated for progressive respiratory failure due to COVID. He was paralysed and ventilated using standard lung protective ventilation. He received otherwise standard ICU care of stress ulcer prophylaxis, thromboprophylaxis (COVID dosing), and physiotherapy.

His condition initially improved, and his oxygen requirements decreased, and his paralysis was removed. His ongoing haematological care of immunosuppression, regular blood, and platelet infusion and standard post-BMT care were directed by the haemato-oncology team. He had aciclovir and isavuconazole added on 24/11/20 empirically as per microbiology and haematology advice. He developed polyuric renal failure causing a rise in urea and creatinine which settled over a few days and was accompanied by hypernatremia. This trend of gradual and slight improvement continued until 28/11/20 when he had an acute deterioration overnight and his oxygen requirements increased. He required an FiO2 of 1.0, paralysis and proning to achieve adequate ventilation and oxygenation. He became very labile with intermittent tachycardia and hypertension. His oxygenation was variable with a further requirement to be proned overnight from 2/12/20 into 3/12/20, with limited improvement in oxygenation.

Throughout Andrew's stay in ICU, he did not have any positive microbiology from 21/11/20 until 3/12/20 and after discussion with microbiology colleagues, his meropenem and teicoplanin were stopped on 3/12/20. He remained positive for SARS-CoV-2 throughout his stay but was negative for other respiratory viruses. He had serology sent for aspergillus antigen (galactomannan assay) on 11/11/20 which was negative, further samples on 1/12/20 were both positive but results were not available until 3/12/20. As he was already on isavuconazole, microbiology advice was to add caspofungin, send samples for aspergillus PCR and consider a bronchoalveolar lavage (BAL). On 4/12/20, in the face of worsening tachycardia and a rising CRP, he was restarted on teicoplanin with aztreonam. A blood (plasma sample) for aspergillus PCR was sent on 4/12/20 and was negative but was not reported until 9/12/20.

His condition deteriorated on 3/12/20 and he had a further significant increase in his FiO2 with dramatic worsening of his P/F ratio. He would not have been fit for BAL sampling. Despite ongoing ventilation, his condition worsened on 4/12/20. At 1900 he was reviewed by two ICU consultants who felt that he would not be suitable for further proning (tachycardia and previous failure to improve with it). By 2230, he was reviewed by two ICU consultants and a senior trainee, and a decision was made that it was likely that Andrew would continue to deteriorate and his wife was called to attend.

On 5/12/20, Andrew was reviewed on the ward round and felt that given the likelihood of a new infection (noting the positive galactomannan results, rising CRP and tachycardia) despite appropriate antimicrobial treatment alongside persistent COVID pneumonitis with critical hypoxia and recent stem cell transplantation, Andrew was now dying on maximal support. His wife was in attendance and, following MDT discussion, a decision was made to move to endof-life care.

Andrew died at 1136 on 5/12/20.

Questions for clarification

1. It may be accurate but what was the "Mortality of 90%" based on.
2. Would be useful to know the degree of hypoxia and how long patient had been on non-invasive respiratory support prior to the decision to intubate.
3. Patient was paralysed and ventilated suggesting severe hypoxaemia. Was prone ventilation considered at this time? It would be useful to have a timeline of when paralysis was stopped and the severity of hypoxamia on each day e.g. PF ratios. Was ECMO considered (published data suggest very low survival if ECMO required following BMT, this is pre-COVOD).
4. Inconsistency in the start and stopping dates of antibiotics, particularly the isavuconazole which it says was started on the 17th and also the 24th of November. Separate courses or the same course?
5. Useful to know more on severity of AKI and whether either drug toxicity OR requirement to reduce antibiotic doses were a feature.
6. Usefully to know the severity of hypoxaemia which prompted decision to prone the patient and could proning have been considered earlier.
7. It is unclear what respiratory sampling was sent from the time of intubation until the 3rd of December. Of relevance here is whether a BAL, miniBAL were sent, given the patient was immunosuppressed and failing to improve. It is stated that the patient was too hypoxaemic for a BAL on 5th December. There is a known association of invasive aspergillosis and COVID 19 (as well as in immunosuppressed patients) but other opportunistic infections may have been a possibility.
8. Was a repeat CT considered to either exclude PE or further identify cause of hypoxamia between 20/11 and 3/12.
9. Was patient anticoagulated?
10. More detail in the timeline with regard to conversations with next of kin might be useful.

Patient journey through QEUH

Mr Slorance was admitted to the QEUH Wd 4B (Bone Marrow Transplant) on 26th October 2020. Ward 4B is a Bone Marrow Transplant Unit comprising of 24 Single Rooms with ensuite facilities. He had a nose and throat swab undertaken on admission for COVID-19 on 26/10/20 which was negative as was his screen on 28/10/20. A further screen on 02/11/20 returned a positive result. IPCT were alerted to this on 03/11/20 and Ward 4B was contacted and advised that the patient was at the time pyrexial but no other COVID-19 symptoms. Ward 4B was contacted initially by phone and was advised on IPCT Transmission Based Precautions (TBP) as per national guidance, but due to complex chemotherapy treatment the patient was to remain in Ward 4B overnight. Ward 4B was visited the following morning to discuss the movement of the patient to Ward 4A. Medical staff have agreed for patient transfer out of Ward 4B, but currently was being nursed by a member of nursing staff on a

1:1 ratio. Patient was transferred to Ward 4A on 05/11/20 and continued to be nursed in a single room with TBP as per national guidance. Mr Slorance continued to screen positive for COVID-19 throughout his stay until he passed away on 05/12/20.

Time Line / Ward Movements

Ward	From	To	Bed	Room type
Wd 4B	26/10	04/11	78	BMT room. 1-2-1 nursing following positive result on 02.11.21
Wd 4B	04/11	05/11	76	BMT room.
Wd 4A	05/11	17/11	9	SSR used for isolation of Ward 4b Haem-onc isolation
Unit 7 HDU	17/11	20/11	78	COVID Hub
Unit 4 ICU	20/11	05/12	31	Isolation PPVL

Acquisition of COVID-19

Andrew was tested for COVID-19 by PCR on 26/10/20 and 28/10/20. He was tested again on 2/11/20 and PCR was now positive and remained positive until his death. The interval from admission to testing positive was 7 days. Andrew would be classified as a probable healthcare associated COVID-19 infection. Within the BMT unit, Andrew was cared for in a positive pressure HEPA filtered room. There were no visitors during his stay, standard PPE was used, social distancing was enforced, and every attempt was made to prevent transmission from staff to patients. Over an 18-month period, the BMT unit has had 3 cases of COVID-19 on the ward. All were sporadic with no more than one patient at any time testing positive. Some staff did become positive. Unavoidable contact between asymptomatic positive staff and patients prior to staff members testing positive almost certainly occurred at times but the measures listed were successful in protecting both patients and staff and minimising transmission of the virus.

Questions for this section/missing info

1. **Did any of the patients close household contacts develop symptoms/test positive for COVID between 23rd Oct and 8th Nov?** no information is provided on any probable or confirmed out of hospital exposure.
   AS had three children, aged 13/11/10. It is not clear if they were at school.
   We do not know if he isolated for any time prior to admission.
   Prior to admission but within the incubation period AS attended an Edinburgh hospital for procedures.
   12 days before diagnosis on 21/10/20 – Colonoscopy
   10 days before diagnosis on 23/10/20 – Hickman line insertion
2. **Did the patient attend any other department outside of Ward 4 (e.g. Xray, CT, ECG etc) between admission and 2nd Nov?**
   AS had a CXR performed as a mobile/ portable procedure ON 26/10/20. ECG was done by ward team. He did not leave any ward for investigations until his CT scan.
3. **Why was a COVID screen taken on 2nd Nov?**
   Was there a local COVID testing regime in place or was the patient symptomatic/unwell? Test taken on admission & day 2 (pre-treatment) and again at day 8 (the positive test) which does not align with national guidance at, or since that time.

   The test taken on 2/11/20 was in response to a fever more likely to be caused by Campath/alemtuzmab than COVID but this fever triggered the swab.

   The other two tests were taken as a second screening test (admission) and then as part of a routine screening programme (day2)

   Patients were tested more than was recommended because we were trying to prevent COVID entering the ward or spreading in this highly vulnerable group and we obtained special dispensation to be able to screen more than most areas as we had small numbers of highly vulnerable patients. All our patients were tested twice prior to commencing conditioning chemotherapy, once at the base hospital and then once on admission. Subsequently patients were tested once a week if asymptomatic and at any times they exhibited typical or atypical symptoms.

4. **If the test was taken because the patient was symptomatic, what was the earliest onset date of symptoms recorded?**
   AS was tested on 2/11/20 because he had spiked a fever. This was the first day he had been febrile. He had received a monoclonal antibody called campath/alemtuzumab that day. This almost universally causes fever, especially on the first day of therapy (2/11/20). This can be quite a high fever and in our practice, patients may be started on antibiotics as a precaution, although this course is usually significantly abbreviated, as was the case with AS who received a short course of Tazocin.
   This fever is very unlikely to have been a symptom of COVID and very much more likely to be a side effect of the antibody therapy.

Note that in the narrative states the patient was reported as febrile on IPCT reporting of the positive result on day 9 (3rd Nov). The sample was taken on Day 8 (2nd Nov) but the timeline & remaining review does not show the patient becoming febrile until 9th Nov. The onset is on the cusp of the definition between 'Indeterminate hospital onset (Days 3-7) and Probably hospital onset (Day 8-14).

5. **Narrative states "*patient had no other Covid symptoms*" on return of the positive result- what case definition was being applied, and was atypical presentation considered given the patients underlying health conditions/immunosuppression?**
   Patient had a fever but no loss of taste or smell, no new cough and no respiratory symptoms at all. As noted, we were very well aware that immunocompromised patients should be managed with a high index of suspicion re- development of COVID.
   In this respect that justified the 4 tests described above in a short time frame.
   The patient had a fever. They were not Standard case definition is pyrexia, new persistent cough, loss/alteration of taste or smell. National guidance at states " *It is important to take into account atypical and non-specific presentations in older people with frailty,* ***those with pre-existing conditions and those who are immunocompromised.***"
6. **Can GGC confirm if weekly PCR testing was in place in Ward 4B, and what the weekly compliance rate was this this?**
   Yes weekly testing by PCR was in place for staff and patients. (discussed in more detail in answer to question 3)
   This was the extant policy position at the time of the patient's admission (implementation date of 8th July 2020 as per CMO letter of 3rd July)
7. **Can GGC confirm if all substantive staff regularly working in the unit were included in testing, specifically domestic, AHP, phlebotomy, pharmacy, radiology/radiography staff.**
   We do not have phlebotomists and we did not have control of radiology staff. Large numbers of radiology staff all had a small chance of performing portable films on the ward but we could not test all of these at the time. All other staff groups mentioned were tested weekly.
8. **Were there any staff shortages at the time this case was identified and how were these addressed? Redeployment of staff within the hospital/use of bank agency?**
   Three shifts were cross-covered by ward staff. This overtime will show as 'Bank shifts' but the bank staff were ward staff so covered by screening policies discussed
   See point above about testing of staff – in line with SGov letter dated 3rd July 2020.
9. **Can GGC confirm if any Bank/agency staff were used during the period 26/10/2020 and 03/11/2020, and if so, were these staff included in weekly PCR testing?**
   No external staff used.

10. **Why was the patient moved from bed 78 to bed 76 in Ward 4B?**

This was done to move the patient to the most remote room on the unit to minimise transfer of virus pending reinfusion of stem cell graft, which it was felt should be delivered by transplant unit staff. So the patient was kept on the unit for one further day in the most remote room. The rooms 76-80 are in a slightly separate area to the rest of the ward. In the main body of the ward two banks of rooms run parallel and opposite each other, albeit separated by a wall – best seen on a diagram

Noting the move took place the day after the positive Covid result was known and before a move to Ward4A. No rationale for this move is provided in the narrative

11. **Please confirm the type of room and ventilation specifications of a 'BMT' room in Ward 4B**

BMT rooms are HEPA filtered, positive pressure rooms with no lobbies.

Patient placement appears appropriate on admission – the narrative suggests this is a single bedroom (although unclear if this is a lobbied single room/PPVL) with HEPA filtered air supply and positive pressure. This would be appropriate for the provision of protective isolation for a vulnerable/immunocompromised individual.

12. **What is ward 4A, and what type of rooms (single rooms, PPVL, other?) are provided. Can GGC confirm the ventilation specification for room 9.**

The room on 4A was a single, ensuite room with no HEPA filtration.

This is listed as a single side room (SSR) in the narrative. It would be helpful to understand if this was designed/provided as a single en-suite room (6 air changes balanced pressure) or something else.

13. **Did the accommodation provided in Ward 4B take account of the need for ongoing protective isolation for this patient in addition to source isolation?**

AS was not neutropenic at the time the move took place, on 5/11/20. His counts did fall rapidly and he was neutropenic for the first time on 9/11/20, corresponding with a period of neutropenic sepsis, discussed in depth in previous sections. The answer to this question and question 15 are linked.

Noting the patient was pancytopaenic by the time this move took place

14. **Can more information be provided on the 'COVID Hub' and specifically bed 78.**

The COVID hub is in HDU. I can not speak to this part properly as I do not know the specifications. I can say that the room was a single room with ensuite. There is no HEPA filtration in this area.

Is this a single room or bed space within an open area? If this is a single room, what are the ventilation parameters of this room (air change rate, pressure differential, filter type).

15. **Was there an agreed escalation & management plan to manage any COVID positive patients identified within the BMT via a defined 'High risk' pathway as per August 2020 remobilisation guidance?**

It was felt that the best way to manage the small number of positive transplant patients was on an individual basis, co-ordinated at consultant level. The person who knew these patients best was the consultant Haematologist who was covering the transplant ward (The attending consultant). If a patient became positive for COVID 19 then the attending

consultant on the transplant unit would discuss the case with the ID team, and all other relevant teams (e.g. nursing , ITU, infection control), on an individual, case by case, basis. This meant consultant level discussion of vulnerable patients took place. This was to ensure that the 'high risk' nature of these patients was highlighted and the best available care delivered at any given time.

In the small number of patients who became positive, several factors came into play when deciding whether to move patients out of the transplant unit (Ward 4B) and where they were to move to.

The first consideration was whether it was safe for all other transplant patients (24 bedded unit) to allow positive cases to stay on the unit. In all cases it was deemed that the risk of cross-contamination to other patients outweighed the benefit, to the individual with COVID, of being nursed in ward 4B. This is because the rooms in ward 4B (BMT Unit) where Mr AS was being treated prior to testing positive for COVID, are positively pressurised, but do not have anterooms and would have resulted in potential contamination of the corridor areas with virus if he had stayed in that area.

The next consideration is where to move patients. There are very few effective negative pressure rooms or positive pressure rooms with anterooms in the hospital. These rooms are always under intense pressure. There are no other HEPA filtered areas outside theatres and ITU, which again was under intense bed pressures. All patients were, however, moved to ensuite side rooms The other 4 patients presenting over the last 18 months (3 before and one after AS) were transferred to the ID ward on the 5th floor. These other 4 cases were further out from transplant.

AS was otherwise well, asymptomatic, not neutropenic and not requiring active intervention at the time he was moved out of ward 4B. AS was moved to a single room on ward 4A, part of the renal unit. Ward 4A is next to ward4B and was chosen for several reasons. AS would be close to medical and nursing staff with transplant experience day and night who could both review the patient and advise the ward nursing team quickly in the case of a problem. While in ward 4A, he was managed medically by the transplant team but nursed by renal unit staff. This proved very helpful when managing his subsequent neutropenic sepsis. The renal team have a very strong clinical background with a high quality nursing team with experience of managing patients on immunosuppression and post renal transplant.

Did this escalation plan take into account the continued need for protective isolation in significantly immunocompromised patients in addition to source isolation or cohorting need? Was this plan followed?

16. Please confirm the dates of any positive staff cases associated with Ward 4B and their last known date at work in the 7 days prior to the patient's admission on 26th October.

Staff member	Symptomatic (Y/N)	Diagnosed	Last working day
1	N	Staff testing 20/10/20	19/10/20
2	N	Staff testing 30/10/20	30/10/20
3	N	Staff testing 05/11/20	05/11/20
4	N	Staff testing 09/11/20	13/11/20
5	Y	Community test 15/11/20	11/11/20

Summary of direct contact

One staff member had protected contact (with appropriate PPE) on 28.10.2020 and tested positive on 5.11.2020. One other staff member had contact (with appropriate PPE) on 3/11/20 and subsequently tested positive on 9/11/20

17. If there were staff cases identified in this period, were these linked to a plausible household/non work exposure.

The staff involved did have non work / household exposures. This has not been forensically dissected yet. More information could be obtained.

This would inform the inclusion or exclusion of staff cases and risk of staff to patient transmission as part of an outbreak hypothesis.

18. Were any staff or patient cases identified with an epidemiological association to Ward 4B in the 14 days after the 2nd November 2020?

NO OTHER PATIENTS DEVELOPED COVID ON WARD 4B AFTER AS until Oct 2021

As noted , 2 staff did test positive in this timeframe but no definite epidemiological association to Ward 4B was identified in this time frame and alternative explanations existed.

How many staff, and how many patients?

19. Please confirm the dates of previous positive patients over 18 months and the case definitions applied to these cases (non-hospital onset/indeterminate onset/probable onset/definite hospital onset)

Patient	date	Classification
1. AB	30/03/20	Probable hospital – day 16 admission 4B
2. JP	05/04/20	Non hospital - day 2 re- admitted with fever
3. BM	27/05/20	Non Hospital – day of admit with cough
4. FP	18/10/21	Indeterminate – day 6 post admit day 1 on 4B

20. Can GGC provide any audit data or documented feedback from IPC observation of staff practice within ward 4B, and specifically compliance with PPE, Hand Hygiene, equipment decontamination or environmental cleaning for October and November 2020.

By October 2020 all non essential footfall had been stopped, so handhygene audits and environmental monitoring had been put on hold. Last hand hygene audit June 2020 highly

satisfactory. Annual infection control audit June 2020 gold award. The ward has a strong background record of successful infection control audits in many areas. Runs charts of hospital acquired infections show no hospital transfer in 2year period.

21. Have GGC considered any other risk factors for potential acquisition of Aspergillus from the hospital built environment for this patient?

No identifiable site. No building works. Rooms that AS was in functioning well, no leaks.

Aspergillus assessment and antifungal treatment

Andrew was initially on Posaconazole as prophylaxis during his admission for transplant but this was stopped due to derangement of liver function tests. Aspergillus antigen serology was sent on the 11/11/20 which was negative. A CT scan performed due to persistent pyrexia on 12/11/20 (as above) showed appearances suggestive of atypical infection and it was suggested that fungal pathogens (including aspergillus) should be considered. Andrew was started on isavuconazole on 12/11/20 empirically. Respiratory consultant opinion at the time was that a BAL was unnecessary and microbiology and infectious disease colleagues were comfortable with his current antimicrobial therapy. Repeat aspergillus antigen serology was performed on 1/12/20 which was reported 48h later as positive.

On 3/12/20, upon receiving these results, his treatment was amended upon microbiology advice to add caspofungin to his isavuconazole. They suggested sending samples for aspergillus PCR and a BAL sample (for culture and galactomannan antigen testing). The blood sample sent for PCR on 4/12/20 was negative although not reported until 9/12/20 and Andrew was too hypoxic for a BAL to be undertaken. Given the clinical picture, radiological appearance and positive galactomannan, Andrew's presentation was suggestive but not diagnostic of COVID-19 associated pulmonary aspergillosis. The absence of BAL or tissue sampling makes confirmation very difficult. The subsequent negative aspergillus PCR serology is of unclear significance. Overall, Andrew may have either been colonised or had a secondary infection with aspergillus as up to 33% of critically ill COVID-19 patients do. He was treated with appropriate antifungal therapy under microbiological advice throughout his stay.

Communication with patient / next of kin

Prior to intensive care, there are multiple entries in the note describing discussions with Andrew's wife and Andrew but without extensive detail of the contents of these discussion beyond an update regarding treatment. In ICU, there are communication entries from medical staff on all but 3 days of his stay. These conversations were primarily over the phone due to the ongoing restrictions on visiting. Andrew's wife was kept up to date with his current condition, prognosis, and treatment throughout.

With regards an update regarding aspergillus infection, there is a communication entry on 4/12/20 detailing "potential for additional infection". It would not be routine practice to differentiate between groups of microorganisms unless the family member had clearly demonstrated some subject matter knowledge or had asked for specific details. There are also daily entries of communication with relatives documented in the nursing notes section of ICCA. Overall, the standard of documented communication appears to be of the same high level that is expected for all our critical care patients.

Death Certification

A death certificate was issued with cause of death as:

1a) COVID Pneumonia
2 – Mantle Cell Lymphoma, Bone Marrow Transplant

As was standard practice, a death certificate was completed on 5/12/20 but not issued until 7/12/20 when it could be discussed with the Procurator Fiscal's office. This discussion took place due to concerns regarding the timing of COVID positivity and the potential for this to be a case of nosocomial acquisition. Although there is no record of the discussion with the PF, the certificate was issued the same day which suggests that the PF was happy with the case and the absence of any concerns regarding care being expressed by the family.

Addendum

Serological testing for Aspergillus (Dr Cottam, Consultant microbiologist)

There are caveats/limitations to any diagnostic test, with the Galactomannan antigen/ BetaD-Glucan assays being no exception in the assessment of aspergillus infection.

Unfortunately, no respiratory tract specimens were received for either culture or fungal biomarker/PCR testing.

An important caveat to consider when interpreting serum GM and the beta-D-glucan assay, is that they are non-specific.

False positive results can be seen in patients with gastrointestinal tract mucositis caused by chemotherapy or GVHD, with the postulated mechanism being that galactomannan in food or bacteria can behave as cross-reactive epitopes and may translocate across the intestinal mucosa if there is compromise to the mucosal integrity. Furthermore studies have demonstrated false positive results in patients who have received immunoglobulin therapy and/or transfused blood products. Lastly, and equally important, is that the beta-D-glucan assay can be positive in patients with candidiasis.

Overall, my understanding is that the diagnostic utility of serum biomarkers in the setting of COVID-19 and IPA/CAPA is less certain, particularly in this case it is additionally challenging as we have no respiratory tract samples. As it stands, in my opinion, the diagnosis of invasive aspergillosis would seem possible, with appropriate empirical antifungal treatment being instigated.

COVERING SHEET – Louise Slorance

LS/17 – appendix 17 : Lothian Peer Review

NHS Lothian case review of the care of Mr Andrew Slorance (AS)

This section sets out the introduction and the method followed.

The CNO asked NHS Lothian to review the care of Mr Andrew Slorance (CHI [redacted]) and provided a copy of the internal case review carried out by NHS GGC.

The case review was shared with a small number of clinical experts in the relevant fields. None had looked after Mr Slorance or had a conflict of interest in providing the review. This is relevant as Mr Slorance was a Lothian resident and had been treated by NHS Lothian.

Initial reading generated a number of questions that NHS GGC provided further information in answer to these where possible.

Individual reviewers provided commentary and opinion and these were shared between the group. No reviewer had the opportunity to examine the records of care and construct their own timeline or evidence drawn directly from GGC policies and protocols. With that caveat, all reviewers have had an opportunity to discuss and to disagree with any of the high level conclusions being drawn.

The method used has limitations, most notably that case notes and the actual records were not seen, which would be the way an expert opinion is usually given. Nor were any GGC staff spoken to for clarification of the clinical intention or preceding discussion, which can sometimes be captured incompletely in a case review, prior to writing the report.

The level of this review has therefore been kept at a high level and focussed on whether the care provided met the expected standards.

The following documents have been used:

- CNO commissioning letter, asking for a case note review
- Reply letter to the CNO (by TG which sets out the individuals who would be asked to review based on their relevant expertise)
- Case review from GGC, comprising text assembled by named clinicians summarising the care
- Responses to additional questions from GGC and the documentation of family communication in ITU

The review by NHS Lothian has been assembled and checked with contributing participants that they are in agreement with the overall summary.

A commentary, observations and conclusions marked as opinion have been noted under each section. Where further information would have been helpful, or where assumptions have been made, this is noted.

The overall findings have been set out as a summary at the beginning.

Two clinical papers have been highlighted as being relevant to the questions considered and these are provided separately. Extant guidance documents at the time of Mr Slorance's admission are also referred to with links.

The report was submitted in the agreed timeframe to the CNO, and at their request NHS Lothian and NHS GGC met on 05 January 2022 to clarify outstanding questions in the document, recognising the limitations of the method and to provide an opportunity for discussion. The points of clarification were agreed by email and incorporated into a paragraph at the end of the report. No overall change to the findings resulted from this discussion.

Summary of findings

Overall care in Haematology ward

- The care received by Mr Slorance from the Haematology team was good and no significant gaps in care were identified.
- The therapeutic management of the infections, actual and suspected, including Covid, were appropriate.
- The pattern of disease and possible sources of infection are similar to those seen in other immunosuppressed patients in other units.

Acquisition of Covid

- On the balance of probability this was acquired in hospital but that is not proven.
- It may not be possible to determine exactly how, when or where it was acquired.
- Although gene sequencing of the samples from the patient and asymptomatic staff may be considered, this will not determine the direction of infection and so is unlikely to add anything further.
- In the documentation provided all reasonable precautions appear to have been taken in the care of Mr Slorance and extant Infection Prevention Control guidance followed.

Care in critical care

- AS received appropriate care during his ICU admission with several examples of good quality care.

Journey through the hospital

- Mr Slorance's placement was appropriate to his underlying condition and developing needs throughout his journey, and was in line with extant policy and good practice.

Management of clinical infection

- The administration of prophylaxis for infection of Mr Slorance was broadly in line with that expected based on his underlying condition and treatment.
- Standard bone marrow transplant protocols were followed for Mr Slorance and these included prophylaxis for *Pneumocystis jirovecii* pneumonia.
- The management of Mr Slorance's Covid infection was appropriate.
- Consideration was given to all classes of organisms (bacterial, viral, fungal) that may have caused his underlying pneumonia in addition to Covid and therapeutic cover was provided for these

Diagnosis of Aspergillus infection

- A single positive galactomannan serology result does not prove infection. In the clinical context, this could not be ignored, although there is the possibility of a false positive result.

- Secondary fungal infection is common in Covid patients and in immunosuppressed patients after bone marrow transplant but on the evidence presented, the diagnosis of invasive Aspergillus infection is not certain given the differential diagnoses.
- The patient was too unwell for a broncho-alveolar lavage (BAL) when in critical care but there were some other opportunities to test other samples which with hindsight may have helped support or refute the diagnosis.
- The patient was already receiving appropriate antifungal medication and therefore the correct therapeutic intervention.

Discussion with family

- Communication with all families during Covid has been particularly difficult despite efforts (video calls etc) throughout the NHS.
- In the light of the patient's overwhelming illness, and the lack of any other useful therapeutic intervention, reference to additional infection rather than by a specific name was not unreasonable in the circumstances.

Cause of death

- The completion of the death certificate is in line with the clinical course described

Overall conclusion

The care provided to Mr Slorance was good and met expected standards of care

Detailed review of aspects of care (these follow the same structure as the GGC case review)

Haematology care prior to ITU- review by haematologist

- AS had Mantle cell lymphoma treated with first line chemotherapy in 2016 with NORDIC protocol and LEAM autograft. His disease relapsed in 2019. At a consultation with his Haematology consultant in October 2019, there was a decision to treat his lymphoma with the chemotherapy drug ibrutinib but given that this was only a way of temporarily controlling disease to then go on to consolidate this response with an allogeneic haematopoietic stem cell transplant.
- Allogeneic haematopoietic stem cell transplant was the only curative option for treating this condition and given AS's relatively young age and lack of significant co-morbidity, this was an appropriate treatment course.
- AS had a first consultation with one of the Glasgow transplant physicians in January 2020 who agreed that allogeneic transplant was appropriate. A provisional transplant date of March 2020 was proposed at that consultation. However as this coincided with the start of the covid-19 pandemic in UK it appears as if the allogeneic transplant was deferred to later in the year.
- AS had a second consultation with a different member of the Glasgow transplant consultant team in October 2020. At that consultation there is documentation on the potential impact on the covid-19 pandemic on the risk of transplant. AS was advised that it would be better to proceed to transplant rather than delay until after the pandemic was over because there was a high chance that delay could lead to disease progression which would make AS ineligible for transplant.
- In terms of the risk of severe outcome of covid-19 in transplant recipients a recent EBMT publication provides data on outcomes of covid-19 in haematopoietic stem cell transplant recipients. A mortality of 25.2% was directly attributable to covid-19 infection in this population. (https://doi.org/10.1038/s41375-021-01302-5)
- AS had a covid-19 swab checked 2 days prior to admission to QEUH and was negative. A further swab taken on the day of admission was also negative. The first positive result as obtained on the 2nd November on the 8th day in hospital. Therefore I would agree with the case report that this was hospital acquired.
- Remdesivir and steroids were commenced on 12th November based on the finding of persistent hypoxia first recorded on the evening of 11th November. The timing and appropriateness of this intervention was consistent with the then NHS Scotland guidance on use of corticosteroids and remdesivir. (https://www.sehd.scot.nhs.uk/publications/DC20200903Corticosteroids.pdf, https://www.sehd.scot.nhs.uk/publications/DC20201106REMDESIVIR.pdf)
- I note that AS was entered into the RECOVERY trial but was randomised to standard of care. Toculizamab was a further option for therapy although guidance on its use was only published on 6th November.

(https://www.sehd.scot.nhs.uk/publications/DC20201106REMDESIVIR.pdf)

- A further option that was considered was convalescent plasma but this was discounted because AS had had previous severe reactions to blood components.
- In relation to other aspects of the transplant care prior to ICU admission AS developed neutropenic sepsis with blood cultures taken on 9th November with growing *S. epidermidis*. From his records it appears as if he was quite unwell with a CRP of 450. Once the results of cultures were known his Hickman line was removed and his antibiotics were changed to meropenem and vancomycin. Because of developing renal impairment vancomycin was changed to Teicoplanin. This was an appropriate combination to cover both the *S. epidermidis* bacteraemia and the potential of other unidentified bacterial sepsis. In terms of the appropriateness of Hickman line removal this is not always required in *S. epidermidis* bacteraemia, but given how unwell AS was, this does appear to have been an appropriate action. He improved following removal.
- In order to look for alternative causes for ongoing sepsis a CT scan was performed which demonstrated widespread pulmonary infiltrates throughout both lungs concerning for atypical infection. As patients are profoundly immunosuppressed post allogeneic transplant they are at risk of bacterial, fungal and viral infections.
- Fungal infections in particular are difficult to diagnose and often treatment with systemic antifungals is given on an empiric basis. AS had been on prophylactic posaconazole but this was stopped on 11th November due to hepatic impairment. Isavucoazole was started on 12th November and this is appropriate for aspergillus infection. Intravenous liposomal amphotericin B would be the first line choice for treatment of possible or probable invasive fungal infection but may not have been appropriate due to the combination of renal and hepatic impairment

Opinion

- In relation to the significance of the galactomannan results these are only helpful to a degree in the diagnosis of pulmonary aspergillosis, as there is a relatively high false positive and false negative rate with these tests.
- In relation to the question as to whether to perform a BAL it is documented that this was discussed with respiratory medicine and it was felt this was not required. Whilst it is likely that the BAL would not have given positive microbiology given that AS was already at that time on a broad combination of antibacterial and antifungal drugs, if AS had been fit enough to undergo the procedure this probably would have been the most appropriate course. However, in this clinical scenario often a BAL is not possible due to hypoxia and sometimes this procedure is only undertaken once the patient has been started on invasive ventilation in the ICU.
- In relation to GVHD (Graft versus Host Disease) management I note that there was clinical concern about the possibility of engraftment syndrome/hyperacute GVHD. The standard GVHD prophylaxis with Ciclosporin had been discontinued due to renal impairment, and Methylprednisolone had been given,

I am assuming as treatment for covid-19 and to cover for possible GVHD. MMF is a very standard second line treatment option for GVHD treatment so this was an appropriate therapeutic choice at that time.

- In relation to escalation to ICU it was apparent that AS was critically unwell with multiorgan failure. The only question would be whether given that the likelihood of recovery was very low, whether his care should have been palliative at that stage and not escalated to ICU. That however is a very difficult decision to make in a relatively young patient with a potentially treatable condition.

Care Prior to ICU: review by critical care experts

- AS was admitted to QEUH on 26th October 2020 prior to bone marrow transplantation for mantle cell lymphoma.
- AS treatment commenced on 28th October 2020 following two negative COVID tests taken 26th and 28th October 2020.
- AS tested positive for COVID on a sample taken on 2nd Nov 2020. By the time this result was known he had received all his conditioning chemotherapy, so it was necessary to proceed to the stem cell reinfusion, which occurred on the 4th of November. Posaconazole was initiated as antifungal prophylaxis at this time.
- AS became febrile and neutropenic on the 9th of November. Piperacillin-tazobactam and gentamicin were started at this time as standard therapy for neutropenic sepsis. Blood cultures on this day taken from the Hickman Line grew *S. Epidermidis.*
- Posaconazole was discontinued due to concerns about nonocclusive disease and deteriorating liver function. A less hepatotoxic replacement, isavuconazole was started on the 12th of November. This continued until AS' death.
- In the face of continued clinical deterioration with a sepsis-like picture, antibiotics were changed to vancomycin and meropenem on the 12th of November and AS' Hickman line was removed.
- A non-contrast CT chest on the 12th of November was consistent with a viral pneumonitis, but the report also recommends consideration of fungal infection.
- An extended panel of respiratory virus testing was sent on the 10th and 16th of November 2020.
- Aspergillus serology sent on the 11th of November was negative.
- AS had a respiratory medicine, infectious diseases consult at this time and was discussed at COVID MDT. Of note a broncho-alveolar lavage (BAL) was considered but not felt to be indicated at this time.
- AS' renal function deteriorated from the 9th of November, and this was thought to be multifactorial: sepsis, hypovolaemia, and nephrotoxic drugs.
- AS became increasingly hypoxaemic from the 12th of November. Dexamethasone and Remdesivir were started on this date. Respiratory function deteriorated requiring high flow nasal oxygen (HFNO) and admission to Medical HDU on the 16th of November.
- Between 17th November and 20th November AS was managed with HFNO, CPAP (Continuous Positive Airways Pressure) and conventional oxygen therapy. He also underwent self-proning trials.

Opinion

- From a critical care perspective AS received standard treatment based on what was considered best practice in the management of COVID at that time.
- Other aspects of AS' care were appropriate in our opinion.
- He was investigated appropriately. We agree with the decision not to BAL as it may have precipitated a deterioration in this patient who was already receiving appropriate antibiotic therapy including antifungals.
- He was managed in an appropriate level of care setting based on severity of illness during this period.

Clinical care prior to ITU by microbiological experts

- If there remains significant contention over the time of acquisition of Covid, it may be useful to establish which PCR platform for SARS Co-V 2 diagnosis was used and a virology view as to how much trust to put in a negative result.
    - Some of the initial testing platforms only looked for a single SARS CoV2 gene whereas later ones had more targets.
    - Knowing the PCR Ct value of this result may be helpful to establish if it was a low positive which became stronger, i.e. likely early infection.
- Hickman line: the microbiological sampling that would be required to clearly diagnose a Hickmann line infection are sets of blood cultures from each line lumen plus a peripheral set and the line tip once removed. It is still unclear what microbiological sampling took place to investigate whether there was a line infection or blood culture contamination.
- The lung CT images were consistent with septic emboli from the line. There is a balance of risk in undertaking further tests (BAL) to attempt to establish the diagnosis further. The decision to remove the Hickman line and treat appropriately is a reasonable clinical one overall but one which would best be made in discussion with microbiological colleagues.
- The rise in CRP (C Reactive Protein) during this period from 261 to 468 would not necessarily support the diagnosis of a bacterial line infection in this patient as it could be attributable to worsening Covid which may lead to a rising CRP.
- No issues are identified with the decision making regarding the empirical escalation and choice of antimicrobials if neutropenic sepsis was not resolving. The use of posaconazole and then isavuconazole at this stage in the admission would align with ESCMID (European Society Clinical Microbiology and Infectious Diseases) guidance for treatment of invasive aspergillosis.

Summary of Mr Slorance's care while in ITU: review by critical care experts

- Prior to intubation AS was being managed in an HDU environment and was reviewed by the ICU team including a consultant. He and his next of kin were appropriately counselled about what Intensive Care treatments would involve and the limited chance of a successful outcome.
- AS was intubated after a 72-hour trial of non-invasive respiratory support. This would be considered best practice in management of COVID pneumonitis.
- Prone ventilation was undertaken at appropriate points in his ICU admission, and it is noted that he responded poorly to this.
- From the information provided, other aspects of ICU care were appropriate for an immunosuppressed critically ill patient with COVID, and consistent with best practice at this time, including Factor Xa guided anticoagulation.
- Endotracheal secretions and other microbiological samples were sent on admission. He remained positive for SARS CoV-2 during his ICU admission
- Galactomannan Assay sent on the 1st of December 2020 returned a positive result however this was not available until 3rd December.
- AS received appropriate antimicrobial therapy throughout the duration of his ICU admission and this included antiviral and antifungal therapy.
- AS was too hypoxaemic for a BAL on the 5th of December 2020.
- AS continued to deteriorate on maximal support. Following review by senior clinicians and discussion with AS' wife a decision was made to move to end-of-life care, and he died later that day.

Opinion

- AS received appropriate care during his ICU admission with several examples of good quality care.
- From the documentation provided, communication with AS family was accurate and appropriate.
- Invasive Pulmonary Aspergillus (IPA) is associated with immunosuppression, Haematopoietic Stem Cell Transplant (HSCT) and COVID (COVID 19 Associated Pulmonary Aspergillosis - CAPA). Some case series report a rate of CAPA of 15% of patients with SARS CoV2 infection who require mechanical ventilation.
- There is nothing contained within the information I have reviewed that would concern me that there was an environmental source for AS' IPA if this was the underlying diagnosis.
- From the documentation provided AS had moderate to severe ARDS for the duration of his ICU admission. A recent review of CAPA suggests that sputum or endotracheal aspirate can both be used to diagnose IPA although not as sensitive as BAL (Koehler et al, Lancet Infectious Diseases, 2021). To undertake a BAL in AS while ventilated would have been a balance of risks between diagnosis of new infection and precipitating a further deterioration in respiratory function.
- AS continued to test positive for SARS CoV2 and was receiving antimicrobial treatment which included antifungals. It is our opinion that the ICU team's approach was reasonable in this regard.

- Patients admitted to ICU with multiple organ failure following HSCT have a high mortality, without SACS CoV2 infection. Although there is limited data on outcome of patients with both HSCT and SARS CoV2 who become critically unwell, we would expect the mortality in this group to be extremely high and consistent with the figure of 90% quoted to the family. CAPA is associated in a doubling in mortality in ventilated patients with SARS CoV2.

Commentary from microbiological experts-

- It would be very helpful to see renal biochemistry results from the period 28/11 to 3/12 to understand the nature of renal impairment as these will have guided the choice of antifungal agents. Use of liposomal amphotericin B is preferable as second line treatment, however the addition of an echinocandin (i.e. caspofungin) to isavuconazole as a salvage regimen in management of invasive aspergillosis is also appropriate. Liposomal amphotericin B may have been avoided because of potential toxicities.
- The decision making behind the antibiotic prescribing at this point was the subject of clarification with NHS GGC. The therapeutic choices made reflect the overall patient condition and progress and were made in consultation between different disciplines in critical care.
    - In the table provided in the supplementary information, on 3/12 Gram positive cover (teicoplanin) is continued but Gram negative cover (meropenem) is stopped, with aztreonam which has a narrower spectrum of activity started 24 hours later.
    - These therapeutic choices reflect the lack of progress in response to meropenem which was stopped after a full two week course and reflects a therapeutic change to intensification of empirical antifungal treatment which can be undermined by maintaining broad spectrum antibiotic cover.

Patient journey through QEUH: review by Infection Prevention and Infection Control colleagues

- AS was cared for in single room accommodation throughout his admission.
- The single ensuite bedroom on admission was provided with HEPA filtered air and mechanical supply and extract ventilation under positive pressure. This is designed to protect the room occupant from unfiltered air and ingress of airborne contaminant from the hospital corridor and appropriate to this patient group.
- Admission COVID PCR screening was completed (and negative) in line with extant policy at that time.
- Additional precautionary screening over and above the frequency required by national policy was in place – this reflects & acknowledges an understanding of the vulnerability of this patient group to infection.
- There was no delay in PCR testing in response to initial symptoms (pyrexia).
- A risk-based approach to patient moves within ward 4B was adopted following AS' positive COVID result. This is in line with good practice in order to mitigate risk to others within the ward.
- Attempts to minimise patient movement (and potential for exposure outside of the protective ward environment) were taken and are considered good practice – e.g. chest x-rays were carried out in the ward.
- A detailed rationale is provided to explain the overall management of patients with COVID within the transplant unit. This reflects a balanced consideration of individual patient risk factors, clinical need and the needs of the wider patient population and is line with good practice.
- Protection from opportunistic infection was provided in HDU. The air supplied to this ward is not (and is not required to be) HEPA filtered, but positive pressure air flow from mechanical ventilation systems was maintained (protecting AS from 'contaminated' air ingress from the corridor/wider unit).

Opinion

- It is our view that patient placement was appropriate to AS's underlying condition, planned treatment and subsequent COVID infection throughout his admission and was in line with extant policy and good practice at that time.
- Transfers and patient placement following his diagnosis with COVID on 2nd November took account of both the need for source and protective isolation for this patient. This is in line with good practice.

COVID acquisition: review by Infection Prevention and Infection Control colleagues

- AS had a negative COVID PCR test on 23rd October 2020 in NHS Lothian where his Hickman line was inserted (day case procedure).
- On admission to QEUH his PCR on 26th October and subsequent precautionary PCR screening on 28th October were also negative.
- There were no COVID positive cases associated with the Cancer Assessment Unit at WGH Edinburgh between 20th and 23rd Oct 2020 meaning it is less likely that AS was exposed to COVID 19 during his visits there on these dates for insertion of Hickman line and colonoscopy and prior to admission to QEUH.
- There was no known exposure to COVID prior to his admission to hospital.
- Appropriate steps were taken to minimise the risk of transmission within the hospital environment – this included provision of routine diagnostic tests such as plain Xray within the ward rather than the wider radiology department.
- The staff who participated in weekly asymptomatic staff PCR screening **and** had a positive PCR result in late October or early November 2020 **and** had confirmed contact with AS between 26th Oct and 2nd Nov were confirmed as PCR negative at the time of that contact. This means it is less plausible that there has been staff to patient transmission of the virus from these individuals to AS.
- A plausible non workplace exposure was identified for all staff who tested positive for COVID on routine asymptomatic screening. However patient to staff transmission through an unknown mechanism and time remains a plausible hypothesis.
- The direction of infection transmission (staff to patient, patient to staff, staff to staff) cannot be asserted beyond all reasonable doubt on the basis of descriptive epidemiology.
- Whole genomic sequencing of staff and patient samples (if available) would also only be able to confirm or exclude that the virus in each sample was genetically linked (indistinguishable) or not. It would not provide evidence of the direction of transmission.
- AS had some contact with a small number of staff for whom no COVID screening information is available in both hospitals. AS had, or may have had, contact with a small number of staff for whom no COVID screening was required or is available. This would include for example, radiographers. Asymptomatic staff to patient transmission is plausible from this cohort of staff over this period.
- There were no known breaches in the use of PPE although this is reliant on self-reported compliance from staff. No structured observational data is available due to the temporary suspension of formal audit programmes. This approach is consistent with that taken in other large Boards including NHS Lothian to allow IPC and clinical resource to be prioritised.
- PPE is considered the lowest level of protection in the hierarchy of control (as defined by national policy). Fluid resistant surgical face masks, whilst effective in reducing risk, do not provide 100% protection from droplet or short-range aerosol dispersal.

- Masks are not close fitting or sealed to the face. There can be natural gapping at the sides and top of the mask. Movement of the mask is not uncommon during normal use and speech. It is plausible that AS was inadvertently exposed to droplet or aerosols of this highly transmissible virus from an asymptomatic member of staff during care even if a FRSM was worn.
- The adequacy of IPC control measures within ward 4B is supported by the fact there was not subsequent transmission of COVID following AS diagnosis.
- Over the duration of the pandemic, there is no epidemiological link between the 4 other patient COVID infections in ward 4B, and 2 of these 4 infections were defined as non-hospital onset (exposure occurred prior to admission).

Opinion

- It is probable that AS acquired COVID 19 from an unknown person, between his admission on 26th October and 2nd November 2020.
- There is no indication of systemic failings in IPC or COVID control – all known cases appear to have been managed well with no further transmission within the ward environment.

Aspergillus assessment and treatment: expert opinion from medical microbiology

- The assessment **as written** places more diagnostic certainty on the galactomannan serology results being genuine than I am comfortable with. Galactomannan serology may give false positives. Many penicillin based antibiotics have generated false positives including piperacillin-tazobactam but more recent kits may avoid this. The positive galactomannan results are after exposure to piperacillin-tazobactam and are not supported by a negative blood Aspergillus PCR. Neither test alone is robust enough to diagnose or exclude pulmonary Aspergillosis.
- IDSA guidance from 2016 for management of pulmonary aspergillosis says that galactomannan should not be performed from blood (only BAL) if already on antifungals, and this patient was already on antifungals at the point of the Galactomannan testing which tested positive.
- Discussion with GGC has clarified that this (the validity of a single galactomannan serology sample) is widely known amongst the clinical teams and formed part of the discussion about management of care. The limitations of the test and the risk of overinterpretation were understood.
- The CT appearances may have been from a viral aetiology (this is difficult to know without seeing the CT scan). He was known to have Covid at the time.
- The absence of deep respiratory sampling does not help exclude a bacterial cause of Ventilator Associated Pneumonia which may not have been covered by teicoplanin and aztreonam. It could have been tested either for galactomannan or cultured for fungi or tested by PCR for Aspergillus species and other pathogens so there might have been opportunity to gain greater diagnostic certainty if it had been possible to get a deep respiratory sample.
- The diagnosis of aspergillosis is not proven from the data we have, but there was awareness of this potential infection not just in a BMT patient, but also in Covid patients.
- He was managed empirically for aspergillus infection. Antifungal management seems broadly appropriate in terms of prophylaxis and empiric treatment, although possibly resistance and fungi other than aspergillus are not mentioned
- Accepting that there was too great a risk to perform a BAL after 3/12, deep respiratory samples can be both cultured and/or be used for molecular detection of pathogens to help diagnose whether a second organism is present. It would have been a better sample type to use to look for fungal hyphae directly by microscopy, test galactomannan or perform aspergillus PCR to further investigate whether there is pulmonary aspergillosis or a false positive serum galactomannan. This is not a failure in clinical care but a learning point.
- A sputum sample sent on 20 November could have been used for other tests.
- It could have been used to test (or re-test with greater positive predictive value than throat swab after 16/11) for a wider panel of respiratory viruses, Legionella, Chlamydia, Pneumocystis.
- The possibility of secondary Pneumocystis pneumonia does not seem to have been considered although would have been in the differential for a neutropenic

patient with a progressive pneumonitis. Appropriate prophylaxis was given and the clinical picture did not fit with this for the clinical team – see clarification.

- By 3/12 a BAL would have likely been too risky to perform given the precarious ventilation but other "blind" sampling of respiratory secretions or even throat swabs might have helped improve diagnostic uncertainty with regard to presence of other pathogens. Current European (ESCMID) and American (IDSA) guidance for investigation and management of invasive aspergillosis strongly advocates use of BAL for diagnosis.
- Note the ESCMID (2018) guidance and IDSA (2016) guidance do not support use of serum galactomannan in patients to make the diagnosis who are already receiving antifungal prophylaxis.

Communication with family: review by critical care colleagues (lead doctor and previously lead nurse) and others

- In the light of the patient's overwhelming illness, and the lack of any other useful therapeutic intervention, reference to additional infection rather than by a specific name was not unreasonable in the circumstances. It was also acknowledged that communication over the telephone due to very restricted visiting would have been difficult for both clinical staff and family.
- In communication 3 26/11, there is acknowledgement that there is a risk of secondary lung infection. Communication note 7 on 30/11 says that there was at that stage not thought to be any suggestion of a secondary lung infection but only Covid pneumonitis.

Clarification from NHS GGC

This covered a number of areas following discussion on 05 January 2022:

- PCP prophylaxis was given - protocol is that this is not due to start until day 28 post BMT (02/12/20) and the clinical picture on CT was not one of PCP. Septrin would have been avoided in the light of the toxicity profile. The Haematology team did not consider this to be PCP.
- Choice of antimicrobials - the decision to change antimicrobials is made as part of the daily consideration of patient care and reflects the overall clinical picture, therapeutic options, side effect profile and patient progress. Specifically the narrowing of antibacterial cover on 3/12/21 reducing Gram negative cover reflects the overall patient condition and was a considered decision made by the whole team.
- On balance of risk, all were in agreement that the decisions not to undertake BAL were the correct ones,
- Additional information was provided by Dr Clark about a letter he had written to Mrs S after AS's death, expressing condolences, agreeing that the main cause of death in his opinion was Covid and offering to meet to discuss any questions Mrs S had.

Tracey Gillies

11 January 2022

Scottish Hospitals Inquiry
Second witness statement of
Louise Slorance

WITNESS DETAILS

1. My name is Louise Slorance. My date of birth and details are known to the Inquiry. I am a policy and public affairs officer.

2. This is the second statement I have provided to the Scottish Hospital Inquiry. I provided my first statement (A44585778) to the Inquiry in 2023 where I describe what happened to my husband Andrew Slorance who was infected with aspergillus and Covid-19 as a result of the hospital environment at the QEUH.

BACKGROUND

3. In my first statement (A44585778) I raise in the timeline of key events in paragraphs 139- 146 that as a direct consequence to Andrew's death, the former First Minister Nicola Sturgeon instructed on 25 November 2021 that an inspection should take place of the Queen Elizabeth University Hospital (QEUH) campus by Healthcare Improvement Scotland (HIS) to "*carry out a more general review of aspergillus in the Queen Elizabeth University Hospital and to assess and determine if there are any broader concerns that require action*". This was in response to my concerns that Andrew contracted aspergillus at the QEUH.

MAY 2022 INSPECTION REPORT

4. The first in person inspection took place in March 2022. Due to pressures on the hospital as a result of the pandemic this visit was changed to a safe delivery of care inspection methodology. In the report of this inspection HIS state that they had been instructed to carry out independent assurance of infection prevention and control measures at the Queen Elizabeth University Hospital campus by Scottish Government.

5. Paragraph 45 of this report refers to the national guidance for ventilation which recommends six air changes every hour that can be achieved by mechanical ventilation or by opening the windows. The QEUH is of course entirely mechanically ventilated. The report states that the ventilation system throughout the hospital has three air changes per hour (ACH).

6. This reduced ACH was previously mentioned in the Independent Review published in June 2020. Despite HIS recognising the substandard ventilation in the May 2022 HIS report, neither the report nor the action plan contain a requirement or recommendation to change the ventilation to meet national guidance. The statement of 3 ACH is subsequently excluded from the June inspection report focusing on IPC without clear explanation as to why.

NOVEMBER 2022 FINAL INSPECTION REPORT

7. The final report was ultimately published in November 2022. In this report it was stated on page 4 – "*This inspection has not identified any significant concerns with water management or ventilation."* Despite this overall statement of no concerns, at page 37-45 a list of concerns on the ventilation and water management to include the following:

- **Governance structures and reporting in relation to the built environment**
- **Black markings on window seals**
- **Build up dust of ventilation grills**
- **Outstanding maintenance in a high risk patient area**

- **Flushing of water outlets**
- **Cleaning of clinical wash hand basins since 2019 (no recommendation or requirement)**
- **Risk assessments for water safety had not been carried out for years (no recommendation or requirement)**
- **Governance reporting structure policy not being followed by BICC for water management**
- **Ineffective electronic system to report repairs**

8. The comment identifying that the QEUH manages their ventilation system at 3 ACH is missing.

9. There are many questions arising from this HIS report that require answers in this inquiry, particularly in light of the emerging evidence that contradicts their position. I would like to know what time period, data and comparable data they considered, for example did they compare to the Beatson and did HIS look at clinical diagnosis as well as culture positive results.

10. I would also question what expertise did the HIS inspection team have in ventilation and air sampling standards in order to assess the safety of all accommodation. Were they given access to all the historical information since the building opened?

11. The development of the patient placement policy was identified as an area of good practice. This was in fact an update, there have been several versions with room specifications changed between 2020-2022. What assurance did HIS receive for the room specifications presented in the Standard Operating Procedures?

12. I would also query how did the inspector team satisfy themselves that despite the hospital operating at 3 ACH that the sampling standards they took were satisfactory in assessing the safety of all the accommodation.

13. Did inspectors physically see environmental sampling results for both water and air and did they seek expert assessment of these to allow them to come to the conclusion that the hospital did not raise concerns.

14. With reference to this HIS report, will the inquiry be approaching HIS for comments in relation to the [redacted] and the water and ventilation system at the QEUH.

15. Was prepublication access of the report provided to NHS GGC or Scottish Government? What changes were made?

16. At the time of the former FM announcement of the HIS review, I was invited to attend a meeting with NHS Lothian and NHS GGC to discuss its findings. Several dates were agreed and then cancelled on the basis that they would not attend any meeting with my solicitors or Jackie Ballie. To date there has been no meeting with either Scottish Government, NHSGGC or NHS Lothian and myself to discuss Andrew's care or case reviews. Given how I have been treated I have been forced to raise my concerns publicly.

17. The glaring inconsistencies between this report which sought to provide me with reassurance and answers, and the contrasting evidence emerging from the public inquiry has left me alarmed.

PRESS RELEASE AND MEDIA COVERAGE

18. From my perspective as the widow of Andrew Slorance, the public availability of these documents provides valuable insight into where HIS perceive their accountability is to the People of Scotland in relation to patient safety issues at the QEUH.

19. I note that the November 2022 report is not available on the new site either in the inspection pages nor the news pages, despite the new website containing reports further back in 2022. I raised this directly with HIS in March 2024 who responded saying that this would be raised with their comms team who are

handling the transfer of documents. This report is still not available on the new website at the time of writing.

20. I am unable to provide the inquiry with the associated news release for the November 2022 report, as it is not available on either the new website or the archived website, however the Press Association text provides much of the information contained within:

INFECTION CONTROL AT FLAGSHIP HOSPITAL 'GENERALLY GOOD' INSPECTORS SAY

By Neil Pooran, PA Scotland Political Reporter

Unannounced inspections of Glasgow's flagship hospital found "generally good" approaches to infection control, a watchdog has said However Healthcare Improvement Scotland said the Queen Elizabeth University Hospital (QEUH) was under "significant" staffing pressure, with dozens of wards carrying a risk rating of red. The inspectors visited the hospital in March and June this year. A separate public inquiry is investigating its infection prevention measures after it emerged that patients have died after contracting infections at the hospital complex.

Ten-year-old [redacted] died in 2017 after contracting an infection at the QEUH's Royal Hospital for Children's cancer ward, and senior Scottish Government official Andrew Slorance died in 2020 with an infection caused by a fungus called aspergillus. The Healthcare Improvement Scotland inspection was said to be "wide ranging" and examined the prevention of aspergillus. Its report noted: "On the first day of our inspection, senior managers told us that 27 wards across the hospital campus scored a risk rating of red at the start of the day.

"This can result from staff numbers or the staff skill mix not being optimal. “It said patients were happy with the cleanliness of the hospital and staff were adhering to infection control measures. Donna Maclean, head of service at Healthcare Improvement Scotland, said: "At the time of our inspection visits, the Queen Elizabeth University Hospital campus was experiencing a significant range of pressures,

including increased hospital admissions, increased waiting times in emergency departments and reduced staff availability

"These pressures are not isolated to this hospital, with similar pressures being experienced across NHS Scotland.

"Despite the significant staff shortages across the campus, staff within the clinical areas told us they felt supported by senior leadership, and we observed clear communication throughout the inspection.

"We observed that most infection prevention and control practices carried out by staff working across all roles to support care delivery was generally good, and in line with infection control guidance and standards.

"This report has highlighted several areas of good practice, with some areas for improvement detailed within the requirements and recommendations within the report.

"In order to prioritise the requirements from this inspection, an action plan has been developed by NHS Greater Glasgow & Clyde." Health Secretary Humza Yousaf said: "I welcome Healthcare Improvement Scotland's (HIS) report into infection prevention and control at Queen Elizabeth University Hospital and am pleased to see positive feedback from patients on the care they have received.

"Patient safety is paramount and the report highlights good infection prevention and control leadership at QEUH, a vigilant approach towards aspergillus infections, and strong communication across the multidisciplinary and infection prevention and control team.

"I note the HIS recommendation on the development of national guidance on the management of aspergillus infection and the Scottish Government will give full consideration to this as part of its work in developing an interim healthcare associated infection strategy."

21. The public message omits relevant infection prevention control findings contained in the report. While some general recommendations were given, there is no assessment or determination regarding the risk of aspergillus to patients housed in the QEUH campus, the report's objective.

22. The November report reads like a reassurance document, with the news release focused on a positive message and remaining silent on the original issue it was instructed to investigate. Communications between the Scottish Government, HIS and NHSGGC may provide some insight to this narrative.

CONCLUDING COMMENTS

23. While the HIS report was instructed to provide answers to the concerns I raised in respect of Andrew's two hospital acquired infections, it has had the opposite effect. The reports have demonstrated a willingness and determination to bulldoze through the narrative of the QEUH campus as a safe patient environment, despite evidence to the contrary. The number of organisations involved in the QEUH cover up expanded when I received the November HIS report (which may in part be why neither HIS nor Scottish Government saw fit to alert me in advance of its publication). To establish answers, no stone can be left unturned, no question left unsaid. HIS appear to have accepted what they were shown / given and asked very little.

24. The associated action plans to these reports should be carefully considered alongside all other reviews into the QEUH as well as the Public Inquiry expert reports.

25. Analysis of the effectiveness, or otherwise, of the HIS response to patient safety issues arising at the QEUH should be carefully considered. There is a serious and fundamental gap in regulation of the NHS in Scotland. HIS does not have regulatory powers, and as such the inspections and reports carry little weight, with health boards free to ignore all recommendations and requirements. It has also been established that the same is true of the new

NHS Assure, set up to ensure healthcare buildings are compliant with standards and are free from avoidable risk. This has been demonstrated by NHS GGC's refusal to allow NHS Assure to review the refurbished Schiehallion unit on the QEUH campus.

26. In reviewing, the March 2022 and the November 2022 reports it is also recorded that HIS do not follow up on their own unsafe observations, so why would a Health Board?

Declaration

I believe that the facts stated in this witness statement are true. I understand that proceedings for contempt of court may be brought against anyone who makes, or causes to be made, a false statement in a document verified by a statement of truth without an honest belief in its truth.

Scottish Hospitals Inquiry
Witness Statement of

Maureen Dynes

WITNESS DETAILS

1. My name is Maureen Dynes. I was born on [redacted] 1971. I own my own business which is called Moto Childminding. I am 52 years old.

2. I was married to Anthony (Tony) Dynes. He was born on [redacted] 1958 and passed away on 21 May 2021 at the QEUH from respiratory failure, multi organ failure, refractory diffuse large B cell lymphoma and fungal chest sepsis.

3. While undergoing cancer treatment at the QEUH in 2020 and 2021, Tony contracted aspergillus and Stenotrophomonas Maltophilia.

OVERVIEW

4. Tony was diagnosed with diffuse B Non Hodgkins Lymphoma in March 2018, stage 3. He was treated for this in 2018 at both Hairmyres and Monklands Hospital in South Lanarkshire which fell under Lanarkshire Health Board. This treatment was successful and he went into remission later that year.

5. In 2019 Anthony started to develop symptoms again. Ultimately in November 2019 it was deemed that he was relapsing and a referral was made to the Queen Elizabeth University Hospital, Glasgow in order that he could receive further treatment.

6. Tony was admitted to the QEUH in September 2020, and his Stem Cell Transplant took place on 8 September 2020. He was admitted to Ward 4B. During this admission Tony developed aspergillus. He was discharged from the hospital on 7 October 2020. I will discuss the events around the

aspergillus diagnosis below. Please note, Tony was never able to properly clear the aspergillus and the affects of it remained with him until his death in May 2021.

7. In February 2021 we were advised that the Stem Cell Transplant had failed. We were advised that the next option was for Tony to undergo CAR T-Cell therapy at the QEUH.

8. On 31 March 2021, Tony was readmitted to the QEUH back into Ward 4B. I discuss this in detail below. Due to his ongoing cough which came about as a result of the aspergillus diagnosis in 2020, Tony's treatment was continually delayed for fears that his body would not be able to cope.

9. On 6 April 2021 Tony's laboratory results came back with a positive aspergillus result. This resulted in delays to Tony's stem cells being returned to his body and as his immune system was being kept deliberately supressed it increased the risks to his life. I was later told that this diagnosis was incorrect and that he was fine.

10. Tony' cells were returned to his body on 19 April 2021 after which he did start to improve. Some of his symptoms were expected and some were not.

11. This remained the case until the last week of his life when he deteriorated with no obvious reason. This left the doctors thinking the cancer had returned. Tony passed away on Friday 21 May 2021.

12. After Tony passed away, I recovered his medical records and upon review of them established that Tony had tested positive for aspergillus in September 2020 and April 2021 and he had also tested positive in April 2021 for Stenotrophomonas maltophilia. I was never advised of this.

FAMILY BACKGROUND

13. Tony was a very kind and generous person who had many friends. He was a wonderful father to his children and husband to me. He worked several jobs and worked hard to provide for his family. He would get the first bus in the morning and would get home late at night after working hard through the day. He did have health issues but overall he kept well. Tony was a Roman Catholic and his faith was extremely important to him.

14. Tony and I were married in July 1991. We have two adult children Clare [redacted] and Paul [redacted].

SEQUENCE OF EVENTS: AN OVERVIEW OF TONY'S CANCER JOURNEY AND THE FAMILY'S EXPERIENCE AT THE QEUH

15. Tony was diagnosed with Diffuse B Non Hodgkin Lymphoma in March 2018, stage 3. We originally thought he had a really bad cold at first but then a lump appeared in his neck and it didn't disappear. He was originally treated at Monklands Haematology Hospital where he received chemotherapy treatment.

16. Tony went into remission the same year he had the chemotherapy treatment. On the 31st August 2018 the medical records show that the abnormalities had almost completely resolved. I can't remember if they ever explicitly told him he was in remission then but I do remember he was doing extremely well and on the 5th October 2018 the records reflected that he was doing well.

17. On 14 January 2019 Tony started to experience symptoms again which led to him having a further round of chemotherapy treatment at Monklands hospital. On 27 August 2019, a repeat CT scan showed that there was a large mass around his adrenal gland.

18. On the 8th November 2019 a letter was prepared from Monklands Hospital to the Queen Elizabeth University Hospital (QEUH) with a proposal for Tony to undergo CAR T-cell Therapy.

19. Tony started attending the Beatson Clinic between Christmas and New Year for his stem cell collection and then on to see Dr McQuaker. He did stay overnight during this procedure but there were no notable infection episodes at this point. He started attending outpatient appointments at the QEUH on 7 January 2020. Tony at this point was considered too far gone for a Stem Cell Transplant so the CAR T-Cell Therapy was the alternative.

20. On 11 March 2020 Tony and I attended an outpatient appointment with Dr Latiff. This was a day appointment in her office where we discussed what the side effects of CAR T-cell therapy would be and what Tony had to do. He was given 2 weeks to get his fitness levels up, the irony of this being that he had to be sick enough to get the treatment but fit enough to survive it. When I say he needed to get his fitness levels up, the goals were things like walking from one lamp post to the next, he wasn't expected to be able to walk on a treadmill or anything like that.

21. Due to the Covid-19 pandemic, lockdown was then announced on 17 March 2020 and treatment was then cancelled.

22. Tony remained at home during this period and shielded in the upstairs area in the house. He was put forward for Bridging therapy. He was put on a medication that Lanarkshire Health Board had to approve due to the cost. Dr Latiff made the request for this medication to give Tony longer. Tony was put on polatuzurnab which he had a good response to and allowed him to be referred back to Dr McQuaker to look at his options again.

23. At this point Tony's diagnosis had developed into Refractory Diffuse Large B cell lymphoma. He became well enough to be recommended for a stem cell transplant. It felt like snakes and ladders with the treatment.

24. The first time Tony was an inpatient in Ward 4B at the QEUH was September 2020. He was admitted early in the month and then on 8 September 2020 the Stem Cell Transplant took place. He was extremely unwell during this admission. He was discharged on 7 October 2020.

25. He developed an unusual lingering cough during his September 2020 admission and it was unclear why. After he was discharged Dr Betts and the doctors from the Lanarkshire team had been trying to work out what it was and treat it. I recall hearing the word aspergillus in discussions with the doctors during his admission in the QEUH but the word didn't mean anything to me. I was just focusing on Tony getting better. I was told it was "just an infection". The significance of it was not explained. I exhibit an aspergillus PCR test result dated 24 September 2020 as **MD/001 (A49630227 - Maureen Dynes Exhibits_proposed redactions – Bundle 27, Volume 10, page 160)** and progress summary from his medical records as **MD/002 (A49630227 - Maureen Dynes Exhibits_proposed redactions – Bundle 27, Volume 10, page 162)**.

26. For many months Dr Betts and the team at Hairmyres Hospital was attempting to treat this cough and work out where it was coming from. It was there that the connection with the QEUH was first made. When she used the word aspergillus in the conversation I recalled that I had heard that in September. She explained to me that it was not an infection that they usually see or even look for. She described it as something that lay down in the bottom the lungs and hid in warm dark areas and grew. Before they worked out what it was he would always be given antibiotics and get a bit better but then he would then decline again. It was because they couldn't see that it was aspergillus.

27. He was constantly tested for Covid-19 because of this cough. He didn't have it before the admission though. The cough gave him a lot of problems because it was sore on his back and muscles. There was a fear that if he didn't recover

from it that he wouldn't be able to have his reinfusion treatment which ultimately took place in April 2021.

28. It was only later when the cough was discussed again and the word aspergillus was used did I recall it being mentioned in September. When we were advised of this it was presented to us as "an infection" and the significance was not explained.

29. We were advised that the Stem Cell Transplant had failed on 5 February 2021. The next option was CAR-T Cell Therapy.

30. Tony had a Hickman Line inserted at Hairmyres Hospital with no issue. He was then readmitted to Ward 4B at the QEUH on 31 March 2021 to undergo CAR-T Cell Therapy.

31. When Tony was admitted, the restrictions from the pandemic were still in force so at the beginning I wasn't able to visit. He was told that the chemotherapy wouldn't be as bad on him as per the last round which was reassuring because he was really worried about this due to how hard it had been the first time. Tony was feeling quite positive in the beginning. He still had the cough and we were concerned about the reinfusion date because of this.

32. The way the treatment works is that a patient's immune system is supressed from Day minus until Day zero when they receive their cells back. So Tony was admitted on day minus 5. Because of the cough the cells were delayed in being returned to his body. This meant that Tony stayed in the minus days, they weren't able to move forward to day zero for quite a long time.

33. I can see in my messages on my phone that during the week of the 5th April I have been advised that Tony had two infections, the common cold and aspergillus. I then communicated this to family and friends. I exhibit a test result as **MD/003 (A49630227 - Maureen Dynes Exhibits_proposed redactions - Bundle 27, Volume 10, page 164)**.

34. I can see from further messages in my phone that I was told on the 12th April that Tony was still viable for infusion of the cells. The consultant wanted 1 week to get him free of infection.

35. I received a phone call from a junior doctor at the hospital I believe on Saturday 17th April. They raised that they were concerned about the aspergillus. They had originally been planning to do the reinfusion on Monday 19th**.** I remember saying to them that he had that when he had his stem cell transplant before. I didn't know how bad it was at that point, I just remember thinking they will know how to treat it. I didn't realise it had been there this whole time and had never gone away. I also exhibit a result that references delays in Tony's treatment due to the aspergillus as **MD/004 (A49630227 - Maureen Dynes Exhibits_proposed redactions – Bundle 27, Volume 10, page 166)**.

36. The junior doctor became a bit vague with me and said they didn't really know what was going to happen with Tony's treatment but that I should be aware that they were pushing the boundaries for returning the cells to Tony's body. There was a question of if he would need more chemotherapy. I was advised the consultant would discuss it with me.

37. On the Monday (19th) when the consultant returned she said to me "No no, he doesn't have aspergillus" entirely dismissing it. I responded to her saying oh I was told he did and the response was a straight "no he doesn't". The conversation was left with me saying oh I must have mis heard but in reality I hadn't. I didn't challenge it at the time because I didn't realise the implications of the infection.

38. Dr Annie Latiff said to me in that conversation that she didn't think that Tony needed another round of chemotherapy and that he could get his cells back. At that moment we were just going along with everything that we were told. Tony got his cells back that day and he had a lot of side effects. We knew he would have a strong reaction as he had a heavy disease burden. We were

advised that if the cells were doing their job properly they would give off toxins which the body would then have to fight.

39. We had watched a documentary called “War in the blood” which was about CAR-T Cell therapy so we understood what was coming.

40. Tony got his cells back on 19 April 2021 and ended up being moved into ICU on 1 May.

41. Tony remained in ICU for a day or two before he returned to Ward 4B on 3 May. When he was on ICU during this time I was immediately struck by the differences in protocols between the two wards. Ward 4B was very strict with PPE, taking temperatures and procedures that we could see were to keep Tony safe, ICU didn’t do anything like that. Tony told me that he felt safer on ward 4B because of this which is incredibly ironic.

42. When Tony returned to Ward 4B the plan was to get Tony home as soon as possible because being at home was safer than being on the ward which we thought at the time would be because of the Covid pandemic. Around day +30 which would have been 19 May 2021, there was talk that the only reason he wasn’t able to go home was because he was still showing signs of a chest infection.

43. It was agreed that after a PET scan appointment which was due to take place on day +30 (Wed 19 May), that he would go home afterwards into strict isolation. The week before we made little gifts for every member of staff that had been part of Tony’s care. His cognition was very alert that week, he was fully normal it was my Tony. That left me feeling like there was light at the end of the tunnel. Yes he was thin, but his eyes had a sparkle again.

44. The last week of Tony’s life really does merge into one long event now. I can’t recall exact dates for everything but on the 19th May, I went up to visit and I was asked by the Charge Nurse how I thought Tony was. I could see

something wasn't right, I couldn't put my finger on it but there was something different about him that worried me.

45. I have a message on my phone dated the 17th May that says: "*Hello everyone, Annie the consultant, was called in to see Tony tonight, he has an infection and they are trying to find the source. They have removed the Hickman line and put a cannula in. He may get a PICC line instead as he will need IV meds. He was also put back on oxygen but she doesn't think he will be on it for long*". The PICC line was inserted on the 17th May.

46. There is also a message on the 17th May that says: "*Managed to chat to the consultant. Tony Is being closely monitored by the nursing staff in case he develops sepsis from an infection. He is on 3 antibiotics and 1 steroid. They reduced his other steroid by half over the weekend. The current steroid is to reduce inflammation in his brain. The Hickman line did have a bug but the lab are analysing it to ensure he is on the correct antibiotic*". Later on the message says: *"The Sister said that he was a little slower and was a little confused…"* and "*Hopefully he can get out as soon as he can as he is anxious to get home*".

47. The consultant called me at 00:35am on Tuesday 18th and told me that Tony might not be coming home on the Wednesday. I remember the Senior Charge Nurse Lisa Halliday saying that if she didn't know better she would wonder if he had sepsis but his temperature wasn't increasing. A CT scan took place during the evening of the 18th but I wasn't advised of the results until the Wednesday.

48. On Tuesday 18 May I visited the hospital and while I was waiting for Tony to return from a scan, there were a series of staff coming to his room saying that they were going to miss him and they were delighted he was going home. Tony always affected people, he had a great memory and would remember names and things going on in other people's lives.

49. Tony returned from the CT scan in the evening around 6pm and I remember thinking that he didn't look good at all. I went home around 7:30pm. The following morning I received a call from Lisa who asked me to come in immediately. She wouldn't tell me what was going on, so I went into the hospital and eventually met the consultant. The consultant told me that the treatment had not worked and that was it for Tony.

50. I can't remember all the conversation. We all went into the room together and told him together. It was the only time I heard him say "why me".

51. It was agreed that he would be going home and carers would come in to make him comfortable on the Monday. I stayed in the hospital until later in the evening and went home at 11:36pm. The next morning I received a call from Lisa telling me I needed to come back as he was not doing well at all. Tony was going downhill fast, he was hardly speaking.

52. I returned and at that point I was absorbed into the ward, I wasn't going home. Tony's brothers were supposed to have a short visit to say goodbye individually on the Friday. This couldn't happen due to me testing positive for Covid that morning. Clare, Paul and Father Ivan had short individual visits on the Thursday night. the children would have been allowed back on the Friday individually if all had been ok.

53. I tested positive for covid-19 on the morning of 21 May. It then became the case that no one except me could be in Tony's room. Most of that last day became a fight to keep me there. I was really frightened that I wouldn't get to stay until Tony died. The conversation about if I should be allowed to stay continued until I was told that no matter what I would have to leave at 6pm. Tony passed away at 17:35 and I was in my car by 17:45. I was numb and exhausted at this point. It was right that the IPC policies determined that I should leave the hospital as soon as possible, It is worth noting though that I was supposed to be in a room that was sealed. As long as no one came in there was no risk, at least officially, I do wonder if I was moved out quickly out of fear that the room wasn't as secure as it should have been.

54. I thought he had passed away from the cancer. Looking at the records now, I question this.

EVENTS AFTER MAY 2021

55. How I connected it all was Louise Slorance. I saw her on the news and I remember her saying the word “aspergillus”. When I heard that word it immediately got my attention. I got in touch with her and we spoke about what happened to Tony.

56. I recovered his medical records and through reviewing them I uncovered the aspergillus laboratory results and Stenotrophomonas. I exhibit the Stenotrophomonas test result as **MD/005 (A49630227 - Maureen Dynes Exhibits_proposed redactions – Bundle 27, Volume 10, page 168)**. I further exhibit the laboratory report from Public Health England that I was not advised of as **MD/006 (A49630227 - Maureen Dynes Exhibits_proposed redactions – Bundle 27, Volume 10, page 170)**.

57. I didn’t know what to do with this information. I was floored that he had 2 infections and I understand that one of them is the same infection that [redacted] contracted years prior. Why is it that years later Tony developed the same thing.

QEUH FACILITIES

58. I wasn’t able to go into Ward 4B in September 2020 and I was limited in how much I could see Tony in April 2021 until he deteriorated.

59. I don’t know for example if Tony was brushing his teeth with tap water. I do know he was given bottled water to drink generally, and I remember his toothbrush was laid out for him on a tray next to the sink. Even if he had used bottled water to brush his teeth, there would have been splashback or any droplets on the sink would have likely spread to his toothbrush.

60. Tony had mouth ulcer gels for his mouth as part of his treatment. This would also have been another way that water could have got into him. For example a nurse would wash her hands, perhaps touch the tube, put the gloves on and apply the gel to Tony. These are potential routes that Tony could have inadvertently ingested the water.

61. Tony had a denture plate so I don't know where that would have been put. He needed it for eating so I wonder if it was cleaned with tap water at the point Tony was unable to do so for himself. Normally dentures have to soak in water so would they have used bottled water?

62. I need a room to be much warmer than other people typically do, while I don't recall thinking it was too hot in the hospital I do recall that I would always wear light clothes there. I had a sweet box for Tony that was kept by his bed and the chocolate in there would always melt.

63. I don't know what rooms Tony was in on the ward but I do know he was moved rooms. During his first admission I know he was moved because when he was able to be fully awake, he could see that his surroundings had changed. I know that at one point he was moved closer to the nursers station because he was so unwell.

64. I believe there is a portal on the NHSGGC system that states what rooms a patient is put in but I was not provided with information on where Tony was moved to during either admission. I know Tony was on a room that was considered the highest grade of protection that they had. It sets off an alarm if the door is left open for example.

65. Tony never mentioned any issues with the hospital facilities. He spoke highly of the staff and understood the difficult job they carried out. He commented that he always saw the staff change PPE which he found reassuring. He trusted the staff.

COMMUNICATION

66. Now I know that an infection like Stenotrophomonas demands that an internal investigation take place. I question why this investigation either didn't take place or I wasn't told about it. Did they not tell me because of the upset it would cause? Was it because they didn't want another case which would have come about at a time when there were high profile cases? I do think it was purposely not disclosed.

67. I am asked if I would have wanted Tony to have had a post mortem if I had known about the infections, to know if they were the reason for his death. My answer is yes. It makes we wonder if the hospital has downplayed everything deliberately. I have actively taken this forward and tried to make Tony's case heard so yes I would have wanted a post mortem because the question that is going round my head is: did the infection kill him? Did the treatment work? No scan or investigation appears to have been done. A post mortem would have answered all of this and now I am left with the question.

68. I was not made aware of the significant problems that the hospital had to the level I do know now. When Tony was admitted to hospital what everyone was acutely aware of was that Tony was highly susceptible to infections so extra measures would need to be taken generally. We were never advised that there was a risk from the hospital building itself.

69. I appreciate that a hospital is full of sick people which comes with its own degree of risk, but I wouldn't imagine that a hospital would be one of the main dangers. I wouldn't like to think that something was hidden from me, I always ask for honesty. If I had been advised that there was a risk with the water and ventilation then yes I would have at least liked to have had the conversation and considered if it was even possible for Tony to have been treated elsewhere. I'm not sure that is even possible, but certainly it should be if this is the alternative.

70. Tony had to sign a contract which set out in clear terms the risks he was taking on. He was scared, really scared when he read the form. If the information that the hospital wasn't safe had been included on top of that then he may have asked to have gone elsewhere. He should have had the right to have had the conversation.

71. People going into the hospital today is giving me the motivation to do this. I have a friend who is going onto that ward to have a transplant and I feel sick for them. There is no point spending all this money on treatments when an infection from the building can kill them. they should be able to look elsewhere. How many people have been affected by this and have had their immune system kick in so its ok, and then how many others have had the infections and weren't ok. How many have died from an environmental infection and told it was from cancer?

72. When looking at Tony's medical records it is clear he has been prescribed prophylaxis medication as part of his cancer treatment. I do recall that we were given a leaflet at the beginning and there would have been conversations about him being given antibiotics to try and limit the chances of him developing an infection. What didn't happen though was we weren't advised he was being put on a medication because of the building itself. If anything we were told the opposite, that the hospital was the safest place that Tony could be.

73. Before Tony was admitted to hospital in February 2021 and indeed this was also the case in September 2020, I was not able to go into the hospital with him. I found this incredibly frustrating. This was because of Covid, but it meant there would have been information that Tony may have been receiving that he missed. He had brain fog and I could ask important silly questions so he could be properly supported. I was allowed to listen in on the call but that comes with major draw backs. I couldn't understand what everyone was saying and there was background noise from my end as well.

EMOTIONAL IMPACT

74. I try and find things to fill the gap that losing Tony has left. I stress eat and as such I have put on weight. My health has been impacted. I was on anti depressants for a while as well.

75. This happened at a time when my daughter Clare didn't live at home and my son Paul had left home in January 2021. We went from a happy busy household to just me. My business is at home so that is a blessing because there is noise during the day but come 6pm it's silence.

76. I'm sad, I'm heartbroken, I have lost the love of my life and best friend, that was hard when I thought he had died from cancer, its even harder when I know he may have died from an infection that could have been prevented.

77. I want to get answers because whatever happens in this inquiry, nothing can bring back Tony. Nothing will be able to let him walk his daughter down the aisle, nothing will allow him to attend his son's wedding next year.

78. Clare's wedding was beautiful but it was strange because we knew someone wasn't there. Clare has worked really hard to save up and purchase her own home and she commented on me that her dad has never been able to step foot in it knowing how hard she had worked to get there.

79. Paul at the beginning thought his dad had passed from the cancer. His view was much more black and white. When it became clear that Tony had passed away from Stenotrophomonas as well, that changed things. I now think he has the realisation that his dad may have not died from cancer and that has changed his view a bit. I'm glad he and his sister both have partners to talk to.

80. I wanted to talk to someone. I paid for a counsellor because you can't get counselling for bereavement on the NHS. I was given several phone numbers to find someone and I'm still waiting for those numbers to call me back to tell me I'm top of the waiting list after 3 years. I went and saw someone privately for 3 months once a week, but that was a financial strain.

81. Tony was my business partner as well as the love of my life and best friend. We ran a regulated childcare business. I can't have the same number of children attend now as a result which means my income has halved. Everything that has happened has drained our finances. Cancer has drained our finances.

82. NHSGGC must know I know now. They must know I know he contracted these infections. There should be a recourse, some system where they tell you. I don't understand why I wasn't.

HOPES FOR THE INQUIRY

83. I hope that honesty comes out from it. I hope that if the investigation shows that something is seriously wrong with the hospital then they fix it and make it what it was originally designed to be. It was an all singing and dancing hospital. Yes people will continue to die there because of illness and medicine can't fix everything but all the efforts of the good doctors, nurses and healthcare assistants shouldn't go to waste because the building isn't safe. I would hate to hear of anyone else contracting another infection from something that can be fixed.

DECLARATION

84. I believe that the facts stated in his witness statement are true. I understand that this statement may form part of the evidence before the Inquiry and be published on the Inquiry website.

The witness provided the following documents to the Scottish Hospital Inquiry for reference when they completed their witness statement.

APPENDIX A

A50258433 – Hearing Commencing 19 August 2024 - Bundle 27 – Miscellaneous Documents – Volume 10

Scottish Hospitals Inquiry
Witness Statement of
James Leiper

This statement was produced by the process of sending the witness a questionnaire with an introduction followed by a series of questions and spaces for answers. The introduction, questions and answers are produced within the statement.
The witness responded to as many of the questions within a limited time period. Where there is reference to a question not being answered, this means the witness was not able to respond fully within the time period.

Personal Details

NAME:
James Stewart Ballantyne Leiper.

QUALIFICATIONS:
2022- Present-Infrastructure-and-Projects-Authority-(IPA)–Certificate-of-Accreditation–2022-2025-IPS-Accredited-High-Risk-Review-Team-Member–Review-Large-Public-Sector-Capital-Projects.

1994-present-Chartered-Engineer-and-Member-of-the-Institute-of-Healthcare-Engineering-&-Estate-Management.

1990-1995-Glasgow Caledonian University-Glasgow. -Bachelor of Engineering Degree - First Class Honours.

1984–1987-GlasgowPolytechnic. -Diploma-in-Building-Services-Engineering.

1980–1981-Stow-College. -Institute-of-Management-Services-Certificate-in-Management, -and-City-&-Guilds-Certificate-in-Work-Study.

1972–1977-Anniesland-&-Stow-College-of-Engineering, -Glasgow-City-&-Guilds-Full-Technological-Certificate-in-Plant-Engineering.

PROFESSIONAL-HISTORY:

Dec-2018–Present--AHEEM-Ltd.—Managing-Director-and-Consultant-Advisor-in-Healthcare-Engineering-&-Estate-Management.

May-2018–Aug-2023—NHS-Greater-Glasgow-&-Clyde. -Project-Manager/Technical-Adviser-Part-Time.

June-2015–April-2017-NHS-National-Services-Scotland. —Strategic-Director-of-Facilities-in-Health-Facilities-Scotland.

Feb.2005–June-2015—NHS-Fife. —Director-of-Estates, -Facilities-&-Capital-Services.

1994–2005--Head-of-Estates--NHS-Tayside.

1989–1994--Deputy-Estate-Manager—Royal-Alexandra-Hospital-NHS-Trust, -Paisley.

1987–1989--Senior-Estates-Officer—Inverclyde-Cowal-&-Bute-NHS-Unit, -Greenock.

1980–1987--Estates-Officer—Renfrew-General-Acute-NHS-Unit, -Paisley.

1976–1980--Fitter--Yarrow-Shipbuilders, -Scotstoun-Glasgow.

1972–1976--Apprentice-Fitter—Barclay-Curle/Yarrow-Shipyards,-Scotstoun,-Glasgow.

SPECIALISM:

General Building Services Engineering - no specific specialisation.

Professional Background

2 Professional role(s) within the NHS

A I am currently retired from employment within the NHS. I occasionally carry out some periodic consultancy work within and associated with the NHS.

3 Professional role(s), if any, within the wider NHS, including National Services Scotland

A I was previously the Director at Health Facilities Scotland between 2015 and 2017, Director in NHS Fife 2005 to 2015, Head of Estates in NHS Tayside from 1994 to 2005. Between 1980 – 1994 I held posts of Hospital Engineer/Estates Officer (7 years), Senior Engineer (2 years) and Assistant Unit Works Officer/Deputy Estates Manager (5 years) all within the Argyll & Clyde Health Board. All of this following an engineering apprenticeship and a few years' experience as a Fitter in the Glasgow Shipyards.

4 Professional role(s) within QEUH/RHC

A I was a part-time project manager/technical adviser with NHS GGC between May 2018 and Aug 2023.

5 If Applicable, area(s) of QEUH/RHC in which you worked/Work

A Estates Department

6 If applicable, role(s) and responsibilities within the above area(s)

A I was originally appointed under a 6 month contract which was extended several times, (all part-time employments, temporary contracts) helping with various pieces of work at QEUH, carrying out investigations and giving general assistance in a number of hospital systems and building fabric issues and helped progress SCART compliance, Risk Assessment, Planned Maintenance, Governance etc.

7 If applicable, who did you report to? Did the person(s) you are reported to change over time? If so, who and when did it change?

A Initially, I reported to Mary Anne Kane, Interim Director of Estates & Facilities, (PPFM). The reporting line manager changed from time to time depending on the work I was undertaking. I reported, over the time of my employment, to Mary Anne Kane, to Tom Steele after he was appointed as the Director of Estates & Facilities on 1st October 2018, to Elaine Vanhegan, Director of Corporate Services & Governance, to Gerry Cox, Assistant Director of Estates and Property (until he retired in 2022) and latterly to Hazel McIntyre, Head of Capital Services until Aug. 2023

8 If applicable, who selected you for your role(s)? When were are you selected for your role(s)? Please describe the selection process for appointment to this/these roles?

A Initially, Mary Anne Kane then through an HR engagement process with Susan Chisolm, Recruitment Lead NHSGGC. Late May 2018 around 29th. I was engaged for a period of 6 months to provide some assistance.

9 Had you worked with any members of the QEUH/RHC project team/estates team or management prior to your role(s) at QEUH/RHC? If so, who had you worked with before this current role? When did you work with this/these colleague(s)? What role where are you in when you worked with this/these colleague(s)? How long were you colleagues in this these previous role(s)?

A I had worked with Alan Seabourne when we both started work in the NHS in January 1980. We were both employed by the then Argyll & Clyde Health Board. Mr Seabourne was a 'Hospital Engineer' based at Johnstone Hospital and I was a Hospital Engineer based at the Royal Alexandra Hospital, covering the 'Paisley hospitals'. Although not in daily contact, we carried out some professional training at the same time. At this time, I also worked with David Bratty and James McQuade in the same Health Board. Brian Gillespie was my line manager when I worked in the Inverclyde Cowal & Bute Unit of the Argyll & Clyde Health Board in 1989 and we again worked together in NHS Fife around 2010. During employment in my previous posts and in

connection with meetings of national technical groups, I collaborated with a number of people that were involved in many parts of the NHS in Scotland, including some people involved with the QEUH/RHC project and the Department of Estates & Facilities and others employed with all of the NHS organisations in Scotland. By way of explanation, I was the Chair of the Scottish Engineering Technology & Advisory Group, (SETAG), where the Heads of Estates across the NHS in Scotland would meet together. This began from the time SETAG was started in 2003, until I became to Director at Health Facilities Scotland in 2015. On this group I collaborated with Brian Gillespie, Ian Powrie, Gerry Cox, Alan Gallacher and other senior Estates Engineers, e.g. George Curley. When working at HFS, I then stopped chairing SETAG and became the Chair of the Strategic Facilities Group, (SFG), which worked in a similar manner to SETAG, but with the Directors of Estates & Facilities in the NHS Boards. At these Groups, I collaborated with Tom Steele, Mary Anne Kane, Alex McIntyre, David Loudon, George Curly and others over the years. My staff at HFS included Eddie McLaughlan, Ian Storrar, Geraldine O'Brien, John Connolly and John Wright. I met up with various colleagues at conferences and training events etc and as the Director of HFS, I hosted several of the Scottish National Conferences.

10 What is your current professional role? Provide details of your role responsibilities and how long have you worked in this role?

A I am not currently directly employed. I am largely retired. I undertake periodic small pieces of consultancy work. This has been ongoing since 2018. I have provided some voluntary input to IHEEM over the last few years.

Taking on the role at QEUH/RHC

11 When did your involvement commence with QEUH?

A 28th May 2018.

12 How did this involvement come about? Who initially contacted you?

A Mary Anne Kane and I had been NHS colleagues for many years. She was aware that I was retired and she asked me if I would be available provide some short-term assistance within the QEUH on a part time temporary contract.

13 What was the nature of your involvement at QEUH in around July 2018? When was this explained to you and by whom?

A There were a number of issues that had emerged relating to fabric and engineering systems at the hospitals. I was working on reviewing the application of technical guidance in the Board and how the Board was complying with various aspects of technical guidance. I was diverted from this to assist with responses to information requests coming into the Board. Health Facilities Scotland, (HFS), were in the process of writing a report, 'Technical Review, Water Management Issues, NHS Greater Glasgow and Clyde, Queen Elizabeth University Hospital and Royal Hospital for Children', and produced a final draft for comment dated May 2018. Part of this process required NHSGGC to respond to questions and further requests for information being asked, initially by HFS and to make comment on the initial draft of the document produced by HFS, for factual accuracy.

There were also information requests and questions coming in to the Board from the Scottish Government, (SG). The SG had invoked the National Support Framework on the 20th March 2018 and Health Protection Scotland, (HPS), at the request of the SG, was to lead an investigation into the hospital's ventilation system and also to provide support to the Board and to produce a joint report with HFS. Questions were also coming in from the media seeking information on issues related to the hospital and there were also Freedom of Information requests. I was asked by Mary Anne Kane to

help respond to questions and provide comment on the HFS report and to help provide responses to their questions.

I was asked to participate on a Water Safety Group, to help progress work related to the hospital's water system and to try to coordinate and manage the responses to the questions coming from the various sources. This Group was chaired by Jonathan Best, Chief Operating Officer, and participants were Mary Anne Kane, Interim Director of Estates and Facilities (PPFM) and Tom Walsh, Infection Control Manager. Minutes were taken by Allyson Hirst. As part of the work associated with this, I was involved in reviewing the hospital's Written Scheme and Water Safety Policies and commenting on the management structure related to the hospital's water systems. From memory, I also attended some Water Safety Group and IMT meetings.

On the 12th July 2018 I was asked by Jane Grant, CEO, to carry out an investigation into issues relating to water, including the 2015 DMA Canyon Water Risk Assessment. On 19th July I met with Ann McPherson, Director of HR to organise support for me to undertake the review and Ms McPherson confirmed arrangements on 31st July. Gillian Gall, HR Officer would provide support and Allyson Hirst was to take notes of meetings etc. That same day I started to put together a set of standard questions. After a brief discussion with Gillian and Ally on 3rd Aug., we put together a list of people that I thought would be helpful and I sent them a draft of the question set to assist in setting up interviews with the available key staff.

I had also been asked by Mary Anne Kane if I could coordinate assistance for Annette Rankin, Nurse Consultant Infection Control at HPS who was writing a report with HFS on Ward 2A ventilation systems. Annette had asked for information on number of air changes in each room, air pressures, corridors vented/not vented, complaints about humidity/over-heating on the ward, conversion from PPVL to Isolation Rooms, general airflows, PPM, compliance and any risk issues.

Later on, I would provide assistance on various other issues emerging that needed some progress. The other areas covered included, ventilation and water systems, filtration, windows, floor-coverings, doors, fabric, including roofing, planned maintenance, SCART, governance, policies and procedures, filtration, pneumatic tube system, energy centre operation, etc.

14 What were the issues or concerns, if any, regarding either the water or ventilation system at QEUH/RHC prior to your involvement?

A There had been a number of patients who had contracted infections in the hospital. There had been single infections and clusters of infections in ward 2. I believe it was suspected that some infections could have been caused by microorganisms associated with water/ventilation and there was a concern that there may have been contamination in the hospital's water and/or ventilation systems. Investigations had begun prior to me starting in May 2018 and the Board had sought assistance from HPS and water experts Susanne Lee, Tom Makin, Tim Wafer, AE(W) Dennis Kelly and other specialists on ventilation systems such as Peter Hoffman. There was concern emerging, highlighted perhaps through the scrutiny and investigations into the water system that mitigation of the risks associated with the recommendations of the 2015 DMA Canyon Water Risk Assessment had not been implemented. There was some concern around the ventilation systems in some locations in the hospital, highlighted I understand, by an Aspergillus infection in a patient in ward 2 around July 2018.

Ventilation System – Ward 2A QEUH Report October 2018

15 We have a copy of your draft Ventilation System, Ward 2A QEUH Report from October 2018. Please refer to this. The report states that you were commissioned in July 2018 to provide comment on the ventilation system at QEUH ward 2A by the NHS GGC Interim Director of Facilities. We understand that at the was this Mary Anne Kane, is this correct?

A Yes.

16 Had you worked with Mary Anne Kane previously?

A Indirectly and on occasion within the NHS.

17 If so, what was the nature of your prior working relationship with Mary Anne Kane?

A In national collaborations, conferences etc, particularly with the Strategic Facilities Group, we had collaborated in various national initiatives, e.g. Establishing SCART question sets risk levels, (particularly on Soft FM Services), Benchmarking, Strategic Laundry Contingency plans etc.

18 What issues, if any, were there with the ventilation system in ward 2A that required comment?

A An email of 31st July 2018, from Mary Anne Kane (MAK) to me, copied to Ian Powrie and Alan Gallacher indicated there had been historical concerns about the functioning of the ventilation system in ward 2A/B. Annette Rankin of HPS had indicated to MAK (mid-July 2018) that the Scottish Government had asked for ventilation to be included in the report HFS/HPS were working on. There had apparently been previous feedback from clinicians that the unit was not fit for purpose. Despite not initially having a brief on what information HPS might require, MAK asked me to link with Ian Powrie to begin to look at the situation.

19 Why were you selected for this role?

A I wasn't informed why I was selected. The Estates team were very busy and under a lot of pressure. I had effectively only been working with GGC for a very short time and I was part time, (only a few weeks in total). I had only been in the hospital once or twice, so I didn't have any knowledge about the hospital layout etc. and was therefore reliant on others for guidance and information. This was perhaps the reason why I was asked to link in with Ian Powrie to get information from him.

20 Were HPS/HFS involved in your instruction? If so, explain how and why?

A Not directly. HPS had requested assistance from Mary Anne Kane and she asked me to link with I Powrie to get a response.

21 What background information was provided to you by NHSGGC prior to you carrying out this review?

A I can't recall receiving any formal background information prior to the review but Mary Anne Kane and I had a conversation on 3rd August 2018 when she gave me some background information. Ian Powrie provided me with information and I got some other information from ZUTEC records via Shiona Frew.

22 What was the remit of this report?

A Annette Rankin had asked Mary Anne Kane for information on ward 2, e.g. number of air changes in each room, air pressures, corridors vented/not vented, complaints about humidity/over-heating on the ward, conversion from PPVL to Isolation Rooms, general airflows, PPM, compliance and any risk issues. I understood that HPS was to produce a report and this information might, along with other specialist's reports and technical information, assist considerations in that process.

It is noted in a minute of the Water Review Meeting (Technical), "Ventilation – IP and JLeiper are working to pull together for information on ventilation to assist AR with her report including PPVL/isolation change – the facts as they are will b presented to AR."

23 How were you instructed to prepare the report? If in writing, please provide the Inquiry with a copy of this written instruction letter?

A I can't recall receiving any formal instruction on how to prepare the report other than, in conversation with Mary Anne Kane, for it to be readable, not overly technical and to have some comment and explanation.

24 At 1.1 of your report, you write that you were commissioned 'to provide comment on the ventilation system in the QEUH, Ward 2A'. What did you understand the meaning of 'to provide comment' to mean?

A To provide 'readable' information. The comments provided were intended for background information, decision making and some comment on guidance.

25 To what extent, if any, was you report intended to be a technical review of the ventilation system at the QEUH?

A The report wasn't intended to be a 'technical review'. Technical reviews on 2A and 2B were carried out around that time by others on ward 2 ventilation systems and I believe Tom Steele had initiated a detailed review [redacted] when he started in October 2018.

26 What infection control considerations did you take into account when preparing this report?

A I was aware there had been issues with infections contracted by patients which some believed may have had a source in the hospital systems.

27 Prior to writing your report did you visit Ward 2A? If so, on how many occasions did you visit Ward 2A, and when did these visits take place, how long were they in duration?

A I recall visiting ward 2 with Ian Powrie. I was having trouble trying to understand the ward configuration. It was a fairly short visit.

28 What level of detail were you instructed to review the ventilation system in Ward 2A?

A It wasn't so much 'an instruction', but it was suggested to me that the report would be helpful if were less technical and offered some comment and explanation.

29 How detailed do you consider your report to be? Why is it this level of detail?

A I don't consider the report to be detailed. The level of detail given was simply attempting to relate the information I had got, largely from Ian Powrie, and the provision of information to offer views and comments to stimulate consideration by others. B) I think it was generally, fairly peripheral in relation to the other technical data that had been provided previously in addition to the specialist technical reviews being carried out on the ventilation systems. I had only been there a short time and had no real personal experience or appreciation of the hospital systems. I had genuinely attempted to reflect the information communicated to me and to provide comment and decision making but given my lack of familiarity with the hospital or its systems, I am now aware that I had misinterpreted and incorrectly recorded information provided to me about the ward configuration which led to a number of inaccuracies within the report.

30 Who did you interview or speak to from NHSGGC estates staff, if anyone, for the purpose of carrying out this review? If so, provide details of staff, including names, occupation along with the reason you interviewed them, what information regarding Ward 2A were the individuals able to provide you?

A I didn't 'interview' individuals in relation to this. I met with Ian Powrie and the information I got on the ventilation systems was largely provided by him through conversations and I tried to access records on the ZUTEC system.

31 How compliant were individuals with your request for interview?

A Ian was very busy and he was about to go on leave, but he spent some time giving me information about the ventilation systems. I believe he had previously reviewed the ventilation system.

32 What difficulties, if any, did you have speaking with any members of staff? If so, whom?

A I can't recall having problems speaking to people in general, apart from arranging time to speak to people with busy diaries.

33 Who did you interview or speak to from NHSGGC infection control staff, if anyone, for the purposes of carrying out this review? If so, provide details of staff, including names, occupation, along with the reason you interviewed them, what information regarding Ward 2A were the individuals able to provide you?

A As stated above, I didn't 'interview' anyone in relation to the report. B) I do recall speaking with Teresa Inkster, Consultant Microbiologist, who had asked about whether the 'slightly negative pressure' could be made 'positive' as she was concerned about the implications of 'negative' air flow in relation to 'neutropenic' patients and I had referred her to Ian Powrie. I also wanted to meet with her get some general appreciation to the nature of the microorganisms that she had been referring to.

34 What difficulties, if any did you have speaking with any members of infection control staff? If so, whom?

A I don't recall any difficulties, apart from those related to time and availability.

35 If you did not speak to infection control staff explain why?

A I spoke to Dr Inkster, but not specifically in relation to the information to be contained in the report. I think the conversation was on a more general basis. I was on the Water Safety Group along with Tom Walsh.

Design of ventilation system – Ward 2A

36 Who was responsible for the ventilation system design? Explain your answer.

A I understand that this would have been Brookfield Multiplex. B) It was a design and build project and Brookfield Multiplex were the 'main contractor' and hence, had the prime responsibility for the design-risk on what was being designed to deliver against the Board's construction requirements and clinical output specifications, augmented by changes via derogations, or agreed changes through, for example, compensation events. From memory, I think the design was by ZBP, consulting engineers. Mercury Engineering were the M&E contractor on the project.

Ward 2A layout and sections

37 What was your understanding of the different sections of Ward 2A at the time?

A I had no familiarity with the hospital and had difficulty in appreciating how the ward was configured and how the different sections of the ward and the rooms were identified. I was therefore reliant on others for information and what information I could get from records. I had genuinely attempted to understand the layout of the ward, but I was uncertain, at the time, that I had accurately understood and captured the information. Because of these uncertainties, I asked Ian Powrie to check the draft paper for errors and factual accuracy.

38 To what extent has your understanding changed, if at all, now?

A The passage of time has not helped memory, but I my understanding now is that: The whole of the Ward 2A/B is the Haemato Oncology unit which, I understand, is called the 'Schiehallion' unit and not the title of only ward 2A or 2B as I had mistakenly thought at the time.

I believe Ward 2A is a ward with in-patient bedrooms and ensuite facilities for Cancer care for young people and children. Ward 2B - Day Care Unit and the national Bone Marrow Transplant Ward. I had misunderstood the information I

had about the ward, which I think contributed to my misunderstanding about the purpose and configuration of the single rooms.

39 What was the patient cohort in each of these sections?

A My understanding is that the Schiehallion Unit cares for young patients being treated for cancer and blood disorders. Ward 2A – In-patient Cancer care for young people and children and Ward 2B – Bone Marrow Transplant Unit and the ongoing day care of ‘cancer-patients’ that had possibly been cared for in ward 2A.

40 At section 2.2 of your report you state ‘Schiehallion does not have Chilled Beam Units’ to what extent, if any, do you consider that statement is inaccurate?

A I regret that it is inaccurate. I had attempted to accurately reflect the information I had, but my lack of familiarity with the hospital looks to have led to my misunderstanding. I had genuinely tried to get it right, but obviously misinterpreted and/or incorrectly recorded the information I had about the ward configuration, which resulted in inaccuracies.

41 To what extent, if any, is it accurate to state that Schiehallion Unit, in respect of inpatients has chilled beam units except BMT rooms?

A Ward 2A has, I believe, air supplied via Chilled Beam Units to ward 2A mid-ward and Teenage Cancer Care rooms.

42 At paragraph 2.3 of your report, you describe the Teenage Cancer Trust as not having chilled beam units but having ‘heating/cooling comfort modules’. Describe the difference between heating/cooling comfort modules and chilled beams. Include details of the difference between the two units, any differences that you are aware of in delivery of air supply. Further confirm why they are routinely referred to as chilled beam units.

A I now think that the TCT does have CBUs which were delivering 3 Air Changes per Hour (ACH). My confusion about the ward’s configuration is again reflected in what is written here. B) I do not have detailed knowledge of

the differences between these modules but I understand they have a similar operation; both, I believe, have two sections within the units to heat and cool a primary air supply. Comment from other ventilation specialists indicated that the ‘comfort modules’ installed in ward 2A had been incorrectly identified as Chilled Beam units. C). I am not able to confirm why they are routinely referred to as CBUs.

Guidance

43 What experience do you have of interpreting contracts?

A From time to time over the course of my time with the NHS, I have had to read and seek to understand contracts and contract documents and have been involved in deriving the Board’s Public Sector Comparator and Construction Requirements on several projects. I have been involved in creating the technical specification for tender documents and also the operational, ongoing management of PFI/PPP contracts.

44 Throughout section 4 of your report, you make reference to contractual interpretation and application of guidance. What experience do you have in dealing with such matters?

A I do not consider myself to be a specialist in Contracts or in Contract Law or in any specialist elements of guidance. However, over time, working in the NHS earlier in my career, I have previously operated as an Authorised Person in the specialities of Sterilisation and Decontamination, Medical Gas and Vacuum Systems and for High Voltage systems all of which required an intimate appreciation of the applicable guidance, Approved Codes of Practice, Regulations and other Statutory Instruments. I have periodically been involved with the planning and delivery of a number of large hospital construction and refurbishment projects, HUB projects, etc. At various points in my NHS career, I have used JCT80, Engineering Contracts and Scottish Minor Works contracts. I have contributed to, and occasionally have personally written or contributed, technical specifications related to Design & Build, (D&B) and PFI projects’ tender documents. At one point in the mid-1990’s, I wrote the

technical specification and was part of the small team that formed and negotiated, what I understand to have been the first PFI project in Scotland. I have contributed to the formation Public Sector Comparators and to working up Board Construction Requirements for some PFI/PPP contracts. I do not however, have any direct experience with the 'Competitive Dialogue' utilised in the initial stages of this (NECIII) project in NHS GGC.

I have been directly responsible for the operational management of PFI/PPP contracts. During my time at HFS, I chaired a national group with participation from the Scottish Government, the Scottish Futures Trust, Health Facilities Scotland and contribution from Board's that were 'clients' with 'live' PFI/PPP contracts, looking at the implications and responsibilities of various contracts that were operating in Scotland. I also had some peripheral input to the formation and review of the several iterations of the Frameworks Scotland Framework, initially applying the NEC III form of contract. I have participated in the assessment of tender returns and appointment of contractors and consultants.

I was responsible for the operational maintenance of hospital engineering systems for decades, which required a good understanding and application of guidance, approved codes of practice, regulations and statutory instruments. I have undertaken the assessment of tender returns in the NHS both internally and also connected with private sector providers. I have undertaken reviews of major organisational change and capital projects in Scotland, England and Northern Ireland. I contributed occasionally on the preparation of some elements of NHS guidance and management systems. Given the hundreds of NHS guidance documents, before you begin to consider British and European Standards, guidance produced by the Health & Safety Executive, professional institutions etc, good practice guides, manufacturer's guidance and recommendations, approved codes of practice, regulations and statutory instruments, etc, it is difficult to comprehend any one person being totally conversant with all documents, but all of these episodes in my 43 year career

have provided opportunity to gain some reasonable experience with contracts and the application of guidance.

45 What documentation did you consider when preparing your report?

A I can't recall all of the documentation considered, but the documentation referred to in the report included: SHTM 03-01 Parts A&B, SHPN 04 Sup 1, SHFN 30, Manufacturers Information on comfort cooling modules and other project logs, e.g. ME clarification and derogation logs. There was further documentation considered, such as the engineering specification section. As background I referred to SHPN 054 (Facilities for Cancer Centres). I was attempting to find out what had been specified and to try to compare this with what had been delivered. I also contacted the Building Services Research and Information Association, (BSRIA), to try to get information about the research that was carried out to establish the defined air change rates in the HTM guidance. I was trying to find out if there was an air change rate at which the expected conditions being delivered at the recommended air change rates would fail to deliver a safe environment. BSRIA helpfully engaged in some discussion and provided me several research papers etc that I read as background information.

46 What is your understanding of the guidance being referred to as a mandatory consideration?

A My understanding is that guidance, cited in a contract for application in the project, would make it a 'mandated consideration' because it would be a contractual requirement. Other guidance, recognised as a 'Code of Practice', (particularly those cited in legislation) would presumably be, because of their nature, a mandatory consideration.

47 You distinguish between the HTM and the SHTM guidance in your report. You state that the HTMs were cited in the contract but were 'applicable in Scotland' what differences are there, if any, between the ventilation requirements for immune suppressed patients in the HTM and the SHTM guidance? For example, are different air change rates specified in the guidance?

A In the 'comments' I made on section 4.2 of the report, I say that HTMs, " … are normally 'not applicable in Scotland'. This comment is not intended to draw comparison with the content of the documents, (the technical content of HTMs and SHTMs are normally (but not always) the same or similar). Sometimes, there is guidance produced in Scotland which is not used in England or in the other nations of the UK. The point I was trying to convey was that the process of disseminating technical guidance in Scotland was, historically, through Health Facilities Scotland, (HFS). This process, undertaken by HFS, would consist of HFS scrutinising the HTM, as the 'source guidance document' and making any amendments, perhaps to reflect Scot's Law and Scottish Building Regulations, Water Regulations etc, (which are different in Scotland), and also, if appropriate to make updates or amendments to the detail of the source HTM guidance, if appropriate, to create the new SHTM. So, normally, the NHS in Scotland would refer, in the first instance, to the Scottish guidance, as this would have gone through this process. HFS, I recall, in their technical investigation report on the QEUH, (that we were commenting upon shortly after I started with NHSGGC), actually made the same point about the HTM guidance being 'non-applicable in Scotland'. I recall, HFS had left this as a simple statement in their draft report. I was attempting to provide background to the possible thought process by the Board when creating its project documentation to have included HTMs and not the SHTMs as one might have expected. I was explaining the point, in the comments of the report, that there would probably have been a strong desire by NHS GGC to include the latest guidance as a source of reference for the project. At the time of constructing the project documents, I was suggesting that the HTMs were extant, but the process to create the SHTMs, although apparently imminent, had not been completed.

So, the respective SHTM 03-01 did not exist at this time. My position was that, although ‘not normally applicable in Scotland’, the HTM, by virtue of the fact it was included in the project documentation, effectively made the content of the HTM applicable for reference and application as it was now a ‘contractual requirement’.

48 At paragraph 4.3 you state, The HTM, in the absence of the SHTM, the publication of which were expected imminently, might have been considered a reasonable substitution.’ To what extent, if any, was the QEUH having regard to the HTM guidance in the absence of the SHTM?

A See response to question 47 above.

49 How compliant were the areas of Ward 2A with the relevant HTM guidance at the time you wrote your report? If so, which areas? Provide details of non-compliance. If any areas were non-compliant describe the potential patient impact.

A I had personally made no detailed compliance assessment of ward 2A. I was attempting to gather information and provide comment on it. I had information that patient rooms in ward 2A had air change rates approximating to 3ACH. The guidance required general wards to have 6 ACH (SHTM 03-01 Part A Appendix 1 Recommended air-change rates). Inadequate air change rates can increase the infection risk to patients from the healthcare environment they are being cared in.

50 What is the overarching principal of the SHTM guidance?

A SHTMs intend to give best practice, advice and guidance on the design, installation and operation of specialised building and engineering systems healthcare facilities and their appropriate application is intended to help duty holders to fulfil their duty of care.

51 How important is patient safety according to the guidance?

A The appropriate application of the SHTM guidance is intended to assist the duty holder to fulfil their duty of care to those affected by the systems etc that

the guidance covers. So, patient safety is an essential, core aspect of the ambition of the guidance.

52 To what extent did the contract seek to comply with the HTM guidance?

A The compliance with guidance was, from memory, cited in the project documentation.

53 To what extent, if any, did the contract intend that the guidance ought to be complied with?

A See response to Q52 above

54 You state that 'Boards need to be more specific about the outcomes they require'. What specification would you have expected to have come from the Board? If such specification did not come from the Board, what did the Board seek to rely on?

A I do not know how the outcomes were determined or by whom. I imagine the outcomes where developed by inputs from various sources, perhaps built up and the output specifications agreed through specialists and technical committees? I believe that further clarification of the extent of responsibilities would help avoid the ambiguity that has been apparent in several important areas, e.g. responsibility for compliance with legislation and or guidance, responsibility for aspect of soft landings, being more specific about the detail of tagging of assets, the creation and testing of Planned Maintenance Programmes, Building Maintenance Systems prior to handover. Detailing the good practice measures during construction, e.g. keeping pipe ends capped to avoid dirt getting into systems, ensuring builders rubble is not tipped into the sewerage system, perhaps by specifying a camera survey of the drains prior to handover? But I did not take part in the design or specifications related with this project and therefore cannot comment on the extent to how these details were communicated and expressed.

55 What is the potential patient impact of non-compliance with the SHTM?

A The SHTM guidance is intended to provide ‘best practice’ and appropriate compliance with the SHTM would imply that best practice was being achieved. Logically, non-compliance with SHTM guidance would mean that something other than the ‘best practice’ intended by the SHTM guidance was not being applied. It was commonly held, in the NHS Estates, that ‘guidance could be varied, if it could be defended’, which meant that any derogation from guidance would need to be able to be demonstrated to be as good as, or exceed the standards achieved by compliance to the guidance.

Difficulties emerge when the guidance becomes outdated, or when the guidance lags behind the ‘science’, e.g. if research deviates from, or even suggests that the guidance is in error, the guidance is unable to be altered. This scenario is particularly exposed when perhaps, one set of guidance is refreshed and updated and other guidance, which may give comment on the same systems or facilities, is not. In this scenario there is the possibility that some aspects of the guidance will be out of step with other similar guidance. With the current technology, presumably, there is the ability to update information in real time, but this ability has not yet been embraced to my knowledge, with respect to updating guidance. Inevitably, therefore, written guidance will always suffer from this weakness. In addition, guidance is not generally written as ‘a specification’ and will demand, to a greater or lesser extent, interpretation in how it is applied or even derogated. All the more reason to meticulously record how the guidance is being employed and particularly, when it is varied.

Recommended air flows

56 At paragraph 4.5 of your report you state that ‘ventilation rates commonly being delivered to the rooms in the hospital are in the range 2.5-3 ACH’ to what extent did the statement apply across the rooms in ward 2A?

A From memory, the air change rates only in the rooms that had chilled beams installed were restricted to 2.5-3 ACH, but my understanding was that the chilled beam technology had been installed in other areas of the hospital that would have been considered ‘high risk areas’.

57 How many air changes would you have expected to see in the in-patient area of Schiehallion unit?

A Based on SHTM 03-01, if the in-patient area of the Schiehallion unit was to care for patients with immune deficiency I would have expected to see a minimum of 10ACH at a 10Pa differential pressure.

58 How many air changes would you have expected to see in the Teen Cancer Trust unit?

A If the patient area of the TCT unit was to care for patients with immune deficiency I would have expected to see a minimum of 10ACH at a 10Pa differential pressure, but if this was a general ward/day unit, 6 ACH would be applicable.

59 How many air changes would you have expected to see in BMT areas of ward 2A?

A If the in-patient area of the BMT unit was to care for patients with immune deficiency I would have expected to see a minimum of 10ACH at a 10Pa differential pressure.

60 To what extent, if any, did air changes of 2.5-3 ACH comply with SHTM/HTM guidance applicable to the patient cohorts in Ward 2A? If not, why was this not stated in the report?

A I don't believe 2.5-3ACH complies with guidance. I believe I gave some commentary about the application of the guidance and I copied the air change recommendations from the guidance into the appendices of the report.

61 To what extent, if any, did non-compliant ACH in ward 2A patient safety in Ward 2A? If so, how so? If not, why not?

A The effect on patients of having a reduced air change rate, I believe, cannot be determined with any certainty, but I do not understand why it would have been thought appropriate to introduce a potential risk rather than to have deigned out the associated implied risk of reducing a recommended air change rate.

62 If not, what physical characteristic(s) of the ventilation system in ward 2A prevented it from achieving SHTM compliant ACH?

A The use of the CBUs curtailed the air change rate to the capacity of the units.

63 At page 8 paragraph 4.5 in your comments, you write, 'The extent of the Board's agreement to Brookfield's proposal is not explained in any detail or expanded upon. It is easy to read what the text in the Clarification Log says, but one is now left only to speculate about what was actually meant by the text'. In preparing your report, to whom, if anyone on the Board did you explore this issue with? If so, what was the response/position? If you did not speak to the members of the Board, why not?

A From memory, I only had conversation with Ian Powrie and Mary Anne Kane. The comments are based on the knowledge I had at the time. I wasn't particularly aware of the roles and responsibilities of others in connection with the build-up of the project's design.

64 To whom, if anyone, did you speak at Multiplex employee(s) to find out their understanding. If you did not speak to Multiplex employee(s), why not?

A I did not speak to anyone at Multiplex. I did not consider it appropriate at that time to make a connection with Multiplex.

65 Describe your understanding of any discussions between the Board and Multiplex in reaching agreement regarding this derogation?

A I did not view records that afforded this level of clarity. It would be helpful if the records of a project offered a clear audit trail, not only of the decisions taken, but the reason why decisions are taken with an explanation about the objective of the decisions that were taken. This would perhaps be further improved with a record of other options considered with a reasoning of why the chosen option was preferred and the other options not.

66 To what extent were you aware of the Board and Multiplex consulting with ICP professionals to agree derogations?

A I think I became aware at a later stage, through an email that I came across, that there may have been some communication between Infection Control and Peter Hoffman about the derogation, but there was no detail that I can recall that indicated what was discussed, what questions were asked or what detail was provided, but there seemed to be an indication that the suggested proposal was acceptable.

67 In your report at page 10 paragraph 12 you state, ‘but one might conclude that a lesser priority was taking precedence’ what did you mean by this?

A The context of this was the position I was considering in relation to the achievement of a BREEAM and how this would have been affected by the derogation associated with chilled beams and the restricted air change rates. The installation of CBUs, because of the associated energy savings expected to be achieved by them against the potential energy demand of a full air delivery from central air handling plant, would give benefit in the achievement of the BREEAM target, (which is referred to in the derogation). I would personally consider that the achievement of a recommended air change rate

would have been a greater priority. I therefore concluded that the 'lesser priority was taking precedence' when the BREEAM energy benefit was accepted, whilst at the same time also accepting the inevitably compromised air change rate.

68 What were the consequences, if any, of air flows not being reviewed?

A The consequences of not providing the recommended air flows are that the protective environment intended by the provision of the recommended air flows might be less effective. I don't understand what is meant by 'not being reviewed'.

69 To what extent was the ventilation system adequate to protect the patient cohort at the time? If so, explain why. If not, why did the report not state this?

A The ventilation regime required for immune-compromised and neutropenic patients (Ref SHTM03-01) is 10ACH at 10Pa pressure differential. For Isolation Rooms, the direction of flow would be stipulated depending on whether Source or Protective Isolation is required. If the patients being cared for in the ward were immune-compromised and or neutropenic, 10ACH with +5 to10Pa pressure would be the expected ventilation regime to be applied, e.g. in ward 2A.

The reason for my uncertainty about layout etc, (is explained elsewhere in my statement) and I think this is perhaps why I wasn't as specific as I perhaps could have been in the report. If the facility was considered to be a General Ward, (e.g. Ward 2B) the recommendation would be for 6 ACH, but in making the decision to consider a ward being a 'General Ward', one would also need to consider the foreseeable incidence or likelihood of neutropenic or other 'high-risk' or immune-compromised patients being cared for and/or 'boarded' on that General Ward, and whether this would be sufficient to consider the application of higher air flow rates (i.e.10ACH) and protective environments. The report largely attempted to focus on Ward 2 but the wider hospital's ventilation systems for general wards, would then be deficient in respect to

the recommended 6ACH as they would all have been at around 2.5-3ACH due to the installed CBUs.

70 At page 10 paragraph 12 you state that 'The CBUs installed would not function effectively at flow rates above 40 Ltrs/sec and the central Air Handling Unit has a limited capacity which is presently close to its maximum. It will not therefore be possible to improve the ventilation rates with the currently installed ventilation system.' What was the potential patient impact? How HTM/SHTM compliant were the ventilation rates achieved at the time you prepared your report?

A The supplier's literature for the units specify the flow rate capacities for each of the units and the type installed in this instance had a 40l/s specification. I understand that the Air Handling Units (AHUs) and the ductwork systems had been designed to deliver air flows at this rate. The '20% spare capacity' that had apparently been an original ambition for engineering systems, (which may at some point have been generally reduced to 10%, as being thought to be closer to common industry practices) appears not to have been applied, as I learned that the installed systems were already at their peak performance levels, i.e. at maximum capacity.

I appreciate that the choice of the CBU may have been a way of producing ventilation/heating/cooling to the standards specified by the Board and to avoid the necessity of installing significantly larger AHUs. Whether this was an astute decision or not, will presumably be an area of focus for the Inquiry, but I also didn't understand why the spare capacity, that appeared to be an original ambition of the Board in the Board's Requirements, (which would have provided a degree of resilience in the system had this been applied to the installed systems), was now not evident in the installation. The limited capacity of the ventilation system inferred that any increase in ventilation rates, would not be possible, either from the installed AHUs or through the installed ductwork distribution system. A change of AHU plant, if considered appropriate, might be difficult, but more achievable than increasing the duct sizes (to accommodate increased air flow) which were installed in already

congested service risers and routes. The potential impact to the patients being cared for in an environment with incorrect air changes (e.g.< 10ACH, when they should have been at least 10ACH), or air changes that are less than 50% of those recommended in the SHTM, (e.g. 2.5-3ACH, when they should have been 6ACH), would be very difficult to be specific about, but they would technically, be potentially exposed to a greater risk of infection, because the dilution of the bio-load of the room would be sub-optimum to that which would be achieved if the air changes had been at a rate recommended by the guidance. My conclusion was that the ventilation rates were not compliant with the SHTM guidance' recommendations.

71 In the final paragraph at page 10, you make recommendations regarding a Module which can deliver 55 ltrs/sec and up-sizing of the AHU, you then further explain that 'One would need to fully comprehend the benefit to be achieved by increasing the ACH and to balance the net benefit gained against the impact of the costly, disruptive process to achieve it.' What would be the benefit to patients in increasing ACH?

A The unit that had been fitted was limited to delivering 40l/s equating to around 2.5ACH. In the document I looked at, there was only one larger unit; one that would deliver 55l/s. The comment about getting further information about what improvement a 55l/s unit could make to the ACH, was, I believe, more of a suggestion than a recommendation. I was discussing what options might be available to the Board if it was considered necessary to change the system to improve the patient environment.

Rule of thumb suggested that an increase from 40 to 55l/s would not (more than) double the current 2.5ACH to achieve compliance with the recommended 6ACH, but a circa35% increase might make a desirable improvement to the ACH without having to change all of the AHUs and ductwork, if indeed there was sufficient capacity in the existing installation even to accommodate the 15l/s additional air flow. My suggestion about balancing the benefit etc, was merely indicating that (if there was capacity in the central plant to install the larger CBU) there would need to some

consideration about making what would be a significant expenditure to change all of the existing CBUs to larger units, perhaps needing to upgrade heating, cooling and electrical services, altering ceilings etc to take a larger unit, which would also be highly disruptive and not without risk in an operational clinical environment. So, I was just suggesting that, if this was something that might be worthy of consideration, all of these other issues would also need to be considered, not least of which would be that the ACH would probably still not achieve the desired 6 ACH, even at the end of a costly and disruptive exercise.

72 What should be the primary focus, cost or benefit to patients/ protection of safety?

A Patient's protection and safety should always be the primary focus. The effective stewardship of public finance is always an essential component of the Board employee's responsibilities, so achieving the 'best value' is always part of the equation, but a cost saving, (even when it is called 'value engineering'), should never be applied when the result is that patient, (staff or other occupant's), safety is compromised and patients and others are effectively put at an increased risk of harm.

73 To the best of your knowledge were any of the recommendations acted upon? If so, when, by whom and detail your involvement.

A From memory the changes to plant and systems that were made around 2020 were not specifically the result of this report. There were expert reports conducted on the installed ventilation systems and I imagine that the changes that were eventually made were based on the findings of these expert findings. More likely perhaps, that changes were led by HFS report and confirmed in a review report carried out by WSG Consultants (July 2020). Others may be better placed to advise. I was asked to give some input to the consideration that was made on initial findings and on design proposal options of the expert reports, but the tendering and installation of new plant and systems were carried out by others.

Chilled Beams

74 In your report at page 3 you state that the Schiehallion Unit does not have chilled beams, why did you state this?

A I thought that the name Schiehallion referred to only ward 2A. I had obviously misinterpreted / misconstrued the information that I was given.

75 What difference, if any, is there between chilled beams and swegeon parasols?

A (Not answered)

76 Please refer to **Estates Communication Bundle page 953 sub paragraph d** Ian Powrie states that there ae chilled beams in the Schiehallion Unit, to what extent, if any, were you aware of Mr Powrie's view?

A I refer to my answer to Q74. Mr Powrie will be correct. I understand now that Ward 2B is also part of what is called 'Schiehallion'.

77 What is the SHTM guidance for the use of chilled beams in healthcare settings?

A The use of Chilled Beams is allowed by SHTM guidance. SHTM 03-01 Part A, para 2.40 says, "Consideration should be given to the ease with which specific types of chilled beam units can be accessed for cleaning having regard to the need to control the infection risk. The impact of maintenance requirements on room availability should also be considered."

78 What is the SHTM guidance for the use of chilled beams in the areas used to house immune compromised/ suppressed patients?

A The current SHTM guidance doesn't disqualify the use of CBUs but their use in these clinical areas will need to be signed off in writing by the Ventilation Safety Group, (VSG), and the guidance around using CBUs is more extensive than it had been previously. The current SHTM also notes that patients with compromised immune systems as susceptible to fungal infection. The current SHTM indicates that condensation can be developed in CBUs under certain conditions. I imagine, given this guidance that it might be difficult in getting

VSG approval in these circumstances for the installation of these units. So, interpretation is required as everything that is allowed, is not always beneficial. The guidance at the time I was writing also did not advise against their use. SHTM 03-01 Part A, Page 26, paragraph 2.39 stated, “Care should be taken in positioning chilled beams to ensure the avoidance of cold draughts particularly when used in the cooling mode. The control settings should ensure that the external elements of the beam are always above dewpoint.”. Whilst the older guidance is not as detailed as the current guidance, there should presumably have been an awareness about the potential to create condensation. I imagine too that there would have been a knowledge, particularly by Microbiology colleagues, that condensation could be a problem that provided conditions for fungal growth.

When seeking agreement to the derogation that led to the installation of the CBUs, it is not clear whether this potential, was identified and discussed with Infection Control or Microbiology, particularly since the humidity controls were not installed with the Units. In addition, one must consider carrying out the maintenance of CBUs in busy clinical wards and the impact on room occupation when access to the unit is required for cleaning and maintenance. So, in consideration of the risk assessment that is to be applied under the latest guidance, one might consider that a similar process might have been applied under the old guidance, even though it wasn’t actually written down, and some thought given to the implications to patient care as a primary focus rather than achieving the most cost effective solution and the best BREEAM contribution. I did not see evidence that this had happened.

79 Had you experienced working with chilled beams in healthcare settings prior to QEUH?

A Yes, on occasion, but these were largely installed in non-clinical settings, e.g. General office settings, Laboratories, Laundries.

80 What are the benefits of using chilled beams in a healthcare setting?

A The latest SHTM indicates that, ‘Active chilled beams can provide an energy-efficient means of controlling environmental conditions.’

81 What impact does the use of chilled beams have on the air changes rates in a room?

A The ACH is limited to the capacity of the CBU; 40l/s in this case.

82 How did the use of chilled beams impact patient protection from infection in ward 2A?

A Where fitted, the CBU’s would have limited the ACH with a respective reduction in the protective environment which could have been provided by a greater air change rate.

83 How did the use of chilled beams in ward 2A contribute, if at all, to higher levels of infection in patients? Explain your answer.

A I don’t know.

84 Why were chilled beams used in Ward 2A?

A I don’t know.

Risk Issues

85 Explain your understanding of potential ‘cross infection’ between patients vacating and occupying the same room where chilled beam units are used.

A I recall there was a concern that fibres from the room could find their way into the CBU and be later reintroduced to the room. If the room was occupied by another patient at this ‘later time’, I understand, there was a possibility of microorganisms on the fibres from one occupancy could then be ‘shared’ with the second occupant. This is a slightly different consideration to that applied to the infection risk associated with the possible infection route of Fungal spores being sourced in the condensation (or leakages from pipe connections) and then ‘raining’ into the room, but logically, any condensation

could presumably be the vehicle for transporting fibres back into the room for its next occupant.

86 In your report at paragraph 5.2 you state the SHTM (see above) recognises there is an issue with dewpoint control and specifically advises that the CBU operates under controls that ensure “that the external elements of the beam are always above the dewpoint.”

A The point I was trying to convey was that the SHTM had recognised that there is a potential issue with condensation from these units. This suggested to me that consideration about the associated risk and the potential to include controls to mitigate the risk (that the SHTM was highlighting), i.e. dewpoint controls, might have been a reasonable expectation. I did not see any documentation related to this consideration.

a) Explain what issues, if any, can be experienced in relation to dewpoint controls.

A If dewpoint controls had been fitted, this could have mitigated the risk that the SHTM was highlighting. I believe this is achieved by maintaining the temperature of the cooling coil above the dew point.

b) If applicable, how did this issue impact Ward 2A?

A I’m not sure what the experience was specific to ward 2A. From memory, I understand CBUs were installed in other locations in the hospital that were considered to be ‘high risk’ clinical locations.

c) What issues/ concerns, if any, did you witness concerning lack of dewpoint controls in ward 2A?

A I did not witness issues.

d) What measure(s), if any, were in place at the time of writing your report, in ward 2A to mitigate this issue?

A I believe some changes to the control of the central AHU were taken to minimise the potential of humidity consequences at the patient’s rooms.

87 What cleaning regime for chilled beams was in place in respect of ward 2A? How and where is this recorded?

A Generally, I understand that where CBUs were installed, particularly in 'high risk' areas a cleaning regime was put in place, but I can't give details about the actions that were carried out in detail. The access to get into the rooms to carry out the cleaning of the units would be problematic, as patients would be required to vacate rooms, which is a hard, time consuming exercise to organise in a busy hospital.

88 What concerns, if any, did you have regarding the cleaning regime for chilled beams at QEUH/RHC?

A I cannot answer this question.

89 Have these concerns been addressed, if so by whom, detail your involvement.

A I cannot answer this question, other than the difficulty in getting access for cleaning units in patient rooms in a busy hospital and ensuring no additional risk to the patients due to the cleaning process and the increased risk to patients due to the disruption to their care and the necessity to undertake a cleaning process to mitigate infection risk (which would presumably written up in the HAI Scribe Assessment).

Installed Ventilation System

90 Explain the importance of achieving positive pressure rooms, in rooms housing immune compromised patients?

A Patients that are susceptible to infection due to their clinical condition, (e.g. immune compromised), whom do not themselves pose a risk of infection to others, need to be cared for in 'protective' environment that disallows air flow from adjacent spaces into the patient's room. This is achieved by maintaining the pressure of the patient room to be positive to its adjacent spaces. In certain circumstances, i.e. where there is a lobby at the entrance to the patient bedroom, the room can be 'neutral' to the lobby, if the lobby is positive to its adjacent corridor.

91 Explain the relevant guidance that should be followed?

A SHTM 03-01 Series of guidance. There are a list of other references at the end of the guidance documents, which would apply appropriately.

Scottish Health Planning Note 04 - In-patient Accommodation: Options for Choice - Supplement 1: Isolation Facilities in Acute Settings, Sept 2008, indicates that, the purpose of this guidance:

1.4 This Supplement to SHPN 04: 'In-patient accommodation: options for choice', provides guidance on the facilities required for isolating patients on acute general wards.

1.5 For infection control purposes, a single room without en-suite is better than no single room at all. However, the guidance in this Supplement is based on best practice and describes how a single room can be enhanced to provide an effective isolation facility for patients on acute general wards. The Supplement has two aims:

- to set a standard for new-build facilities.
- to provide Health Boards wishing to convert existing accommodation with simple design options that can be implemented relatively quickly and cost-effectively.

1.6 This guidance:

- explains how a single room with en-suite sanitary facilities can be enhanced to provide effective isolation for patients with infections that could be transmitted within healthcare.
- describes how an enhanced single room with en-suite facilities and a ventilated lobby can provide an isolation suite for patients who have airborne infections or who need to be protected from them.

Also, the document indicates, "1.10 This Supplement does not describe the specialist facilities required in infectious disease units or on wards where severely immuno-compromised patients are nursed. Guidance for these facilities will follow in a further Supplement to SHPN 04".

So, the emphasis of this guidance, is intended for how single rooms on general wards can be utilised to isolate patients. I believe origin of the

guidance was mainly to provide information about how a hospital's general wards might be utilised in the event of a pandemic, e.g. Bird Flu, where more than the 'normal' amount of isolation facilities might be required with little lead time to provide the scale of facilities that went far beyond that which would 'normally' be required.

92 Explain your understanding of the impact of installing an extract grille on the ceiling in patient rook, and a further extract within the ensuite? What impact did this have on the air flow in patient rooms in ward 2A?

A The normally expected configuration would be for the cascade of air to be from 'clean to dirty', i.e. from lobby to patient's room to en suite. The positioning of spill vents (i.e. above the door between the lobby and the room and normally low on the door between the Patient's room and the en suite) will encourage an effective air-flow through the patient's room and exiting through the extract placed in the en-suite).

If the main extract is placed in the patient's room on the ceiling and the air is provided from the lobby at high level, there may be circumstances where an effective circulation might be compromised, with the air-flow remaining at high level in the room and being extracted without being appropriately circulated within the room. In addition, the extract in the en suite was much lower than the main extract. This would have satisfied the requirement to have extract in the en suite but may not have provided the normally expected flow from the patient's room to the en suite and the flow, under these circumstances could have been from the en suite back into the patients room. The effect of this would raise the possibility of smells etc being encouraged back into the patient's room, but also, if there was a fan failure on the extract particularly, air could be drawn from the common extract systems (i.e. any extract systems having a common connection the particular en suite extract), into the patient's bedroom. This is particularly problematic if there is any common connection between 'clean' and 'dirty' extract systems, which I understand was the case in this installation, (i.e. the extracts from clinical spaces ('clean' extracts) had a common connection with non-clinical spaces ('dirty' extracts).

93 To what extent, if any, was this compliant with SHPN 04-01 guidance?

A In my opinion, it is debatable if the installation is 'compliant', being a new installation and not one that has been converted from a single room (i.e. where the installation might have been originally installed and then converted). The installation one might have expected would be for the main extract for the space to be located in the ensuite attached to the room. In this case, the main extract is in the patient's bedroom, which is 'recognised' by the guidance, I believe, as a layout that might afford a 'normal' single room to be used isolation facilities on an Acute General Ward, when the facilities were under pressure, for example, during a pandemic. I don't know why this layout was apparently considered an appropriate layout when the system is being designed 'from scratch', with the option to design a layout that, I believe, would normally be provided (with the flow from the lobby to the room and the corridor, to the bedroom, to the ensuite and if no lobby was being provided, for some reason, the patient bedroom would be 'positive' to the corridor and the ensuite).

94 At page 13, paragraph 6.2 you write that 'placing the extract grille on the ceiling of the patient's bedroom might lead to an airflow which does not effectively flow over the patient. Protection of staff caring for the patient may therefore be compromised.' Explain how this potentially impacted the patients and staff in ward 2A?

A If there is a requirement for 'source' isolation, which I understand there was in one of the isolation rooms, where the patient might be themselves 'infectious', ideally the airflow would be designed to flow over the patient and then go to extract. This could be achieved, for example, by placing the extract behind the 'head' of the patient's bed, meaning that the airflow would help protect not only those in adjacent rooms, but also those members of staff that might be in the room caring for the patient. This ideal air flow route may not be as effective if the extract is placed on the ceiling, where there is a potential, depending on the respective position of the supply ventilation, of 'short-circuiting' the room with a portion of the air flow going between supply directly

to the extract at ceiling level. This is a theoretical possibility I was drawing attention to as part of my observations.

In addition, one also needs to consider the implications of air flow if a fan fails, e.g. a supply fan or an extract fan. What would happen to the air flow in these circumstances in both a protective or source isolation room? The design should ideally, as far as possible, still ensure the safety on the patient in these circumstances, e.g. at worst, the room could be designed to be 'neutral' in the event of a fan failure. Also, in the circumstances of fan failure of the ensuite extract, where the main extract, if placed in the patient's bedroom, keeps running there might be the risk of drawing odours from the ensuite, back into the patient's room and if there was a common duct from ensuite extract, the potential may exist for drawing air from other adjacent spaces back into the patient's bedroom, giving risk to a possible cross-infection route. In addition, if the extract in the patient's room is greater than the extract rate in the en-suite, there is a potential to draw air back from the en-suite back into the patient's room. This would be a particular risk in the event of fan failure, which might make the situation worse, particularly of the 'clean' and 'dirty' extracts were run into a common duct system, which I was told was the case in hospital locations.

95 What was the impact of this, if any, on patients in ward 2A?

A I cannot answer this question but see response to Q94 above.

96 What additional potential risks, if any, did the use of two extract grilles, pose to patients?

A I cannot answer this question.

97 What impact, if any, did this have on the room pressure in ward 2A? In turn how did this impact on patient safety in Ward 2A?

A I cannot answer this question.

98 At page 14, paragraph 4.4 you write ‘where immunocompromised patients are to be accommodated, such as in transplant units or specialist cancer units, there could be a need for positive pressure isolation rooms.’ You then further write, ‘Comment: This has not apparently been taken into account in arriving at a solution provided’.

a) Explain what you meant by ‘apparently not taken into account’?

A I understood that patient rooms, where vulnerable patients were being cared for, had been provided where the air flow was flowing into the room, rather than cascading from the room to adjacent spaces, e.g. corridors.

b) What was the impact, if any, of this not having been taken into account?

A Increased patient risk and non-compliance with guidance.

99 At page 14 of your report, you do not make any specific recommendations in respect of the extract grilles, why not?

A I can’t recall why I didn’t make a specific recommendation for consideration to be given to moving the extract grille into ensuites, but this might have been because further investigation would have been required to determine if this would have been appropriate with the circumstances of the existing installation. I had made comment that could possibly have initiated these considerations by others. Similarly, in relation to the resilience of the systems, thermal wheels etc. I did suggest an urgent need to update the technical guidance, perhaps to make clearer the recommendations around ventilation installations.

Single point of failure

100 Why was a single AH unit with a single point of failure used in the TCT?

A I cannot answer this question.

101 You make recommendations such as introducing a second AHU and removal of chilled beams and replacement with a new duty/standby AHU. Were either of these recommendations followed up on? If so, by whom, and what was your involvement?

A I did not make recommendations to introduce a second AHU nor did I recommend replacement of the CBUs. I did recommend that the practicality of undertaking these actions should be explored, if these actions considered appropriate to improve the patient environment. The implications of undertaking such invasive works in an operational hospital are huge, particularly if the changes considered appropriate applied to all high risk areas and perhaps, to all ventilation installations.

If a special environment is required to ensure the safety of the care being provided to a patient and that environment is provided by a ventilation system, what is the potential impact on a patient's safety, when a system fails, or is being isolated to undertake planned and/or reactive maintenance, cleaning etc? Will the patient still remain in a space that is no longer functioning to provide the protective environment necessary for their safety? Will patients then need to be 'boarded' elsewhere during failure and or maintenance of the ventilation plant? Will alternative appropriate isolation facilities be available at the time of failure or maintenance activities? Who will organise and administer all of this? What happens in the event of an out of hours failure? These in my opinion, are some of the thought processes to go through when considering whether to go for a 'duty/standby' AHU arrangement or whether the associated risk to patient safety is 'acceptable' during the time it will take to get people on site and organise a replacement fan, or fan drive etc (some of the other options outlined in guidance that could be considered).

Again, I am not aware that subsequent actions that took place to replace ventilation plant and systems in the hospital, were as a direct result of my recommendations. Other reports were carried out be ventilation specialists and I think it more likely that these other reports would have been the source/reason for changes that were carried out. I was asked to provide internal feedback on technical reports, produced by others, and also to be at meetings where the options were being considered.

102 Was this recorded in the Board's risk register?

A I cannot answer this question

Corridor Ventilation

103 Why were split air conditioning units selected for use at the nurses station?

A I cannot answer this question.

104 Why was their use discouraged following a safety action notice?

A From memory, there was a previous Safety Action Notice that suggested the potential for condensation to be formed on cooling coils and then introduced in aerosol form into the patient environment. If this was considered a possible risk, this was perhaps a reason for cooling not being provided at the nurses station in Haemato Oncology.

105 How does/can the use of split air conditioning units impact patients and staff, if at all?

A I refer to my response to Q104. The patients are perhaps more susceptible to aerosol transmission in the air, but some staff may also be at greater risk than the general population if they have particular medical conditions or lifestyles, e.g. smokers, people with chest complaints, e.g. asthma, male, which are recognised as presenting a higher risk to Legionella infection.

106 To what extent, if any, have concerns regarding temperature in ward 2A been properly addressed by Ian Powrie?

A I cannot answer this question.

107 What are the benefits, if any, of introducing a positive pressure protection lobby in Ward 2A from an infection risk perspective?

A PPVL can provide both source and protective isolation. A lobby also provides the opportunity for gowning and decontamination/discard of gowns, handwashing etc before entry to and exit from the patient bedroom.

Thermal Wheels

108 What is your understanding of the SHTM guidance for the use of thermal wheels in healthcare settings?

A The guidance allows their use in appropriate locations.

109 What is the SHTM guidance for the use of thermal wheels in areas used to house immune compromised/ supressed patients?

A Guidance does not disallow the use of thermal wheels. Guidance is ‘silent’ on locations where their application might be appropriate. In these circumstances, the designer should assess the appropriateness of their installation, or whether an alternative heat recovery installation might be more appropriate.

From the latest SHTM 03-01 part A (2022) –

Page 64 – para 8.66, Air extracted from operating suites should not be recirculated as it may contain malodorous contaminants. **Note**: Where thermal wheels are used for energy recovery, the small leakage across them from extract to supply should not cause odour problems and is not considered aerobiologically significant. In any event, all the air supplied will pass through the final filter.

Page 99, para 9.66 - For most systems in healthcare premises, a plate heat exchanger, “run- around coil” system or thermal wheel would be appropriate. Selection should be based on the relative locations of the supply and extract units, ease of maintenance and practicality. Cleaning access will be required to both sides of any energy-recovery device. **Note**: Plate heat exchangers are the preferred option as they require the least maintenance to retain their energy transfer efficiency. Thermal wheels may be used, as the degree of air transfer from extract to supply is not sufficient to cause aerobiological problems and in any event the air will be filtered before being supplied to the user. Run-around coils are used when the supply and extract units are separate or in case of space problems.

Reference in the contract’s Engineering Specification recommended consideration of the use of Thermal Wheels, ‘where appropriate’.

110 Had you experienced working with thermal wheels in healthcare settings prior to QEUH?

A Yes.

111 What are the benefits, if any, of using thermal wheels in a healthcare setting?

A Energy efficiency / conservation and contribution to BREEAM targets.

112 What impact does to the use of thermal wheels have, if any, on the air changes rates in a room?

A Their inclusion into a ventilation system will inevitably present a resistance to flow, but this should be taken account of in the design, were all of the resistances created by all of the ventilation components, e.g. length of ductwork sections, bends, batteries, dampers, filters (clean and ‘dirty’) etc. The air delivery system would then be appropriately designed to provide the required pressure in the airflow to overcome the system resistances and deliver the required air flow rates and the desired velocities.

113 How do the use of thermal wheels impact patient protection from infection in ward 2A?

A There is a commonly held view, which is backed by evidence, I understand, that Thermal Wheels, (TWs) properly installed might be safe in all clinical installations, despite there being a recognition the air leakage might occur between extract and flow sections of the TWs, which, 'is not thought to be significant'. The significance of this potential could be from a perspective of energy transfer or in relation to the potential to transfer microorganisms. I understand that it is considered that the risk of any transfer of microorganisms between extract and flow would be caught at a filter, downstream of the flow section of the TW I understand the logic being applied, but all risk of possible cross contamination between extract and flow could be eliminated by using a Run-Around Coil (RAC) for saving similar amounts of energy, where the potential for cross contamination between air flows does not happen. Also, the effectiveness of minimising the potential of air flow mixing will rely on the efficiency of brush seals fitted against the TW, which presumably, will deteriorate through time and use.

In addition, the necessity of having to undertake periodic cleaning of the TWs, will necessitate the isolation of the ventilation plant to allow access for the cleaners, with all of the complications this will have to the patient environment, (although in fairness, the coils on a RAC will require periodic cleaning too). If the efficacy of the filter housing is compromised by the filter unit not being 'locked in' and 'sealed' to the filter housing, which may allow air from the TW to bypass the filter, there is a possible route and source of infection to the immune compromised patients in the ward. (As an aside note, from memory, WSG highlighted in their 2020 report that, in the system(s) they inspected, cam-locks were missing, meaning that there was a potential for air to bypass the filter media). For all of these reasons, I believe the energy-capture installation with the lowest risk would be the RAC. The decision in favour of TWs over a RAC, might be heavily influenced by the difference in the capital cost between the two options. Personally, I would prefer to eliminate the risk, irrespective of how small it is, but I appreciate that the economic

considerations might be thought by some as being acceptable to influence the decision to employ TWs if they believed that the associated risk was acceptable.

I never saw evidence of this kind of assessment / consideration, although it may have been applied and perhaps not recorded in the information I reviewed. I felt that the engineering specification was practically influencing the choice of a TW because of the efficiency parameters recorded in the document, which tended to be satisfied by a TW but not a RAC (Reference (hard copy) Document: New South Glasgow Hospitals – Specification Ventilation System – Ref: ZBP-XX-XX-SP-524-303 – Status: Construction T3 – Rev: B – Date: August 2012).

114 How did the use of thermal wheels in ward 2A contribute, if at all, to higher levels of infection in patients?

A I cannot answer this question.

115 Why were thermal wheels used in ward 2A?

A I cannot answer this question, but presumably as a energy efficiency measure.

116 What further action, if any was taken following your report in respect of thermal wheels?

A I don’t know.

Handover

117 In your report you discussed that required HEPA filters had not been provided or incorporated in the PPVL supply Terminal Grille in the Lobbies for each of the Isolation facilities. How did it come to be that HEPA filters were not provided/ incorporated? Would that be considered a derogation or not? If so, are you aware of whether this derogation was signed off by the Board? Provide as much detail as possible.

A I cannot answer this question.

118 Why was validation of room air permeability in the isolation rooms not initially carried out?

A I cannot answer this question.

119 What are the potential consequences, if any, in terms of patient safety, of validation not having been carried out?

A Validation is required to assess how the various commissioned components of the ventilation system will work together to deliver the designed outputs and functionality, e.g. How effective is the control system, e.g. the BMS system, the Fire system, e.g. operation of fire dampers, alarms, Cooling and Heating systems etc. Without validation, there is no assurance that all of the components of the ventilation systems will deliver the outputs and functionality expected from the design. There are numerous implications for patient safety, if all of the systems don't function safely.

120 Who was aware, if anyone, that validation was not carried out?

A I cannot answer this question.

121 how did the lack of validation affect guidance compliance, if at all?

A I cannot answer this question.

122 To what extent are you aware of any other aspects of the ventilation system in ward 2A that were not validated at handover? If so, provide as much detail regarding the impact too guidance compliance and potential patient exposure to risk?

A I cannot answer this question.

123 the system for monitoring the differential pressures was not installed at the Nurses Station, as discuss at page 18 of your report. To what extent did this meet the compliance requirements of SHPN 04-01?

A SHPN 04 Sup1 V10, Sept 2008, Page 17 Para 4.6 The object should be to keep the ventilation systems as simple as possible. Standby fans or motors are not required for either supply or extract. This is because the system as designed is robust enough to withstand fan failure without significantly compromising the level of protection. A flow sensor should be fitted to each system that will alarm on fan failure at a designated nurse station and the estates department.

SHTM 03-01 para 9.229 Visual indication that the AHU is operating within its prescribed parameters should be provided in critical areas at a manned staff location, for example, the reception or staff base. These need only take the form of a green light to show the system is operational and a red light to show that it is not.

So, not having these indicators at the nurses station would, in my opinion, be a ‘non-compliance’, particularly in relation to SHPN 04 Sup 1 as this applies directly to Isolation Rooms.

124 The conversion of PPVL to positive pressure in respect of isolation rooms was completed in March 2018.

a) What was your understanding of the background to this work being carried out?

A I’m not really aware of the detail of this or the background other than what was communicated to me and I recorded this and made some comment about it.

b) Why was positive pressure in isolation rooms not provided at handover?

A I cannot answer this question.

c) What is the consequence, if any, for the respective patient cohort not having positive pressure isolation rooms?

A I cannot answer this question.

d) Prior to the conversion works being carried out, how did the isolation rooms comply with the relevant SHTM guidance?

A I cannot answer this question.

e) To what extent, if any, are you aware of this being signed off by the Board prior to or immediately following handover?

A I cannot answer this question.

f) If so, why were the isolation rooms accepted without being positive pressure?

A I cannot answer this question.

Commissioning at Handover

125 At page 21 you write, that 'the technical oversight of the commissioning process, appears to have been deficient in several important areas' Provide details of the deficiencies and the areas impacted, include patient impact, guidance compliance.

A The lack of commissioning tests witnessed / signed off by the client, the inclusion of permeability testing, some of which, I understand was still being worked on well after handover and also the lack of validation.

126 When did the Sector Estates Management become aware that the commissioning process was deficient?

A I cannot answer this question.

127 What action was taken by Estates following this finding?

A I cannot answer this question.

128 What retrospective rectification was carried out and by whom? Who ordered this rectification?

A I cannot answer this question.

Planned Preventative Maintenance (PPM)

129 Describe the issues, if any, as you saw then, regarding PPM, Computer Aided Facilities Management (CAFM) and ZUTEC. In doing so, explain the impact this had on asset tagging, the consequences of any issues surround PPM & CAFM.

A My understanding is that ZUTEC was provided by Brookfield Multiplex as a solution of their contractual obligation to provide a CAFM system, which would encapsulate to PPM for the hospital. Each asset that is to be maintained should be specifically identified (i.e. tagged). This is the foundation for building the system of Planned Maintenance. Without appropriate identification of an asset, there is no effective way to plan or track any work being done on an asset. My understanding is that there was a ‘grace period’ after handover, within which a system had to be provided with the PPM loaded onto the system.

If the tagging is inaccurate or inappropriate, the foundation of the PPM would be dysfunctional effectively meaning that the PPM would be impractical to use.

130 Who was responsible for carrying out asset tagging?

A I believe it was a contractual obligation for Brookfield Multiplex.

131 When did it become apparent that asset tagging had not been carried out and to whom did it become apparent?

A I understand that it was an ongoing issue at handover and Mr Powrie was the person liaising with Brookfield Multiplex trying to get the problem resolved.

132 Describe your understanding of the impact of lack of PPM? Explain the potential impact to operations and potential patient impact.

A Ideally, the amount of unplanned reactive maintenance is minimised by Planned Maintenance of assets. The lack of planned maintenance inevitably means that the level of reactive maintenance is increased and it may also have compliance implications. Patients' care might be indirectly impacted due to increased asset failures which might affect the clinical services required to provide their care, (e.g. a failure of the PTS). If there were failures of assets providing a protective environment for patients, e.g. failure of an AHU, (without built in contingency arrangements), may give rise to an increased infection risk to patients.

133 What are the legislative/guidance requirements for PPM? At the time of writing your report did Ward 2A comply with the SHTM in this regard?

A The Health and Safety at Work Act 1974. There are requirements not to harm people from activities. The Management of Health & Safety at Work Regulations. There is a requirement to appropriately maintain systems in a safe manner. These responsibilities and obligations might be partially delivered through a reactive maintenance approach, but a planned maintenance is the most appropriate application. I'm not able to comment on the maintenance activities in ward 2A. Other Regulations also apply to the to the requirements to maintain systems.

134 Who was responsible for putting PPM in place?

A I cannot answer this question.

135 Are you aware of when PPM was put in place, and by whom?

A Usually, PPM is built up over a period of time from various sources, e.g. guidance recommendations, good industry practice, manufacturer's information. So, there is no specific date when you could say that PPM 'was put in place' unless the PPM is produced as a package as part of the contract. In these circumstances, the PPM system would be 'loaded' with the PPM regime for all properly identified assets and this would be 'ready to go' as

soon as it was required, i.e. operational PPM in place as soon as plant and systems are running. In my opinion, a planned maintenance, pre-agreed between the provider and the client, should be initiated as soon as plant and systems start to run (or are filled with water in the case of water systems, for example), which would be prior to handover in most cases, to ensure appropriate maintenance is in place over the whole life of the systems.

This could be achieved with a positive collaboration between the client's in-house team and the provider's contractors. If this was done, the PPM would technically already be in operation at the time of handover and would be much more effective than starting from 'scratch' at the point (or beyond the point) of handover of the hospital. This scenario would also allow the opportunity to refine any issues or ambiguities in the maintenance programmes, ensure PPM systems are running well and are fit for the purposes of appropriately maintaining all of the plant and systems to recognised standards, being consistently compliant with statutory obligations and it could also inform the level of technical and financial resources necessary to deliver the necessary programmes.

On this occasion, I understand that Brookfield Multiplex were to provide the PPM system and had a 60 day lead in period after handover to have this provided. I understand that their solution to this requirement was to provide the ZUTEC system. However, because of the issues experienced in tagging of assets (i.e. the identification of assets) and the troublesome experience with the functionality of the ZUTEC system, the ability to build up a PPM programme was not able to be effectively established at an early stage and the use of the ZUTEC PPM was delayed until the issues being experienced could be sorted out. I was aware that the Estates team attempted to create programmes of maintenance, tracking activities on spreadsheets etc. (Jim Guthrie had records of flushing of water systems, for example) and they were also responding to Reactive Maintenance Requests coming into the department from 'Users'. I was told that PPM information provided on ZUTEC was not in a 'user friendly' format and that it was 'taking days' to get any PPM

from the system. At handover, the excessive demands and the time available to the team did not allow the circumstances where focussed attention could be applied to getting things sorted, so the process of establishing, what one might consider to be an effectively operating, comprehensive maintenance regime. During my time with NHS GGC I worked with Alan Gallacher and a few other Estate's people to help improve the coverage of PPM (late 2018).

M&E Clarification Log

At page 24 of your report, you state:

This is a 'Pre Contract' clarification Log. Given the scale of the derogation from the SHTM recommendations, one may have a reasonable expectation that the Board's Technical Advisors, (Wallace Whittle and / or Currie & Brown) would have fully assessed the implications of the proposal and scrutinised it in detail and advised the Board accordingly. A complication in the technical adviser arrangements at that time, was ZBP, (Brookfield's M&E Designers), went into receivership mid-contract and their 'design liability' was apparently assumed by Wallace Whittle's London office. This arrangement was put in place to allow a separation of independence of the two roles that Wallace Whittle were now performing, because of a potential conflict of interest.

136 Describe in detail the scale of the derogations from SHTM recommendations.

A I am unable to describe the 'scale of the derogations from SHTM recommendations', but the one I focussed on was the derogation of the recommended air change rates in the SHTM 03-01.

137 What was the role of Currie and Brown/ Wallace Whittle as technical advisors?

A I cannot answer this question.

138 Who was responsible as technical advisor for NHSGGC? Should the have been aware of derogations? Would you have expected then to have given advice regarding the derogations to the Board?

A I cannot answer this question.

139 What advice would you have given if you had been in the role of technical advisor?

A I cannot answer this question. I do not have all of the information that was available at that time to allow an informed response.

140 You state that Ward 2A is not compliant with SHTM03-01 having 2.5ACH, who signed off this derogation and why?

A The Board signed it off but I cannot answer the question why.

141 How accurate is Brookfield Multiplex's comment that 'providing 6 air changes is energy intensive and not necessary'? Explain your reasoning.

A Providing 6 air changes is more energy intensive (Generally, the provision of larger, more energy intensive plant would be required to provide the necessary ventilation rates if CBUs were not installed) , but I would disagree with the statement that it is 'not necessary'.

General - Ventilation

142 The ventilation report was delayed pending the L8 waster assessment taking place at the same time. What are your views, if any, on the effect this delay had on the operation of the ventilation system and patient safety?

A The ventilation report wasn't delayed 'pending the L8 water assessment taking place at the same time'. I was asked to carry out a brief investigation into what had happened to the '2015 DMA Canyon Risk Assessment Report'. The work I was asked to do on the ventilation was 'observational' to provide comments to assist consideration of others preparing a report. I don't consider the information contained in the report would have had much, if any

significance to the operation of the ventilation system. The ventilation system was being reviewed by other ventilation specialists.

143 Why did the L8 water assessment Take priority?

A See answer to Q142 above for context. It had just recently emerged that there was a Risk Assessment report carried out in 2015 by DMA Canyon that had recommendations that had not been appropriately actioned; nor had it apparently been communicated out with the Estates Department.

144 Who determined this priority?

A I don't know.

145 When you completed your report who did you deliver it to?

A Jane Grant

146 Are you aware of your report having been shared with infection control staff? And if so, to whom?

A No. I can't recall being advised about, to whom, if anyone, this report was shared with.

147 How aware where are you of concerns being raised by members of staff, clinical and/ or non-clinical, at NHSGGC regarding the operation and safety of the ventilation system in ward 2A? If so, what were these concerns, when did you become aware of these concerns, and who held these concerns?

A Mary Anne Kane had, in conversation in August 2018, told me that Brenda Gibson, the 'Lead Paediatrician' did not consider that 'Wards 2A & 2B were fit for purpose'. However, from memory, I can't recall if this view was expressed of the facilities at handover or at a later point in time. In conversation with Ian Powrie, I believe Ian expressed concern about the capacity and resilience of the installed system, but I can't be certain of when this was. I am aware that Teresa Inkster led investigations into the adult and paediatric BMT in 2015. I was also aware that there were concerns in May / June 2018 about the ward's environment following a spike in infection rates and that new patient

admissions had been curtailed as a precaution and patient treatments had been affected. There was concern about biofilm growth in the drains of the ward's water appliances. Action was being taken (which started on 5th June) to undertake a room by room decontamination with Hydrogen Peroxide Vapour to 40 rooms in Wards 2A&B. Chilled Beams had been sampled for contamination, but results of samples had returned 'negative'. The Scottish Government had recently requested that HPS conduct a formal investigation into Wards 2A&B.

148 What work was carried out following the recommendations in your report?

A I am not aware of any work being carried out as a direct result of my report. Work and various actions were already being taken prior to my involvement, which continued after my involvement.

Review of issues relating to hospital water systems risk assessment

149 We have a copy of your review of issues relating to hospital water systems risk assessment dated the 26th of September 2018 refer to estates communication bundle document 134. The report states that in August 2018 the board CEO asked you to review the context circumstances relating to the boards response to DMA risk assessments findings. Who was the boards CEO at the time?

A Jane Grant

150 What was the background to you being commissioned to review the context and circumstances relating to the boards response to DMA risk assessments' findings?

A The background was: NHS GGC just had 'special measures' implemented by the Scottish Government in March 2018, installing an Oversight Board to 'support' the NHS GGC Board. This meant that everything relating to activities of NHS GGC was receiving additional, detailed scrutiny, particularly relating to the issues that were emerging and the concerns being expressed in the media, all of which had attracted a great deal of negative public attention. I

think that HFS, in their draft report, after having received a bundle of electronic information from Ian Powrie that had included a copies of the DMA risk assessments, had highlighted that recommendations in relation to DMA water risk assessments should be completed.

I believe this may have emerged, through a comparison of the recommendations of the 2015 and 2017 DMA Canyon risk assessments, that there was little difference in the recommendations, which had the implication that the initial recommendations had not been actioned appropriately. I understand that the information about the DMA risk assessment had been brought to the attention of Jane Grant, who had challenged Mary Anne Kane about the apparent lack of action on the recommendations of the report. Ms Kane had told Ms Grant that she had not known anything about the report and would need to find out more about it. Ms Kane had discussed this situation with Ian Powrie and Alan Gallacher and I understand that this discussion led to the realisation by Ian Powrie that the report had not been actioned appropriately, nor had it been communicated above him in the management line, which meant that no one in the management line (above Ian Powrie) was aware that this report existed. In addition, there was no indication, that I was aware of, that the initiation of the request to get the risk assessment carried out at the behest of the 'Project Team' (i.e. relating to the minute of a meeting of, I think, a technical sub-group of the project had seen the report at some point), had been followed up by anyone on the Project Team to find out what had happened. In March 2018 the Scottish Government formally requested HPS to investigate and report on wards 2A&B.

151 Why where you selected for this role?

A I don't know. I wasn't informed why I was selected to carry out the investigation.

152 Were HPS/HFS involved in your instruction? If so, explain how and why?

A I am not aware of HPS/HFS being involved in any instructions given to me in my time at NHS GGC (apart from being told that comments about ventilation

might assist consideration by Annette Rankin at HPS, but I was not aware of any influence or request by HFS/HPS related to instructions given to me when I was at NHS GGC.).

153 What background information was provided to you by NHS GGC prior to you carrying out this review?

A I met with Jane Grant initially, (12th July 2018) and she asked me to conduct an investigation into what had happened with the DMA Canyon Risk Assessment Report. I had indicated that, from what I knew about the differences in the two DMA reports (2015 and 2017), it appeared that the 2015 report might have been missed, but I would try to find out not only 'if' it was missed, but also try to make some assessment about 'why' it might have been missed. This was a short meeting in her office. She was aware that Estate's staff were under a great deal of pressure and was mindful about the possible additional pressure an investigation like this might bring upon staff. She asked me to meet with Ann McPherson (Director of HR) to discuss how the investigation might be implemented. I had access to files on ZUTEC. I had read and highlighted salient comments on a Risk Assessment, (dated May 2017), carried out by Dennis Kelly, the Board's AE(Water) in May 2017, which, I understand was the AE's first involvement with the QEUH/RHC water system. He had made several references to the DMA Canyon 2015 risk assessment, encouraging actions to conclude the DMA recommendations.

154 What was the remit of this report?

A On 19th July 2018 at 17:00Hrs, I met with Ann McPherson in her office in the JB Russell Building to discuss the proposed investigation. It was suggested I look into activities from 2014 and to try to find out 'who got what, and when' and use a template of questions to also try to find out 'why' things happened. A list of people to be asked these questions at set interviews would need to be developed which would be informed by 'who was involved' at the time. She indicated that the investigation 'may, or may not lead to disciplinary action', if this was appropriate, but this was not the primary reason for the investigation. The primary reason for the investigation was about the 'incident and to

establish the facts'. It was expected that the investigation would take 3-4 weeks. I was informed that I would be supported by 'admin and HR' during the investigation and that Ms McPherson would now try to organise this support for me. I wrote to Ms McPherson on 31st July asking for an update on her progress with organising support for the investigation and she informed me (on 31st July), that Gillian Gall, HR Officer at NHSGGC would provide HR support and Allyson Hirst (Nee Barclay) would 'scribe' the proposed interviews.

I contacted Ms Gall and Ms Hirst on 31st July and I developed a draft question set for the basis of the interviews. I sent the draft questions to Ms Gall and Ms Hirst and met with them both on 3rd August to discuss the question set and develop how the investigation would proceed and a template communication was drafted to be sent to those that were to be interviewed. It was considered that staff might be nervous about what might emerge from an investigation like this and Gillian would therefore make consultations with Staff-side representatives about what was being proposed. I began with an initial discussion with Ian Powrie on 3rd Aug about whom it might be appropriate for me to speak with, knowing Ian would be on the list of people to be interviewed. The draft questionnaire, from memory, was communicated to Staff side as a matter of courtesy.

155 Was the remit provided to you in writing? If so are you able to supply the inquiry with a copy of this written remit?

A No. There was no 'written remit'.

156 At 1.1 of your report, you write that you were to 'review the context and circumstances of the Board's response …' What did you understand the meaning of the 'review' to mean?

A See answer to Q154.

157 What inspections or investigations of the physical water system did you carry out prior to writing your report? How many occasions did you visit QEUH/RHC for the purposes of preparing this report? When did these visits take place, how long were they in duration? What aspects of the water system did you review?

A I did not undertake any physical inspection of the water system in connection with writing this report. I wasn't reviewing the physical water system. I was reporting on what happened to the DMA Risk Assessment report and explored the circumstances surrounding why the response to the report was apparently lacking.

158 At paragraph 1.4 you refer to your report as being a 'brief review', why was did you view the report as a brief review? Was this part of your remit? Did the curtailed nature of your inquiries hinder the fulfilment of the remit of your instruction? Were there things you would have liked to have looked at, but could not, or areas that you would have liked to have looked at in more depth? Please provide details.

A I was trying to find out what happened with a report delivered to the Board. I was carrying out a high level report trying to corroborate facts where I could. I was not examining the information I got in much detail. It was always expected to be a brief review and originally anticipated to take around 3-4 weeks, but the allocation and availability of HR and Admin support, the consultation with staff side and the availability of people on the interview list, (due to annual leave and other commitments etc), meant that the timescale of information gathering took longer than expected. The recorded information had to be checked for accuracy by me and then put to the individuals to agree that the information fairly reflected what they had said. I then had to consider the information I had gathered and I had then to shape it into a report with the findings I considered appropriate.

159 Did you interview or speak to any members NHS GGC estates staff for the purposes of carrying out this review? If so, provide details of staff, including names, occupation along with the reason you interviewed them, what information regarding the DMA risk assessments were the individuals able to provide you?

A a) Yes. b) Colin Purdon, Estates Officer, Mary Anne Kane Interim Director of Estates and Facilities, Ian Powrie Estate Manager, Jim Guthrie Estates Officer, Melville McMillan Estates Officer, Phyllis Urquhart Compliance Officer, Tommy Romeo Estates Officer and William Hunter General Manager. Some individuals were interviewed as they were directly involved in the operational management of engineering systems or were the line managers of individuals. The information they provided me with formed the basis of the report that I produced. They gave me information about their professional role and experience, where they were and what they and others were doing in the lead-up to the handover of the hospital, what they and others did, or did not do, in relation to the DMA risk assessment and what they had been doing since then. The information they gave was on the basis of their testimony being confidential and non-attributable.

160 Were the individuals compliant with your request for interview?

A Yes. Most were very open in providing information. Some were a bit guarded and whilst they answered questions to the best of their recollection, they did not offer much additional comment.

161 Did you encounter any difficulties speaking with any members of staff? If so, who?

A I would perhaps have liked to speak with a few others to seek further triangulation, clarification, or corroboration but this was difficult as they had left NHSGGC, retired, moved to other organisations or were external to the organisation. David Bratty, Alan Seabourne, David Loudon, Frances Raft etc, but I felt I had sufficient information to arrive at reasonable conclusions.

162 Did you interview or speak to any members of NHS GGC infection control staff for the purposes of carrying out this review? If so, provide details of staff, including names, occupation along with the reason you interviewed them, what information regarding the water system and the DMA risk assessments' were the individuals able to provide you?

A No.

163 Were there individual(s) you would like to have spoken to, but did not get the opportunity to do so? If so, who would you like to have spoken to, and why? What do you think they could've added to your investigations?

A See answer to Q161.

164 Why were you not able to speak to retired staff or staff no longer employed by the board? What impact did this have the outcome/ findings of your report?

A Speaking to others could have corroborated some important detail and might have been able to confirm and / or corroborate some of the other information I had, but I thought that the information I had was sufficient to arrive at reasonable conclusions. Therefore, I did not request to speak to retired staff or staff no longer employed by the Board.

165 At paragraph 1.4 you write 'it is thought that a good level of confidence can be assumed in the accuracy of the high-level findings' given that you were unable to speak to members of staff call my how where are you assured of the accuracy of your findings? How much of a degree of confidence did you have in your own findings? We are there areas where your level of sighting what is relatively low, and you had to work off best estimates? If so, did this impact your confidence in your findings?

A I tried to corroborate the information I was getting from more than one source. I generally assumed that the information I was getting, for the most part, was each individuals' best recollection of what had happened from their own perspective and I think it helped that people were assured that information provided would be in confidence and non-attributable. I thought I had a good level of confidence to arrive at the conclusions I reported. The area of greatest

difference was in people's recollection of the actual physical receipt and passing off of the risk assessment report. Had I concluded that I should recommend disciplinary action as being appropriate, I think I would have had to seek more conclusive findings, but since that was not the case, I was relatively confident in the findings.

166 Did you have difficulties speaking with any members of infection control staff? If so, Whom?

A No. I did not speak with any members of infection control staff as part of the investigation.

167 If you did not speak to infection control staff explain why?

A From the information I had, Infection Control staff were not included in the process of procuring or receiving the DMA Canyon Risk Assessment report and therefore didn't need to be included in the investigation about what had happened to the report.

168 Are you aware of a forensic review having been carried out following your report? If so, please describe your understanding of the findings. If not, are you able to confirm why this recommendation was not followed up by NHS GGC?

A I am not aware of any further forensic review of the situation surrounding the actions related to the receipt of the DMA Canyon report having been carried out as a follow-up to my report. I am not able to confirm why further scrutiny was not applied nor am I aware of the considerations that were applied in arriving at that conclusion.

The water system at QEUH

169 What did you understand to be the main sources, guidance, regulations etc for governing the operation of the water system?

A There are many sources of legislation, regulations and guidance that are applicable for governing the operation of water systems. There are fairly comprehensive lists of references of these Acts, Regulations, and various guidance documents, Codes of Practice, British & European Standards etc, listed, for example, at the end of the ACOP L8, SHTM 04-01Parts A&B and HSG 274 (particularly Parts 2 & 3) and these documents also give guidance on the important and necessary areas of compliance.

I won't replicate all of these here. From an operational perspective, the documents, SHTM 04-01 Part B (and several other parts of the 04-01 series) and L8, HSG 274 would be helpful references governing the operational management of hospital water systems. The principal legislation relating to water systems is the Health and Safety at Work etc Act 1974. The Management of Health and Safety at Work Regulations 1999 and the Control of Substances Hazardous to Health Regulations 2002, (made under the HASAW Act), make specific requirements for risk assessment.

These regulations apply to the control of Legionella, embodied in the Approved Code of Practice and guidance document, 'Legionnaires' disease: The control of Legionella bacteria in water systems', (known as ACoP L8, mentioned above). I understand that the Water Supply (Water Quality) (Scotland) Regulations 2014 has implications for water system operational management, but the focus of this legislation is largely focussed on the supply of water. The Water Supply (Water Fittings) (Scotland) Byelaws 2014 has implications for the materials used in a water system (which should be compliant and 'approved', by the 'Water Regulation Approval Scheme, (WRAS).').

170 What, in your view, are the most important requirements which those sources set?

A The important overarching requirement is to have a structured, risk-based approach to the management of water systems and for trained, competent and formally appointed people to comprehensively apply the associated guidance to satisfy statutory requirements and, as far as reasonably practicable, maintain and operate safe systems, remove and / or mitigate identified risks and to keep appropriate records including systems' drawings, risk register etc, which should all be reflected in a Written Scheme supported by Standard Operating Procedures. All of these operations, such as the organisation's Water Safety Plan, (as now reflected in BS 8680 (2020) Water Safety Plans), should be overseen and co-ordinated by a Water Safety Group with appropriate reporting lines (reflected in the WSG Terms of Reference) to ensure appropriate organisational governance oversight.

171 Who has ultimate responsibility for the operation of the water system at QEUH?

A The Chief Executive has ultimate responsibility as the Duty Holder. The practical, day-to-day management / implementation of policy aspect may be delegated but the ultimate responsibility cannot be delegated.

172 When you first encountered the water system at QEUH, was the allocation of that responsibility made clear in the arrangements in place for operating that system?

A I didn't initially examine the overall structure and how this was applied in the organisation as a whole, but I became aware that the existing water management structure was not sufficiently clear and improvement in the QEUH/RHC structure could be made by further formal training and formal appointments to defined positions of responsibility within the water management structure.

173 What would you expect to see in place, in order for responsibility to be properly allocated?

A The typical basic structure of hierarchy of responsibility, in order of responsibility, can be viewed in SHTM 04-01 Part B (July 2014), page 37, which indicates the CEO as the Duty Holder carrying 'Ultimate responsibility', with the operational aspects of this role delegated to the Management Team – Duty Holders (Accountable for the Operational Policy). Independent Legionalla Risk Assessor/Professional Advisors and Authorised Engineer Professional Assessor. A Designated Person (Water) carrying executive responsibility (and preferred chair of the Water Safety Group, (WSG)). A WSG undertaking a co-ordinating role for water safety, with input from the Consultant Microbiologist. A typical hierarchy is, the Responsible Person (Water) (and optional Chair of the WSG) is placed under the WSG, then the Authorised Person(s) (Water) (Estates Officer) and then Competent Persons (Water), Maintenance Technicians, Contractors, Tradespersons etc under the Authorised Person (Water). The typical structure, given in the SHTM would need to be applied in a way that suited a complex organisation the size of NHSGGC and the typical structure would need to be practically applied to ensure a proper and practical oversight of all of the water systems, in all properties within each of the Sectors of the organisation and to adjust the structure to reflect any significant changes or additions to the organisation's property portfolio.

174 Who was the duty holder at the time of handover of QEUH/RHC in January 2015? Who was the duty holder at the time of carrying out your report?

A The CEO at the time of handover in January 2015 was, I believe, Mr Robert Calderwood. I don't know, to whom the day to day responsibilities of the Duty Holder would have been designated to at this time, but this might have been Mr Grant Archibald and Mr David Loudon (as recorded in the DMA document 'Written Scheme for Legionella Control' - Queen Elizabeth university Hospital (Adult) & Royal Hospital for Sick Children – December 2016 Update). Mr Archibald was the Chief Operating Officer and Mr Loudon was the Project Director / Director of Estates & Facilities until he left the organisation in

December 2017. I understand that Mr Loudon was appointed as Project Director in June 2013 to replace Mr Seabourne, who retired in July 2013; following the retiral of Mr McIntyre in 2014, I understand that Mr Loudon became the project Director & Director of Estates and Facilities. It is his professional role that leads me to conclude that the day to day responsibilities of the Duty Holder may have been within his role, but I don't know if this was formalised. At the time of me carrying out my investigation and producing my report, Ms Jane Gant was the CEO. I am not aware of arrangements to delegate Duty Holder day to day responsibilities to another individual following the departure of Mr Loudon in December 2017. I am aware that Ms Kane became the Interim Director of Estates & Facilities after Mr Loudon left the organisation. Mr Loudon and / or Ms Kane would be able to confirm the nature of any handover discussion or reference to Duty Holder (water) responsibilities.

175 To what extent was it clear that the obligations to appoint an authorised person/ designated person for water/ competent person for water/ authorised engineer for Water, required to discharge water supply safety, had been complied with at the time of writing your report? What awareness did you have as to when these roles had been filled? If there are any delays in filling these roles was this a factor in any deficiencies that you identified?

A At some point in time, (I can't recall when exactly), I became aware of an audit, carried out by Dennis Kelly, the Board's AE (Water), which might be helpful in providing some context/background to this answer. On 4th May 2017, Dennis Kelly (AE(Water)), produced a 'Legionella Management and Compliance Audit – Domestic Water Systems for the QEUH. He records the 'Staff Interviewed' (at QEUH) as Tommy Romeo, Estates Manager and Phyllis Urquhart, Compliance Manager. I understand, from subsequent conversations with Dennis Kelly, that this was the first time he had been involved with the QEUH. The 'Executive Summary' in his audit said, "Given the findings of this audit, and the gaps in the existing risk reduction systems and processes, in the event of a legionella based incident at the hospital NHSGGC would not be

in a strong position with regards to its stance on risk reduction and compliance with existing guidelines. The Hospital is now in full use.

The current risk assessment was completed over two years ago and prior to the hospital being fully opened. There is therefore a need to complete a new risk assessment, and from that, define the required tasks in a new and updated written scheme. It is worth noting however that there is not a complete absence of risk reduction processes and procedures at the hospital. There is an existing system in place. This system was created by the previous Estates' manager. The system does contain many of the required monitoring and control tasks and these are being recorded in a paper-based log book. However, the system appears to be in places haphazard. It took some time to go through the paperwork and define what was happening in the hospital from a water point of view. There are tasks missing and also there does not appear to be an escalation and recoding of remedials process. As the hospital is extremely large and complex, it may be beneficial, and may also increase efficiency and levels of compliance task completion, if an electronic based planning, control and recording process for the legionella-based risk reduction processes and procedures was considered.

There are recommendations below for improving the execution and recording of the required tasks and for clarifying some of the confusion and the issues that exist in the current paper-based system. With regard to competency, there is an urgent need for training to be delivered to the Estates' manager who currently appears to hold the responsibility for the delivery of the required processes and procedures. There is a lack of clarity in the paper-based system of who is accountable for what and of the competencies of the involved NHS GGC staff and the contractors that are used. It should be pointed out that there in not an authorised person for water in post at the QEUH. In summary, there is currently a delivery of many of the perceived required processes and procedures. However, it needs to be reviewed in order to meet the required compliance standards, and to ensure that a

reduced level of risk is maintained. The delivery of the processes should be based on a new risk assessment.

This will help to define the actual current requirements which will be defined by the risk assessment. There is also a need to clarify the management structure, and also to ensure that all involved personnel, from both NHS GGC and also contractor's staff are trained and have an adequate level of competency in order to deliver the required level of water-based risk reduction in the QEUH".

I am not aware where, or to whom this report was escalated to, or if it was escalated. I also became aware, (I can't recall when, but this may have been in connection with another piece of work I was asked to do later on, to refresh the Board's Written Scheme for Water), of a DMA document, 'Written Scheme for Legionella Control - Queen Elizabeth university Hospital (Adult) & Royal Hospital for Sick Children – December 2016 Update'. Within this document, there was a Written Scheme Hierarchy Appointment Timetable, with names beside each of the designated positions. (Within the document there is no reference about who initiated the 'Update', nor to whom it was provided (apart from a footer, which said, 'Ensure all actions are recorded and stored in the L8 Legionella Logbook, QEUH WSG (2016), Written Scheme (Legionella)'. Given that this document was an 'update', it demonstrates that various functional management requirements were recorded as being present in NHSGGC.

When I started with NHSGGC, some point early in my work in connection with my assistance on responding to the Draft HFS report around June 2018, I asked Mary Anne Kane about the water management structure at the QEUH/RHC. Her response indicated that there remained similar weaknesses, (e.g. on training and formal appointments to designated water roles), such as those identified by Dennis Kelly in his audit from the previous year. I suggested to Ms Kane that urgent action would be necessary to get people trained and suggested that she should quickly initiate a training programme

for Estates staff. I suggested inviting trainers into the hospital to deliver the training to groups of staff (rather than sending individuals away to training facilities). This would save time and in getting the necessary numbers of staff trained and formally appointed.

I sent excerpts of guidance documents that I had highlighted and provided brief comment on, to give a broad appreciation of the statutory requirements relating to the management of water systems. I also provided templates of formal AP appointment letters and some other documents that I thought might help appreciation of requirements. Ms Kane made the necessary arrangements and at the time of writing my report in September 2018, I was able to report that, “the training of all appropriate staff on water systems has been completed: All necessary formal appointments have been made: There is a robust management structure in place for the management of the hospital’s water systems: The latest report from the independent Authorising Engineer records significant improvement in the Board’s approach: The recommended actions from the L8 Risk Assessment have been successfully managed..”.

176 To what extent was it clear that the roles required in respect of legionella required to discharge water supply safety had been complied with at the time of writing your report?

A Please refer to the answer to Q174 and Q175 above.

177 Were are the lines of responsibility clear?

A Please refer to the answer to Q174 and Q175 above. At the time of writing my report, the lines of responsibility had been clarified and improved.

178 If not, what in your view was lacking from them?

A Please refer to the answer to Q174 and Q175 above. Arguably, the solution to the issues identified with the management structure in assessments and audits, should have been implemented prior to the handover of the hospital. Had the water management structure for the QEUH/RHC been in place at the

time the water systems were filled with water, (at the latest), and in place preferably prior to the filling of the systems, in order that the filling of the systems could be planned and executed in partnership with the contractor, the necessary operational preparedness (i.e. training, formal appointment etc of Designated internal roles etc) along with the input of the Board's AE(Water) would have had the opportunity to seamlessly pick up the management of the water systems at the handover of the hospital. Also, arguably, had the formal management structure been in place at the run up to handover, the handling of the 2015 DMA Risk Assessment and the subsequent follow-up actions may have been significantly improved.

179 How clear was it to you that arrangements were deficient?

A Please refer to the answer to Q174 and Q175 above.

180 Did you consider recommendations for improvement of them to be within your remit?

A Yes. Please also refer to the answer to Q174 and Q175 above.

181 If so, what actions are you aware of being taken by NHS GGC in order to improve the situation?

A Please refer to the answer to Q174 and Q175 above. I was impressed with how quickly Ms Kane acted and resolved a situation that was in need of improvement after I brough this to her intention.

182 What effect did your actions have?

A Please refer to the answer to Q174 and Q175 above. I think my input was helpful.

183 In your view, have any such short comings been fixed?

A Yes. The current situation at the hospital is, I believe, commendable, and the management of hospital water system is exemplary.

Water Executive Group July 2018

184 Please set out your understanding of the requirement to have a water executive group in place for governing the water system at QUEH.

A I don't believe that there is a 'requirement' to have a 'Water Executive Group' in guidance.

185 From when what is the water executive group in place?

A I think that the Water Executive Group (WEG) started on or before the 18th July 2018 and ran to 18th September 2018. There is a, however, a reference in the Minute of the Water Review Meeting (Technical) of the 8th June 2018, that the Water Executive Group's first meeting was planned for 15th June 2018.

186 What was the purpose/ intention of the water executive group?

A I think the WEG may perhaps have been thought appropriate from the consideration of recommendations made by Susanne Lee in the report she produced in April 2018 to review and improve the activities of the Water Safety Group and to have greater input from Infection Control. In addition, the demand for information being requested from the Scottish Government, the Oversight Board (formed under the national support framework's 'special measures', invoked by the SG in March 2018), Health Facilities Scotland, Health Protection Scotland, Media and the Board's own internal senior management, was significant and it was increasingly difficult to ensure the appropriate information was being gathered and produced to answer the questions being asked within timescales that were required, e.g. for FOI requests.

I believe it was considered necessary to coordinate and track the information going to the various requesters. It was useful to have a record of what information went to whom and when that information was provided, as there were many duplicate requests (even from the same sources, but perhaps by different people). The tracking of the information being sent out helped to ensure the organisation had appropriate records, which also assisted on

compliance with FOI and GDPR obligations. The WEG was chaired by Jonathan Best, Chief Operating Officer for NHSGGC, which also gave a direct oversight link to the Board's Executive Team.

The group picked up the various actions being noted and actions to resolve issues, get information, etc, were identified and were taken forward by the teams of the individuals represented, e.g. Estates and Facilities via Ms Kane and Infection Control via Mr Walsh. In an SBAR dated 5th July 2018, written by T. Walsh to J. Best, there is a recommendation which says: "To provide optimum support to the internal and external review processes a structured approach to communication, review and management of documentation, and local coordination of resources is proposed. This will be led by the Interim Chief Operating Officer supported by the Interim Director PPFM and the Board's Infection Control Manager. The Board's Infection Control Manager will act as a single point of contact for both internal and external colleagues.

The coordinated approach will focus on three primary and interlinked work streams: 1. Review and management of all relevant documentation and written communications to support the SG commissioned external review and the GGC internal review. 2. Ensure that the QUEH/ RHC water reports have been reviewed and all actions are either completed or in the process of being enacted with clear evidence, and 3. Liaison with and support to the internal review process when commissioned. Regular meetings, (2 or 3 per week), have been arranged to monitor and review progress given the high priority and tight timescales". This, I believe, would reflect the intended purpose of the Group.

187 Did you participate in the water executive group? From when?

A Yes. June/July – Sept 2018.

188 How well did the group function? Did the group achieve appropriate engagement among necessary participants?

A I think that the group functioned well and helped to manage and keep track of communications. The group participants collaborated well to gather the necessary information to answer all of the questions timeously and to initiate appropriate actions.

189 Were its activities properly recorded?

A Yes. Allyson Hirst (Nee Barclay) took and recorded notes of each meeting.

Water Review Meetings July - September 2018

190 Please set out your understanding of the purpose of the water review meetings which took place between July and September 2018.

A I understand the notes of the 'Water Review Meetings' were for the Water Executive Group. My understanding of the purpose of the Group is described in the answer to Q186 above.

If the meetings referred to here, refer to the Meetings that were designated the, 'Water Review Group (Technical)', Chaired by Mary Anne Kane, the purpose of that group was, as I read in a 'Timeline with reference to HFS Water Management Issues Technical Review', notes that, "6.4.18 Water Review Group (Technical) convened as a subgroup of IMT". The meeting gave Ms Kane a better appreciation of actions taking place and allowed 'a space' where all of the actions being taken by Estates in relation to the water systems could be discussed. I believe Alan Gallacher tracked the various action on a 'Smart Sheet' spreadsheet.

191 Describe your role and involvement in the water review meetings between July and September 2018.

A In relation to the Water Executive Group – my role was to help with a review of applicable guidance and also to support Ms Kane (from an Estates perspective), to update the group on activities that I was directly involved in

and to carry out any actions that were assigned to me. With regard to the Water Review Group (Technical), I recall attending one or two meetings. My role at these meetings was fairly peripheral and to offer occasional observations and to helpfully engage with anything I thought appropriate.

192 How well did the meetings function? Did the meetings achieve appropriate engagement among necessary participants?

A I think the Water Executive Group meetings functioned well and served the desired purpose. The Estates and Facilities and Infection Control departments were directed/informed via Ms Kane and Mr Walsh respectively. The Water Review Group (Technical), I attended, had a quite an intense atmosphere, which I put down to the emerging serious and unique issues they were trying to address. The meetings were attended by a large number of people including various people from Estates & Facilities, Microbiology (Dr Inkster Dr Hood), Infection Prevention and Control (S Devine), HPS (A Rankin) and HFS (Ian Storrar and Eddie MacLaughlan) and Clinicians.

193 Were its activities properly recorded?

A Allyson Hirst (Nee Barclay) took notes of the meetings.

Water Incident 2018

Refer to estates communication bundle Page 938 when considering your answers. It was noted on several occasions to the SHI team that access to the Estates Communication Bundle could not be achieved. An attempt was made to 'reset' access to the bundle, but this didn't work either (confirmed again by me to Tom Gallagher on 9th July 24), so answers are provided without the advantage of accessing this information. The issue was resolved on 10th July.

194 At the time what was your understanding off the water concerns which emerged at QEUH/RHC in 2017 2018? In relation to the concerns:

a) When did the concern arise? Put set a timer.

A I think suspicions started to emerge in January 2018.

b) Nature of the concern?

A I believe that a patient infection was related to an unusual microorganism (i.e. not routinely encountered) in January 2018. I think this caused Microbiology colleagues to look back at a similar infection in the same patient group that had taken place in 2017, which had, at that time, I think, may have been considered as an isolated, single incident.

c) Possible cause of concern?

A Others may be able to more accurately answer this question, but I think that the cause of concern was that the source of the microorganism (Cupriavidus, I believe, from IMT Minutes) might have indicated a second case from the same kind of unusual organism indicating the possibility of contamination in the hospital water system and if this was the case there was an urgency to try to determine if the possible source was localised or otherwise. From IMT minute in March 2018 it was noted that Stenotrophomonas and Sphingomonas had been identified on ward 2A.

d) What actions were taken in response to concern?

A IMT - Water tests were carried out in the water tanks and in the Aseptic Pharmacy. Both tests were negative. Testing of taps and showers. Water testing frequency was significantly increased particularly in ‘High Risk’ patient areas. One water outlet tested positive. Twice daily cleaning of taps with ‘Achticlor’ in 2A. Shock dosing with Silver Hydrogen Peroxide took place and shower heads and taps were replaced as a precaution and shortly afterwards. A week later (on 16th March 2018 according to the timeline and IMT minutes, confirmed by the HPS report) the decision was taken to fit Point of Use (PoU) filters to the water appliances and these were fitted in 21st March 2018. It was noted in the IMT minutes that communication with the parents of patients was to take place via Emma Somerville, who was to inform them that a problem with the taps had been identified and was being rectified and it was

recommended that the Parents and patients should ‘still use bottled water for drinking and washing hands’. This was obviously a precaution that had been implemented before 6th March 2018. The use of patient showers on ward 2A had restricted from 9th March 2018 according to the minute of the IMT dated 9th March.

e) How sufficient were these actions?

A At this point in time, I think the team thought they were dealing with something fairly localised, hypothesised to be potentially related to ‘tap cleaning’ and they were following what they thought to be reasonable actions in line with what is reflected in guidance. Retrospectively, if the hypothesis arrived at is not accurate, the focus of action on one particular activity, e.g. tap cleaning, might be masking attention to more meaningful action that may be required elsewhere.

f) Can you identify any specific feeling which led to any concerns?

A Personally, it was concerning to me that NHS Scotland had, for years, been ‘looking’ for Legionella and then after the ‘incident in Belfast’ we were concerned about looking for Legionella and Pseudomonas when water-testing took place. I was concerned that the references I was hearing about other potentially harmful, possibly water-based microorganisms, that were largely not recognised in any testing protocols in any hospital, that I was aware of, could have such a concerning patient impact, particularly to patients with significant health issues who perhaps could be most vulnerable due to the suppressed nature of their immune systems.

Report - High level findings.

195 What was the implication of the change from a PPP to Treasury funded procurement model on the post contractual arrangements for FM service provision?

A I believe that the decision to change to a treasury funded project may have been announced in 2007, (at the time of writing the report I had thought that

the change had been taken around 2009/10). The main post-handover implication of the change was that the responsibility for the operation and maintenance of the new hospital would revert solely to NHS GGC.

I have responded to this question based on my experience and knowledge developed over my career working on capital and revenue funded projects.

Had the project been a PFI/PPP, the post-handover arrangements would normally have reverted to a third party Facilities Management (FM) contractor/provider. Commonly, the post-handover FM provider, in the PFI/PPP model, would be the FM part of the Project Company (the special purpose vehicle under the PPP/PFI model) e.g. the Project Company contracts with the FM Provider for the provision of the FM services (the FM Contract) This approach, I understand, intended the benefit the Project Company by ensuring an ongoing business income over the period of tenure of the PFI/PPP agreement, which could routinely be 20-25 years. The monthly payments, made by the NHS under this model to the Project Company under the Project Agreement, would, I believe, have a capital component which effectively paid off the project debt to the funders, along with a profit element, over the time of the contract.

Another component of the monthly payment by the NHS would be a ‘Service Charge’ for the maintenance and operation payment, which would be built up from life cycle estimations for systems and fabric over the life of the project, to maintain the fabric and systems to ‘Condition B’, (a defined measure of condition) together with a profit element. At the end of the 20/25 year contract period, the hospital would then be ‘passed over to the NHS ownership’ in a ‘good condition B’. The arising Capital Charges relating to the asset would be minimal as the deterioration of the asset value would be amortised over the period of the Project Agreement. At the end of the Project Agreement there may, or may not be, (depending on the terms of the contract), a termination payment to the Project Company. There would be performance measures on the condition, response times to correct reported defects, designated annual

expenditure on various aspects like decoration, floor covering replacement, maintenance contracts etc.

These measures would be reported on routinely by the Project Company and would attract and oversight management of the NHS to ensure all of the contract provisions were being appropriately delivered at the agreed Service Charge.

The benefit of this model to the NHS is related to the transfer of risk. If the FM Service Provider is part of the Project Company's organisation, they will often seek to minimise the risk level over the life of the FM contract. In order to minimise this risk, the early engagement and collaboration between to construction contractor and the FM contractor parts of the PPP model can be observed. The FM contractor will seek to influence the construction contractor's supply chain and choice of 'higher quality' materials and systems being installed during construction, to minimise the intensity and cost of the life-cycle responsibilities, the cost of which will often dwarf the cost of the initial capital procurement cost.

The construction contractor must balance to desire to satisfy the demands of their 'partner' FM provider whilst maintaining their Guaranteed Maximum Price for the project, so it is not solely demand led by the FM Provider. If the project is Treasury funded, the handover of the hospital, once constructed, is to the NHS. There are post-handover responsibilities for the Project Company (and Sub Contractors), for snagging issues and defects, but the operational management, maintenance responsibilities and costs are largely now carried by the NHS. The incentive to consider the installation of high quality systems, elements of fabric, components, equipment etc, in order to minimise the life-cycle risk is significantly reduced, with the potential commensurate impact on the NHS. The setting of budgets and resources within the NHS is rarely, if ever, 'built from the ground up' to relate to a life-cycle model.

196 Explain what you meant by ‘the timing and the level of consultations with the Board’s estate professionals could have been earlier and more deliberately intensive’. What would the impact of earlier and more deliberate intervention of been?

A It needs to be recognised that a construction like the QEUH/RHC places huge demands on the ‘in-house’ team, whom are normally already extremely engaged and busy with doing what they normally do routinely without having to deal with all of the new demands placed in them due to the new hospital being built.

This is particularly the case on a ‘brown-field’ development, where the construction of the new buildings on the site, directly impact on the normal operation of the facilities in the retained estate. Bearing in mind the intentional and deliberate, early inclusion of the contractor’s organisation of their partner service provider, the reasons for which I tried to explain earlier in my response, one might have considered that a similar, inclusive approach would be taken to ensure that those picking up the post-handover operational and maintenance responsibilities, might have the opportunity to influence the contractor’s supply chain decisions and the considerations being made about the quality of the fabric, systems, equipment, components etc, that were forming part of the contractor’s design deliberations. Ideally, the greatest influence can be generated by the client as these considerations are being formed early in the procurement process. From the time the contract is signed, there is normally a diminishing opportunity to influence what will be installed, particularly if the implication of this influence has cost and / or time implications.

I appreciate that there were multi-disciplinary consultations, but I learned that the consultations/communications with the technical managers, (i.e. Ian Powrie and Brian Gillespie) that were put in place early, were, I understand, fairly minimal. In January 2009, Mr Gillespie (working at Inverclyde Royal Hospital) and Mr Powrie (working at Glasgow Royal Infirmary) were asked to offer ‘high level’ comment on the project brief. Other input and attendance at

project meetings representing Estates and Facilities, was, I understand, Alex McIntyre. Mr McIntyre was an able and capable NHS manager; I understand engaged in working up early estimates for Hard FM resources for the new hospital. I'm unsure what engineering, technical experience / expertise Mr McIntyre would have been able to contribute to the process. Brian Gillespie left the organisation on 31st March 2010. This, I understand, remained the situation until Ian Powrie was seconded to the Project Team in January 2013.

197 What design weaknesses in the water system that you identify in carrying out your report?

A The principle focus of my report was to try to find out what had happened to the DMA Risk Assessment Report. I did not personally review the technical design of the water system. Some of the weaknesses were highlighted in the DMA report and reflected elsewhere in other assessments. The extent to which my voice contributed to the identification of water system weaknesses and operation difficulties, were, I believe, limited to reflection and some brief comment on the findings of others.

198 What involvement did the Board's Estate professional managers have in the design of the water system? How could early inclusion of the boards estates professional manager have improved the design aspects of the water system?

A I refer to my response to Q195 and Q196 above.

199 At paragraph 2.3 you write that 'aspects of the design of the water system and some of the components installed have the potential to contribute to proliferation of microbiological contamination'. What components of the water system contributed to the potential for microbiological contamination? How did this occur?

A I learned from others, e.g. DMA Assessments, Dennis Kelly AE(Water) and HFS Report comments, etc. that some design / installation weaknesses were apparent. These included cap ends missing from lengths of pipework being installed into water systems during construction allowing dirt and potential contaminants to be 'installed' with the pipework; that there had been

Malleable or Cast Iron, components, e.g. valve bodies and flanges etc, and there was also a section(s) of steel pipework included in the water system installation. There were issues related to a variation of the grade of stainless steel pipework installed in the system. Ian Powrie also showed me, what appeared to be part of a brick that was removed from a Pressure Reducing Valve (PRV) following it being dismantled.

I received corroborated information that the main filtration system had been problematic in operation and that the filtration plant had been by-passed when the system was charged with water. There were some ‘Ethylene Propylene Diene Monomer’, (EPDM), rubber components fitted to appliances, e.g. Arjo rise/fall baths, dishwashers. These are not approved in the ‘Water Regulations Approval Scheme’, (WRAS), as they have the potential to support microbiological growth in water systems. I understand that the pipework drops from the main flow pipework to appliances were, in some locations, greater than the allowed dimensions.

The by-pass pipework configuration at the water tanks was, from memory, problematic and the balancing of the water tanks had to be redone to minimise the risk of stagnation in the main water tanks. These issues were, I understand, compounded by the experience of valves not operating effectively, valve stems shearing, valves not providing their intended isolation when repairs were attempted. Temperature variation, out-with recommended limits, in the water systems and calorifiers was a common issue identified in the DMA Risk Assessments, in addition to the presence of a number of dead-legs in the water systems.

200 What was the resource estimation methodology you refer to? What impact did this have on the Estates' team?

A The resource estimation methodology I refer to is, one that was reflected to me, where the resources available do not reflect the actual, factual and determined, life-cycle demands of the hospital's fabric, systems and equipment requirements, but one that more closely aligned to the resources that existed at the time. This, together with other contributary issues, I believe, directly detracted from the ability of the team to effectively respond to the inevitable demands placed upon them and to allow them to assess and undertake the improvements they had to make to the systems that had been provided to them. The service that they did provide was only delivered by the compensation of working excessive hours over a protracted period of time.

201 At paragraph 2.5 explain what you meant by 'some project outcomes and adversarial responses by the contractor to some requests by the board might have been improved by a higher definition of some of the boards requirements'.

A I refer to the explanation within my answer to Q195 and Q196 above in relation to the influence that a FM Service Provider might have on the quality of the design and the choice of the quality level of materials, plant and equipment, etc. When the interpretation and application of elements of the guidance is largely within the domain of the contractor, in a design build situation, the choices made by the contractor can be influenced by the level of their post contract responsibilities and whether these will persist for a relatively short interval or for an extended period of time.

Also, after handover, I understand that there was a contractual obligation on the contractor to provide a 'Soft Landings' assistance for a short period of time. By this time, I was told that most of the contractors had vacated the site. There was a process set up to allow the reporting of matters that the in-house team were experiencing where they believed that the contractor would be obliged to provide assistance and to resolve the identified problems.

Presumably, there would have been reference to this, ‘Soft Landings’ arrangement in the contract agreement. The experience of this arrangement, in fairness, varied from person to person. Some had a good experience where the contractor responded and delivered what they would have expected. Others felt that the system was severely flawed. Their opinion was that so much time was wasted, arguing with the contractor, who in their view, often had an intransigent and argumentative approach about the interpretation of what their obligations actually were, that they often did not actually invoke the Soft Landings arrangement, believing that they would be quicker just to deal with the issues at hand on their own. My assessment of the situation was that the intention of the Soft Landings arrangements were laudable, but that a better definition of obligations and responsibilities would help to remove the ambiguity that allowed the contractor to waste time arguing about whether or not it was appropriate for them to respond. To clarify the terms where the Soft Landings would be applicable, I thought, would be helpful within my report.

202 What were the project outcomes and what impact did they have?

A The choices of the contractor about the quality of the installations of various systems, e.g. pressure systems pipework installed without the requisite CE marking, the ‘CAFM’ system provided, the CHP plant that was persistently problematic, the installed cooling system that didn’t work, the failures of glazing units that fell from the building to the ground, wiring problems, battery problems and early obsolescence of the AGVs automated/robotic delivery systems, floor-covering problems, problems with the quality of doors, issues with wall construction and cladding (the list is not exhaustive), not to mention the identified shortcomings of the ventilation and water systems, may have had some source in the design applied and the quality of the plant and the systems that were installed. I also refer to my response to Q195 and Q196 above in relation to ‘Soft Landings’. The time wasted arguing with the contractor, without much confidence of a favourable outcome, only delayed response to the issue causing the problem. This could have impacted the response time to resolve issues. These issues could have directly impacted the service to the hospital’s clinicians and patients.

203 What were the adversarial responses by the contractor, and what impact did they have?

A I was not provided with the detail of any specific issue, the 'adversarial response by the contractor' was a general reflection on what was viewed by some to be the contractor's general attitude to, what were considered to be the reasonable requests being made for assistance during the Soft Landings period. I think the impact of the negative response experiences were to diminish further the confidence in the contractor.

204 Which of the Board requirements could have been improved by higher definition and why?

A I recognise and appreciate that the NHS, during the compilation BCRs cannot be overly prescriptive about specifications, for fear that the design risk, carried by the contractor, might then be 'assumed by'/'diverted onto' the client. But, despite the difficulties, there is a real, urgent need to improve what happened in the Glasgow and in the Edinburgh hospitals. Perhaps, for example, more closely defining the terms of the Soft Landings obligations of the contractor might have removed / reduce the apparent ambiguity. Perhaps closely defining the situation where Soft Landings would *not* be applicable might be easier than trying to cover all of the eventualities where it would be applicable?

205 Describe the recognised management structure that you would expect to see for the functional management of a hospitals' technical systems. Describe the different roles and responsibilities you would expect to see.

A With respect to the general staffing and management structure in hospitals, there is no set model. The variation in service delivery, the size and complexity of all of the various healthcare institution does not allow a set structure or a standard number of staff for any particular facility. In the 1980's there was a standard, (PTB9/78) which related the number of engineering staff to the technical systems, plant and equipment.

This was removed as a standard around 1985 as part of a wage negotiation and thereafter, the assessment of staffing compliment was then a ‘management decision’. A professional benchmarking of similar facilities could be the basis of forming an opinion about the resources that might be deemed appropriate for creating a reasonable structure. If the time was afforded to make such a base assessment, it could then be reduced or added to, by making some decisions about specialisms that need to be covered to satisfy the Board’s statutory obligations to effectively and professionally manage its facilities. Despite all of the debate about the wider estates structure, guidance recommends the technical management structure related to various systems, which largely follow the same model which I reflect and comment upon in my answer to Q173 above.

A similar system of defined responsibilities, the appropriate training and formal appointment of designated Authorising Engineers, Responsible persons, Authorised Persons, Competent Persons etc are recommended for all of the technical systems, including High and Low Voltage Electrical systems, Sterilisation and Decontamination, Pressure systems, Confined Spaces, Medical Gas and Vacuum systems, Lifts, Ventilation and Water systems. It was this form of management structure I was referring to. Arguably, as I say elsewhere, had this structure been defined, organised and put in place prior to handover, the clearly defined responsibilities would have, I believe, made a significant difference to responses in general, but particularly to the response to the DMA Risk Assessment Report. All of these recommended technical responsibilities, should be part of the equation adopted when establishing the general technical management and operational structure for the hospital to ensure that all of the technical systems are appropriately maintained and operated in a safe, compliant, operational condition.

206 Did you see this structure in place at QEUH/RHC?

A I refer to the response to Q205. There is no set standard for the general structure for an Estates Department, but the technical systems management structure for water systems (reflected in my answer to Q173 above) required some improvement (also reflected in my answer to Q174 above). I did not investigate the wider technical management arrangements but I was aware there was a functioning Water Safety Group and assumed there were Responsible Persons etc in other parts of the organisation.

207 What, if anything, was lacking from the structure in place at QEUH/RHC? What was your understanding of why this was lacking?

A I refer to my answer in relation to Q173 and Q174 above. I don't know why it was lacking but had it been recognised as an important requirement to have a technical water management structure in place for the QEUH/RHC before handover the issues that emerged may not have been so challenging.

208 Describe your understanding of staffing levels of the estates team at the QEUH/RHC?

A <u>From 2012- Laboratory Building</u>

My understanding of the staffing levels in the lead up to, and after, the handover of the hospital was: The Laboratory building had been constructed and handed over to the Board in March/April 2012 and became fully operational in July 2012. The Energy Centre had not been handed over at this point. The site works for the hospital had begun in February 2011, so the hospital construction was over a year into construction. In August 2012, Ian Powrie moved from his position in Glasgow Royal Infirmary to take up a post at QEUH. He was not given any induction for his new post. His responsibilities at this point included managing the maintenance activities in the Laboratory (Labs) Building. Mr Powrie, I understand, had 2 Technicians assigned to him to assist him with these responsibilities. Mr Powrie told me that the Labs had many basic engineering problems, e.g. the Labs ventilation systems automatically shut down when the external temperature reached -6^{o}C. Mr Powrie, I understand, relayed this as a potential problem with the hospital

ventilation and the external design temperature for the hospital ventilation was changed to -12ºC. Also, these was no appropriate operational electronic maintenance system in place with related maintenance programmes necessary to undertake and record maintenance activity.

Labs – PPM

Because of this Preventative Planned Maintenance, (PPM), was 'non-existent'. He was aware that maintenance would be essential, not only to comply with guidance and legislation, but also so that warranties (which were only valid if the systems were appropriately maintained), would not be invalidated. The ZUTEC system did not have the ability to automatically generate PPM job cards. He said that he highlighted this problem to Mr Seabourne and also to Wallace Whittle. He spent two years working with IT colleagues to move the Lab assets on to the system, because Brookfield Multiplex had not 'tagged the assets'. His attention on the Labs Building inhibited his ability to effectively contribute / comment to / on the project. He had been doing this via Wallace Whittle (M&E Engineers). Mr Powrie initiated a managed service contract for the Labs around January 2013 and set up a largely paper-based PPM system in the absence of a functional CAFM system.

QEUH/RHC – Secondment

It was around this time that Mr Powrie was seconded to the Project Team, without any formal induction and he 'handed off' the responsibilities he was carrying for the Labs building to others. At this time Mr McIntyre agreed with Mr Powrie that he (Mr Powrie), would be the Sector Estates Manager Designate and he would take over this role after the project was concluded.

Resource Plan for QEUH Campus

Mr Powrie was asked to work up a resource plan for the new hospital and he based his assessment on the Scottish average to produce, what he thought, would be an appropriate to service the new hospital. The resources he identified were greater than the available resources in the demitting hospitals

that were intended to transfer to the new hospital. His estimation of the finance required was based on what would have been the same as the PPP 'life-cycle' estimations. Mr Powrie indicated that he 'negotiated' with Robert Anderson, the Facilities Finance Manager to add a further [redacted] revenue funding to existing estimates, which then meant that staffing budget would be [redacted] and [redacted] for maintenance services, maintenance contracts etc. The funding that was provided (even with the 'additional' funding) was, according to Mr Powrie, insufficient to cover all of the service contracts required to maintain installations, equipment etc, which meant that 'things had to be prioritised and juggled a bit'.

Maintenance Service Contracts

I had seen a spreadsheet that related to a [redacted] requirement for the required maintenance contracts for installed plant and equipment.

Communication of Resource Report

Mr Powrie advised that he thought that Mr Loudon, (who was appointed as the Project Director in June 2013), took Mr Powrie's concerns about resources seriously and that he took these concerns to the Board's senior management. I understand that Mr Loudon told Mr Powrie that he had been told that the budgets had already been set and the feedback to Mr Powrie by Mr Loudon was, 'run with it just now and make a case once the hospital was up and running'.

Initial Estate Management Resources

Mr Powrie advised that, in partnership with National Education for Scotland, (NES), he developed and introduced and programme of 'fast-tracking' Estate Managers and 5 people were recruited to Band 7 Estate Officer positions, 'from the shop floor'. One of the individuals had apparently been a Supervisor, but the other four had no Estates Management experience. Jim Guthrie (mechanical/plumbing) was promoted to Band 7 Duty Shift Manager – day to day operation and moved to the new hospital 'for acclimatisation' around November 2014. Melville MacMillan came to QEUH from IRH and in Jan

2015, he was working shifts (nights and days) as Duty Estates Manager after completing familiarisation training. Others that transferred, were, I understand, Daryl Connor (electrical), Paul McAllister, (electrical), Tommy Romeo, (electrical).

Initial Roles & Responsibilities

Colin Purdon, suggested that, initially, Jim Guthrie led on water issues and that Tommy Romeo took over these responsibilities from Jim Guthrie, when Mr Guthrie left the QEUH (at a later date). Ian Powrie was line manager for this team.

After Handover

Mr Powrie, Mr Guthrie and Mr MacMillan indicated that over 200 contractors had to be 'signed in' to the site (on 27th Jan 2015) with Risk Assessments and Work Permits as required, then 'signed out'. Administration associated with this was significant. Standard Operating Procedures were developed for reporting problems. Reports were going through the helpdesk and then getting reported back to Brookfield Multiplex. A defect log was managed by Estates.

PPM

Mr Powrie indicated that the contractor has a 60 day 'lead-in' after final completion to provide a functioning PPM system. This, in my opinion is astounding! So, effectively, prior to handover NHSGGC had a functioning PPM system for the retained estate and at hand over, the PPM system was not functional. Both PPM systems were incompatible for the automatic transfer of data. PPM on ZUTEC was in the form of spreadsheets and, according to Mr Powrie, many of the PPM checks on the ZUTEC system were not required. There were14,500 tags for assets, but Mr Powrie said that Brookfield hadn't tagged any assets, so, none of the associated assets could be associated with the PPM. The identification of the assets is a fundamental requirement for PPM to be able to function. Mr Powrie indicated a further

20,000 tags had to be purchased to make the tagging more accurate and functional.

Staffing Availability

Mr Powrie indicated that he couldn't get his full team on site, on a full time basis because they had decommissioning duties to complete in the demitting hospitals. Mr Guthrie advised that Brookfield Multiplex were still working on Water systems and calorifiers etc for around a year after handover. Mr Guthrie, despite not having and effective electronic system, started to take a 'paper record' of water temperatures etc.

Operational Issues

Mary Anne Kane indicated that things were taking weeks to be sorted, leading to significant operational challenges. For example, the AGV systems, (the robotic delivery/transport system), experienced frequent failures, requiring the immediate substitution of Porters to maintain the services, e.g. food deliveries, waste disposal etc. Similar levels of failure was experienced in the Pneumatic Tube System, creating severe problems for the Estates & Facilities department. Ms Kane indicated that Mr Powrie was filling in 'gaps' in the Soft Landings arrangements. She indicated that the arrangement didn't accelerate any issues and that the team were constantly 'fighting' for resolutions and she thought it only added friction and deteriorated relationships. She also cited issues with routine failures of the CHP plant, (which I understand was handed over 1 year late), to highlight where the 'Soft Landings' arrangements didn't work well. She said that contractors were not always compliant with site rules and she thought, in general, that 'expectations and accountability' were not adequately defined, which meant that issues were frequently unresolved.

It was around this time that the DMA Risk Assessments were handed over by DMA.

I learned that familiarisation was being given by suppliers on various systems (between November 2014 and January 2015). Mr Powrie indicated that a chap called Alastair Smith 'got involved with some of the witnessing'. He

thought Mr Smith was a consultant, working for the Board and he said that Mr Smith was ‘kept on’. I was provided with a list of post-handover work that the small team was involved in. Ms Kane engaged agency staff to undertake flushing of water systems between handover and the occupation of the hospital to try to improve water turnover in the water systems. All contributors to my investigation recounted all of the Estates staff working significantly excessive hours over an extended period of time, e.g. routinely 12 – 14 hours per day and often 7 days per week! I learned that the building suffered severe flooding episodes, with sewerage backing up from the main sewers into the basement. Each time they went to clear the blockage they found that the drain blockages were caused by builder’s rubble in the systems. I heard opinion from the team that manpower was insufficient to cope, but they had no choice other than to ‘get on with it’. Ms Kane indicated that Financial Savings in the form of CRES were still expected and posts were not being filled.

I heard that there were gaps in people’s availability as they had to go through ‘induction training’ before they could get on site. In addition to all of the emerging operational problems, the Estates Team were trying to manage a large number of modification requests coming in for all over the hospital in addition to the larger post contract modifications, e.g. fitting televisions etc. Medium Temperature Hot Water pipework was apparently manufactured on site and did not have the requisite CE marking, which meant that it could not be certified under the Pressure Systems Regulations and Brookfield did not apparently have any records related to the pipework manufacture, despite allegedly saying that they did have records over an extended period in the lead up to handover and beyond. It fell to Mr Powrie to work with Zurich, (the Board’s insurers) to get the systems certified. In March/April 2015, Mr Powrie finalised the ‘Strategic Estates Plan’ he had been working on when seconded to the Project Team. From Late April 2015 the small Estates team were supplemented with agency staff to help with the migration from demitting hospitals and occupation of the new hospitals. I heard that the agency staff had no previous NHS experience.

209 Did the staffing levels of the estates team at QEUH/RHC meet your expectations? If so, how so? If not, how did differ from your expectations?

A I refer to my response to Q194 above for details. For clarity, my response is about the staffing levels of the estates team at QEUH/RHC leading up to and beyond the handover into the early occupation period of the new hospitals. Had I been the Director of the Estates & Facilities Service at this time, I would have been very concerned about the adequacy of the resources, both human and financial, do deliver the level of service and to cope with the additional demands placed upon the hospital. This was, I believe, compounded by the incapacity and /or absence of effective and functional computerised systems, which would have helped instead of hindered the team's activities. In June/July 2016, Mr Gallacher formed a Compliance Team to address SCART Compliance issues. I believe he moved to QEUH around November 2016. Mr Gallacher issued, what I think might have been the 2016 DMA Update document for everyone in the various parts of the Board to use as a template for a Written Scheme. The distinction between the responsibilities carried by Mr Powrie and Mr Gallacher, in retrospect, may have had some areas where clarification of where one stopped and the other started, and some definition of who was responsible for reporting what up the line management structure may perhaps have helped avoid any confusion that may have contributed to issues not being appropriately elevated.

210 Did you have concerns regarding the staffing levels in estates at QEUH/RHC? If you don't have concerns, how clear would it have been staffing levels were inadequate?

A I refer to answers to Q205-209 above. In fairness, additional funds were provided (albeit less than was arguably required) and the 6 additional agency staff to assist during the transition period were positive elements that demonstrated that the level of resources were at least clear to those that had arranged the additional resources. So evidently, despite the recognition of inadequacy being somewhat delayed, some attempt was made to help the situation, but this was possibly too little, too late.

211 How did any staffing level concerns impact the functional management of QEUH/RHC's hospital technical systems?

A I refer to answers to Q174-175 and the Q177 (which should have been the new number 163) and Q205-209 above.

212 In your opinion, did this pose an additional risk to patients, if so, explain how?

A It is very difficult to directly quantify an increased level of risk to patients associated to staffing levels without also taking the prevailing circumstances of demands placed on the staff into consideration. Had the hospital simply functioned efficiently, as one might consider a reasonable expectation (given that it was a brand-new hospital), with perhaps minor teething issues dealt with by a proactive partner contractor; if the operation of the energy centre, the Automated Guided Vehicles (AGVs), Pneumatic Tube Systems (PTS), ventilation controls and a number of other important systems had not been as problematic; if the identification and tagging of the assets had been accurate and appropriate and the CAFM and PPM systems etc had been 'operationally ready' and tested for functionality prior to handover; if the patient entertainment system had been installed during the contract and other post-contract alterations to rooms and a list of other problems that emerged shortly after handover, e.g. the repeated backing up of the sewerage system; the absence of CE marking on pipework systems etc, could have been avoided, the challenges may perhaps, have been more readily dealt with by the team. In the circumstances however, prevailing at the time at handover, in my opinion, meant that the small, relatively inexperienced team, was overwhelmed by the demands placed on it.

I personally consider that the time consumed in trying to deal with the post-handover issues that were either immediately apparent or those that seemed to emerge with monotonous regularity, led to a situation of the team being highly reactive to respond to problems rather than having the ability to operate in a more measured, planned and strategic manner. Their attempts to apply a more planned approach was, in my opinion, greatly inhibited by the lack of systems' functionality and the lack of operational preparedness. In my

opinion, the risk to the patients was more attributable to the issues that emerged from the hospital's systems, which was only compounded by the level of resource that was applied to manage them.

213 Who ought to have been monitoring staffing levels in the estates team at QEUH/RHC?

A The Director for the particular department carries the ultimate responsibility, to the Chief Executive, for the management of the department. The Chief Executive will carry ultimate responsibility for the overall staffing of the organisation, but I imagine there are many competing demands on a finite organisational resource.

The staffing model worked up through the Public Sector Comparator should potentially have been further refined by the subsequent detailed review carried out by Ian Powrie. Despite the gap between what Mr Powrie had proposed and the available resource it was possibly concluded that, if the operational phase ran smoothly (which was the reasonable expectation at the time), things could be 'juggled a bit' to 'get by'. This is not an uncommon approach in the wider NHS, in my experience. However, it appeared that the original resource estimates had already been adopted and there was an apparent reluctance to vary these original assumptions. I understand that Mr Loudon was supportive in seeking additional resources, but he was not apparently successful in persuading senior Executives to improve the established revenue position. So, I believe that it appears that an appropriate oversight was being applied, but possibly lacked the Executive support that would have improved the situation.

214 What led to the finding that that Estates team was inexperienced paragraph 2.7?

A I was informed that the staff in Mr Powrie's team had largely, recently been transferred and/or promoted from, for example, Supervisor roles into Band 7 Estates Officer positions. So, I concluded that the level of management experience at the Estate Officer level and familiarity with this massive new hospital's systems was fairly limited. In addition, the team were in the early stages of learning how to navigate the complex hospital layout and to begin to learn (on the job), the detail of how the hospital functioned. In saying this, I am not casting any aspersions on the technical competence of the people, whom all appeared to me to be 'good people' and keen to do a good job.

215 What was the consequence, if any, of the team being inexperienced?

A It is difficult to be specific about any particular consequences attributable to 'inexperience' other than to consider what might be logical conclusions of possibilities. In my view, the presumption about the level of experience is appropriate, but it does not reflect on the level of effort that was apparently applied by the team to learn on the job, which I think was considerable, nor does it reflect on the technical capability of the team when they were working in the Estates service, it is a reasonable conclusion that they would have been on a steep learning curve to become proficient at Estates Officer level.

216 Explain what you meant by 'they were overwhelmed by demand'?

A When a new hospital is occupied, there is routinely a big demand from User departments for a large proportion of minor tasks, e.g. moving shelves, building furniture, carrying out Portable Appliance Tests (PAT), sorting minor damages, installing a wide range of fixed equipment across the hospital and other smaller items that are spotted by staff as they move into their new accommodation that they feel they need to get changed or sorted. The in-house team would have been fully engaged with the 'normal' expectation, but in addition to these demands, Mr Powrie and the team were also responding to plant and system failures, (some of which are mentioned in my response to

Q212 above). In addition to this my understanding was that the team also had the following issues to administer:

- The access of over 200 contractor's and review all of their risk assessments and method statements associated with the works they were carrying out, which all needed to be controlled and overseen in the early period of time following handover.
- They were trying to establish Written Schemes and risk assessments, e.g. relating to L8.
- They were involved in flushing and testing of water systems and the sanitisation of water systems, which took place in all departments 2 weeks prior to occupation.
- They were trying to establish and implement the associated Written Schemes of Examination, (legal requirements), related Lifting Equipment and to the Pressure Systems and Safety Regulations (PSSR), which was further complicated due to the pipework in some of the Pressure Systems, e.g. the Medium Temperature Hot Water (MTHW) System, which did not have the required CE marking and certification, which in turn, led to complications with negotiating with the Board's Insurers (Zurich) in order to get the required certification the required to comply with the requirements of the PSSR, (the single action took around 2 years to reach a conclusion). I understand that Zurich played a pivotal role in undertaking assessments of the installed system to get it into an acceptable position.
- The team were tasked with tendering and installing a new Patient Entertainment System (PES), (i.e. bedside TV stations). This, I understand, was complicated because the Dwang positions (i.e. the fixing locations for wall mounted brackets located behind the walls of the patient bedrooms), were not routinely in the positions marked on the as fitted drawings, making the installation much more challenging.
- Various Service Contracts for various specialist plant and equipment had to be procured and implemented (all of this done on a prioritised basis due to the challenging financial resources provided for this provision).
- The team needed to support the installation and commissioning of '3rd party equipment', e.g. major elements of equipment like large items of medical

equipment, which needed connected to electrical and other supplies during installation and commissioning.

- Delivering required departmental ‘change of use’ from original design.
- The team was involved in the handover of the new Office Block and T&FL and provided support for the commissioning and occupation of these facilities.
- They procured and fitted out a new ‘Mop Laundry’ Facility inclusive of all of the installed equipment. There would have been under pressure to get this in to allow the Domestic Services to function effectively.
- The team were trying to manage defect reporting and they introduced a logging process to try to keep track of what had been reported, when etc.
- The team were responding to resolve ‘constant drainage issues’. This led to arranging and implementation of a CCTV survey of the sewers, which then led to the necessity to “remove ‘builders aggregate’ from all manholes / outfalls and the main sewer, right back to the Govan Road”.
- They were involved in the identification and solution to what they identify as a ‘contract omission’ for the shared lay-up prep interlock requirements.
- They were involved with raising defects to Brookfield Multiplex, one of which was concerned with what was considered to be a defect related to the non-compliance of the PPVL Isolation room facilities in the Adult Hospital.
- They then supported the rework of the Isolation Facilities in the Adult Bone Marrow Transplant facilities in the Adult Hospital.
- In addition to all of the above, there were emerging issues with the operation of the energy centre and the functioning of the Boilers, the Combined Heat and Power and Cooling systems. I understand there was a late handover of the final section of the energy centre.
- I understand that the way the Building Management System had been set up meant that there were a significant number of ‘high-level’ alarms coming through on the system and some work had to be done to ensure the ‘true’ emergency alarms, were not being ‘masked’ by many other less important alerts.
- There were issues related to floor coverings, doors and other elements of fabric.

- They experienced the occasional failure of large glazing units, some of which had fallen from the building into public areas, leading to large quantities of Heras fencing and scaffolding being installed to mitigate the risk from this issue.
- There were issues of leaking pipes.
- There were complaints about heating levels, which eventually led to the discovery that the Contractors had installed the signal cables (controlling the actuator controls of the ventilation systems) in the same containment as power cables, (despite this installation method not being recommended in the IEE Wiring Regulations). This had resulted in Electro-Magnetic Forces (EMFs) being induced into the signal cables, meaning that the actuators were not being appropriately controlled. The solution to this meant a degree of re-wiring to resolve the problem.
- There were issues with frequent breakdowns, battery failures of the AGV system, (i.e. robotic vehicles), used to deliver food trolleys, remove wastes disposal containers etc. It was eventually found out that the system provided was imminently obsolete, meaning that there was difficulty in procuring spares, new batteries etc, without any available alternative battery packs etc.
- Frequent breakdowns of the Pneumatic Tube System (PTS) were experienced requiring routine callout of specialist contractors to provide repairs and set the system back to work. There were also post-handover alterations made to the PTS system to establish direct routes between particular departments to avoid the impact of the regular experience of breakdown that was affecting the effectiveness of the clinical service. It was considered that the alteration made should actually have been provided to comply with the system originally specified, but this, I understand, was rejected by Brookfield Multiplex on the grounds that their interpretation of the specification had been satisfied with what they had already provided. I understand that the Board funded the alteration.
- The failures of AGV and PTS (mentioned above) had immediate unplanned implications for portering staff, who had to fill the gaps in service left by the equipment and systems failures.

- They had to repair holes in the fragile roof membrane of the 'Burn-off Roof' section that were caused by birds 'pecking' the membrane and eventually to deal with the failure of the installed test system that caused the roof to actually burn off.

All of these issues and others, not recorded here, contributed to my conclusion that the in-house team, and particularly Mr Powrie as the Estate Manager, were overwhelmed by the demands placed upon them. It is commendable, I believe, that the team compensated for the situation by working significantly extended hours over what I understand to have been, an extended period of time.

217 Are you aware of any action being taken to address the staffing levels and experience of the estates team following your report? If so, provide details of action taken and impact.

A I am aware changes were made to personnel and shift patterns in the time period between the initial handover in 2015 and the time of the writing of my paper, but I do not know the extent to the changes that happened (apart from the introduction of the Compliance Team under the leadership of Mr Gallacher). I understand Mr Gallacher was originally working from the Royal Alexandra Hospital, Paisley and started a Compliance Team around June/July 2016, (initially, I believe, to improve the focus on Statutory Compliance Assessment and Risk Tool (SCART) reporting). I believe he, and the Compliance Team function, moved to the QEUH around November 2016. I also understand that Mr Steele initiated a review of the Estates & Facilities Service when he became the Director of Estates and Facilities and this would have included some investigation into resources. However, this may not necessarily have been prompted by my report which was provided to Ms Grant earlier. Mr Steele was probably looking for a wider assessment than that focussed in my report.

218 At paragraph 2.8, when discussing the response to the L8 risk assessment are you writing about the response to the DMA Canyon 2015 report - **refer to bundle 6 - miscellaneous documents.**

A I am referring to a lever-arch folder that was shown to me during one of the interviews with a member of the Compliance Team, which contained a L8 Risk Assessment Plan with actions that related to the whole campus. From memory, it contained actions on removing little used outlets, dead-legs, flushing, etc. I observed that some of the actions contained within this L8 Risk Assessment Plan appeared to be similar to recommendations that had been made in the 2015 DMA Risk Assessment report. I speculated that some of the actions in the L8 Risk Assessment Plan might have been 'informed' by the DMA Risk Assessment Report. This might have implied that some action had begun on a response to the DMA 2015 recommendations and if this had been the case, it may have been the difference in the timing of the production of this Plan which could have overlapped with my investigation that led to the production of the DMA 2017 Report. This may explain why there was no reference to the Plan in the DMA 2017 report. The existence of this L8 Risk Assessment Plan, whether or not connected in some way to the DMA 2015 report, did indicate that there were appropriate actions taking place on the campus, despite the lack of evidence of a formal management structure being in place specifically for the QEUH/RHC facilities.

219 At paragraph 2.8 of your report, what staffing changes applied to the role that would have been responsible for carrying responsibility for implementing actions in response to the L8 risk assessment recommendations?

A Part of the information I gathered, leading up to writing the report, informed me that Jim Guthrie was particularly focussed on mechanical and plumbing related issues at the time of handover. Melville MacMillan was, at this time, I understand, also primarily focussed on mechanical and plumbing related issues. Both of the gentlemen came to the QEUH around November 2014. Mr Guthrie was promoted to be the Band 7 Duty Shift Manager (with day to day operational responsibilities for the site) and Mr McMillan transferred from the Inverclyde Royal Hospital to the QEUH. Others transferred/appointed around

that time were Darryl Connor, Paul McAllister and Thomas Romeo, all of who I understand had a focus primarily on electrical services. I understand all of the gentlemen had ‘acclimatisation training’ to help them familiarise themselves with the layout and services in the new Hospital. I understand this was concluded in January and only after this, was access allowed to the hospital. Prior to handover, Jim Guthrie made up sheets to record water temperatures. He had not been instructed to do this, but apparently considered this as his responsibility and he assumed that he would be the person with day to day responsibilities for the water systems’ management at the hospital.

So, my conclusion was that Jim Guthrie would have been the ‘lead’ for water supported by Mr McMillan from time to time. Also, at the time of writing the report, Mr Guthrie was actually the formally appointed water lead, which tended to support my conclusion about the originally intended arrangement of responsibilities. Mr Guthrie, left the QEUH in February 2017 to take up a new role at the RAH. Mr Guthrie handed over responsibilities for water systems to Mr Romeo. There was, I understand, a fairly short, informal handover between Mr Guthrie and Mr Romeo due to the annual leave and time availability of both gentlemen when they were on site at the same time. The handover between the two gentlemen could have been more detailed. This change, together with other staff movements may have contributed to what I thought was a confusion of roles and of the associated responsibilities. Arguably, had the formal recommended structure for water management been in place at the start (i.e. before and at handover), this potential confusion could have been averted.

220 What review did you carry out of the post-holder's training in reaching the finding that none had been trained to an appropriate level?

A I didn't carry out a review. The information was provided to me by the individuals themselves. From this information I understand that there had been no formal appointments made into the technical management roles for the QEUH/RHC and the training on water management that some had received had mostly been in connection with previous positions held. This training had not apparently been refreshed appropriately in the recent past.

221 What level of training would you have expected to have seen?

A There should be a comprehensive training programme for all staff carrying particular formal responsibilities for specific technical systems. Each person should have appropriate training for the particular technical system and have their level of understanding tested. Their level of competence and familiarity with the system they are managing should be assessed by the independent Authorising Engineer and following the AE's endorsement, the person would be appointed in writing with their responsibilities listed and they would then respond in writing to formally accept the role. The person should then have refresher training periodically; normally at 3 yearly intervals to ensure they are up to date with relative information, changes in guidance standards and legislation etc.

222 Given that to your report expressly only deals in 'High level' findings, does that suggest there are also 'low-level' findings somewhere? What 'low-level' findings did you make and what action was taken in response?

A The high level findings were a result of what was a high level investigation. I did not follow every element forensically, nor did I extend the investigation by seeking to continue with a further series of interviews in addition to those that were initially set up. I indicate in the report that if further detail is required, (e.g. to be more exact about who had possession of the report and to what extent did they examine it and use it; whether there was definitely a connection between the Plan I had seen and the DMA Report(s) etc), a more detailed examination would be required. I triangulated and corroborated what I

could during the one interview that had been arranged with each individual, HR, Staff Side Representatives and Admin and obtained what I considered to be sufficient information to support the high level conclusions I arrived at in the report or, where I did not have full corroboration for information provided, I worked on the balance of probability I considered logical and appropriate. I used terms like, ‘may have been’, ‘appear to have’, ‘were apparently’, ‘would have possibly’, etc, to infer a degree of speculation I was using to arrive at what I thought to be reasonable conclusions. There are no ‘hidden’ details or ’low-level’ findings.

DMA Canyon Report 2015/ Action Plan

223 Who instructed for 2015 report to be carried out?

A During my investigation, I came across a minute of, from memory, a sub-committee (maybe a Technical Committee??) of the project team, which recorded that a Water Risk Assessment should be organised. I recall that person this action was allocated to was Ian Powrie, although, logically, it may have been a contractual obligation on Brookfield Multiplex to provide such an assessment as an assurance that they had delivered a system that was ‘safe and fit for purpose’. During a conversation with Mr Powrie, I recall asking him about this and he said he didn’t personally recall this ‘instruction’ from the meeting, but he was clear that it was actually him who organised and procured DMA to undertake the Risk Assessment. This is also recorded in the DMA Risk assessment report, confirming it was Mr Powrie that had been responsible for initiating the Assessment on 6th January 2015.

224 What what's the purpose of the report?

A The DMA Canyon report was a ‘Pre-occupancy L8 Risk Assessment’ for ‘NHS Greater Glasgow & Clyde South Glasgow University Hospital’.

225 In carrying out your investigation did you establish who is the report was delivered to? If so, provide details of your findings regarding who received the 2015 report and how the findings were delivered to them?

A Ian Powrie and Jim Guthrie, (as noted in the DMA report), I had also received uncorroborated information that Melville McMillan was also in attendance, but this could not be recollected by Mr McMillan. Mr Powrie indicated that he thought that the report was to be taken forward by David Bratty. Mr Bratty was not interviewed to confirm this or not.

226 Who was aware of the existence of the 2015 report when it was delivered in 2015?

A The DMA people handed over the document to Ian Powrie and Jim Guthrie, so, all of those people definitely knew about it. Others who may have had knowledge of the report at some point in time, (at least an expectation of the delivery of a report at some point), could have been David Loudon, (as I understand it was Mr Loudon that had communicated with Mr Powrie to ask him to proceed to get the Risk Assessment done): Possibly Mr McMillan, (possibly at the handover meeting, but personally, I think more likely not to have been at the handover meeting but likely at a later point in time): Possibly David Bratty, when he became Mr Romeo's line manager at the QEUH, (as I understand Mr Bratty had some formal role in the Board's water management and I was told that a copy of the report had been given to him, but this was not corroborated).

After the delivery of the report, I believe that Thomas Romeo may have become aware of the report (when he took over the focus on water systems when Mr Guthrie left the QEUH to go to the RAH), but Mr Romeo's knowledge of the Report may have been impaired because of the informality of the short handover between him and Mr Guthrie. I also believe Alan Gallacher and perhaps members of the Compliance Team became aware of the report, at a point in time after it was delivered, but I'm unsure when this awareness happened. It was clear to me for the information I gathered that the report had not been escalated by anyone to Ms Kane.

The DMA report records that the DMA Risk Assessors were, ‘assisted on site by Ciaran Kellegher of Mercury Engineering, Ian Powrie, Jim Guthrie, Mel McMillan and Brian Lavery’. So presumably, all of these people would have been aware that the report was being produced. The DMA report also indicated that there was, ‘Variable levels of knowledge (of the systems being surveyed) as the site survey (was) being carried out immediately after handover and (that) Estates staff (were) still in (their) familiarisation period’, inferring that the Estates staff still had a way to go to become ‘familiar’ with the site.

227 Where was the report stored?

A I don’t know where physical or electronic copies of the report were stored.

228 What in your opinion ought to have happened at QUEH/RHC and within the estates team following receipt of the 2015 report?

A Given that the report was a ‘pre-handover risk assessment’ one might have considered that the correction of some problems may have had implications for Brookfield Multiplex to resolve, (e.g. to resolve plant failures in the heating system, that may have been the source of some temperature variation in the Domestic Hot Water system; resolve the issues causing routine operational failure of the filtration plant; removal of dead-legs, identification of calorifiers and other actions that might have been contractual defects and therefore would have been appropriate for Brookfield Multiplex to resolve), but where actions were, for example, associated with adjustment of controls etc, the most practical solution might have been better resolved by the in-house team.

Either way, the actions on the recommendations should have been given to a delegated lead, (e.g. the person responsible for leading on water issues, e.g. the Responsible Person (Water) had there been such a formal appointment), to form an action plan and organise the appropriate people to act and resolve the issues being highlighted, with actions being possibly being prioritised with the level of risk associated and practicality of achieving the required actions. It

would be reasonable for the report to have had oversight and control of the action plan through the Water Safety Group (WSG), receiving periodic reports on the progress of the action plan. The WSG would also serve to act as a communication route to alert to the Infection Control, Microbiology and Clinician representatives on the WSG and, if considered appropriate, to escalate information to other committees, (e.g. the Infection Control Committee) and appropriate line managers. The WSG could then have made any additions to the Board's Risk Register if this was considered appropriate.

229 Who was responsible for instructing the works to be actioned following the report?

A I think that the responsibility for water system compliance was perhaps harmed by what appeared to me, to be the confusion about who was responsible for the report, which appeared, at least in some way, to have been transferred to the Compliance Team under Mr Gallacher. Mr Gallacher, I learned, became responsible for the training of staff on water systems in order to get them into a position where they could be appointed into the formal roles. The 2017 DMA Assessment makes similar comment and also suggests that the communications between Operational Estates and the Compliance Team were poor.

230 At paragraph 2.8 in your report you state that 'there is evidence that this (the action plan) included actions on water systems, some of which were apparently informed by the findings were recorded in the L8 risk assessment'.

A Some of the actions I had seen in the water plan for the campus (in a lever arch folder) were similar to actions that might have been appropriate to address some of the issues highlighted in the DMA Canyon report and I speculated that these could have been informed by the DMA Canyon recommendations. I cannot recall the detail, but I felt at the time, on the balance of probability, that there was a strong enough possibility to conclude that this had apparently been the case. See further on my response to Q231 part h), below.

231 What evidence did you see of the action plan? Did you have sight of an action plan?

A I personally saw the action plan, on paper, in a level arch folder. It was a full folder, (about 6-7cm thick). I leafed through the folder briefly and observed some of the content.

a) Who advised that an action plan had been formulated?

A It was provided to me by Phillis Urquhart who was a member of the Compliance Team.

b) Who prepared the action plan?

A I understand that Mr Guthrie and Ms Urquhart prepared the plan, perhaps with input from George Walsh and Garry Cullan. (See response to part h) below for further information).

c) What actions were included?

A I cannot recall the content in much detail.

d) Explain what actions, if any, were apparently informed by the findings of the 2015 report?

A I cannot recall the content in much detail.

e) When were these actions carried out?

A I cannot answer this question, however, I did note in the report, at the time of writing that a high percentage of the required actions (related to the DMA recommendations) had been completed.

f) Who provided information regarding the action plan and actions to you?

A Phillis Urquhart

g) What financial allocations were used to progress actions?

A I am unsure whether the additional funding that I was advised had been provided, was directly related to this action plan, (it may have been, perhaps,

but others would be better placed to provide this information). I understand from the information I gathered, that non-recurring funding had been provided to Estates from Finance and that actions to remove little used outlets and other water related improvements accounted for a proportion of the expenditure of this funding.

h) You identify that the 'timing of these actions may have overlapped the survey to inform the 2017 DMA gap analysis'. Explain your understanding of what actions had been carried out/ commenced and when they were commenced, leading to the overlap that you refer to.

A I knew from the 2017 DMA report that, the 2017 DMA Assessment had started on 8th Sept 2017, but it was not actually handed over until 25th April 2018. So, it had taken nearly 8 months to complete the assessment. I believe this had taken longer than perhaps initially envisaged, due to problems with trying to get access into the now occupied clinical areas. The 2015 DMA report had been handed over on the on 29th April 2015.

I learned from Ms Urquhart that Water Action Plans, 'were in place when she arrived at the QEUH', albeit, that they were on paper and 'a bit haphazard'. The Compliance Team moved to the QEUH from the RAH around November 2016. I therefore thought it possible that the L8 Action Plan that I had seen (in the lever arch file) had, in some form, been present at, or before November 2016. I understand that Mr Guthrie had then worked with Ms Urquhart, (perhaps, as had been suggested to me, with input from other members of Mr Gallacher's team, i.e. George Walsh and Garry Cullan) to tidy up the Action Plan and I understand that they also worked on the water monitoring and testing regime.

I concluded that this would have been in late-2016 / early to mid-2017, which was in advance of the start of the DMA assessment (on 8th Sept. 2017, which would lead to the 'DMA Canyon 2017 Risk Assessment Report'). Given these timings, I therefore speculated that any actions associated the L8 Action Plan (in the lever arch folder) could have been informed by the DMA 2015 report

and potentially, could have been in-train, being planned or taking place, overlapping the time when DMA were doing their assessment for their 2017 report. Actions suggested by the 'level arch' Action Plan may possibly have been delayed because of the focus on and pressing nature of the other demands (explained elsewhere) that were still being experienced in the Estates Department. Also, because of the timings, the 'lever arch' L8 Action Plan could not have been informed by the recommendations of the DMA 2017 report, because it had not physically been handed over until April 2018. All but 3 of the 502 actions relating to both DMA Assessments were completed by 7th November 2018.

i) Please explain and provide detail to the following statement within paragraph 2.8: 'the transition between incumbents' changing rules was fairly informal and of short duration and probably delaying the progress on actions.' What changing rules? How did this impact in delaying the progress on actions?

A I was referring primarily to the handover of responsibilities between Mr Guthrie to Mr Romeo. I understand that Mr Guthrie left the QEUH to go to the RAH in February 2017. Mr Romeo, whom I understand, had been working on Medical Gas and Vacuum and other Systems, was to take over responsibilities for water. A 2-week handover period was anticipated between Mr Guthrie and Mr Romeo, but this was apparently curtailed to 1 week due to Mr Guthrie being on annual leave for one of these weeks. I learned that Mr Romeo's attention was drawn to level-arch folders, but there was apparently no detailed scrutiny of their contents. I concluded that this could have delayed the response to the actions necessary to progress the 'lever-arch' Action Plan.

In addition, I understand that there were changes in responsibilities between Operational Estates and the Compliance Team (effectively between Mr Powrie and Mr Gallacher). Also, around April 2018, I understand that Mr Romeo was designated to move to the RAH (I understand, it took several months to finalise his move) and that Darryl Connor was the person who then took over water responsibilities for water from Mr Romeo. Mr Connor was, I

understand, taken off the shift pattern he was working in order to assume these responsibilities.

232 What formal management structure would you have expected to have seen in place at QEUH/RHC?

A I would have expected to see a structure, in relation to water, noted in the DMA Canyon Pre-Tender Risk assessment in Section 10 in the 'Management Structure' section, which reflected the SHMT 04-01 Part G and L8 guidance, also replicated by DMA in their report.
The requirements for Authorised Person / Responsible Person appointments were also factored into the Strategy that Mr Powrie had produced earlier, (mentioned elsewhere in my evidence)

233 What, if anything, was missing from the formal management structure at QEUH/RHC?

A I understand formal structure had been put in place in the QEUH/RHC for Electrical Systems, I believe, because of recommendations made by Mr Powrie, as he had recognised that, without this role being in place, the continuing function of the hospital would have been severely affected if the system failed without anyone in place to find faults and operate the HV switchgear. The formally appointed management structure had not been in place for the QEUH water systems at the time of handover and this situation prevailed for some time. In reading for preparing my responses to this questionnaire, I note that the Water Safety Group had noted actions relating to the training and appointment of various people in each of the Sectors of the Board, but this is only apparently directly addressed by the AE(W), (appointed around 7th August 2014 – ref WSG Minute of 7th Aug 2014), post hand over of the new hospital. The Board's revised Written Scheme and Water Policy which had been developed over a period of time, was just being 'rolled out', (ref 6th October 2015 Minutes of the WSG). Therefore, actions were in train to create a management structure but this had not apparently been delivered at the QEUH/RHC at the time of handover of the QEUH/RHC.

234 What was the consequence of this, if any?

A I believe this led to a confusion about who was responsible for what and the subsequent implications for the management of the associated risk and the governance oversight of the hospital's water systems. It would also have implications for statutory compliance.

235 What other competing priority demands delayed the level of response to the DMA canyon 2015 report?

A I refer to my response to Q216 above.

Source of contamination

236 Look up paragraph 2.9 of your report, what routine monitoring results did you review in carrying out your report?

A I was aware that pre-occupancy water testing had taken place prior staff and patients occupying wards and departments between March and July 2015. Water systems had been tested and if clear, had been signed off for occupation by Infection Control/ Microbiology. If there were any elevated TVC readings or the presence of microorganisms present, appropriate decontamination actions were employed, systems were flushed and then retested. When they were appropriately clear, they departments were approved for occupation by Infection Control/ Microbiology. I cannot recall the detail of the spreadsheets containing the results of routine testing I looked at, but from memory, these looked to be fairly good. The routine testing and monitoring had apparently been improved by work that had taken place between Mr Guthrie and Ms Urquhart and the Compliance Team in 2016/17. The samples, I believe, were however only typed for Legionella, Pseudomonas, E.coli and TVC which was the routine testing in place in every hospital in Scotland where water testing was being applied. Testing frequency had been increased as one reaction to the emerging circumstances of infections in 2018 and the scope of the microorganisms that were being typed from the samples was widened when it became apparent that other 'unusual' microorganisms might have been present. The fact that testing

frequency was increased is, I believe, further good evidence to demonstrate that a water testing regime was already in place and the water testing was an agenda item in the Water Safety Group and recorded in the minutes of this group and also at the IMT meeting.

237 What measure of assurance were you provided that patient infections had largely good results?

A I can't recall any detailed scrutiny of patient related infections by myself, other than in general, from information being reported at meetings etc. In 2023, I was shown the spreadsheets with the hospital's water test results tabulated, with hundreds of sample results, being typed for an increased number of microorganisms and they were 'all green'. This, I believe, demonstrated that the actions taken, e.g. testing flushing, installation of Chlorine Dioxide dosing system and all of the other positive improvements made to the control and physical attributes of the water systems had contributed to the improvement in confidence of the systems' safe operation and management.

238 What explanation do you a tribute to the higher than expected levels of patient infections?

A I am not really qualified to provide 'a scientific explanation' about infections nor am I aware of the definite source of every microorganism that cause specific patient infections. My understanding however, is that it is an unfortunate consequence of the medical condition of patients, e.g. because of being immuno-compromised, that they are more susceptible to contracting infection. The nature of the treatment provided by the QEUH/RHC, being the national centre of treatment for a range of treatments, means that there is a higher incidence of patients with highest potential for susceptibility to infection being cared for in this hospital. So, because of this, I understand it is difficult to draw a correlation between the treatment centres within NHS GGC and other general hospitals in Scotland as NHSGGC tends to be treating the 'most ill' and the 'most susceptible' in much greater numbers. It is therefore a more complicated benchmark. I personally believe therefore, that there is all the more reason to ensure, as much as possible, the environments being

provided are designed and maintained to the highest standard and to ensure the effective function and resilience of the systems installed to sustain the safest possible environment. The other components of maximising patient safety include the associated operating procedures infection control and clinical practices associated with the care of the patients to, as far as possible, reduce the infection risk through a route of direct or indirect contact with the patient. There are other possible implications for patient infection for patients that are largely at home and attend hospital as a day patient or are in hospital, then at home, then back in hospital for short periods. I understand that a lot of potentially harmful microorganisms are ubiquitous in the atmosphere of the public domain and patients that are at home possibly have have a greater risk of exposure to these potential problems.

I understand that a small number of patient infections could, due to the known time frame of the development (incubation period) of microorganisms, be recognised as being nosocomial, because the patients had only been in hospital during the time frame of the organisms' incubation period, (other witnesses are more qualified to provide information about these circumstances). All of that said, it is essential to ensure, as far as reasonably practicable, that any possible source of harmful microorganisms is minimised in order to reduce the possible risk to the patients and other occupants of the hospital premises. The fact that harmful microorganisms were present, would indicate that the environment they were in was compatible with conditions that allowed their survival and, if these microorganisms were in different parts of the system, this would suggest that the compatible environment was not localised.

The prediction about whether the microorganisms came from the water system or were seeded during construction by dirt getting into the system, or from bypassing the filtration system or perhaps through human contact into the system, or the design of the system that included dead legs, low flow in tanks and or expansion vessels, the cleanliness of water storage vessels, or temperature fluctuations caused by plant failure or the way systems were set

up or poor controls caused by signal cables being installed in the same compartments as power cables, or from potentially problematic materials in the water systems, or because of a delayed response to recommendations, or because of the internal components and/or the internal surface of taps or the breakdown of internal surfaces of cast-steel water system components, or insufficient flushing, or delays in identifying the size of the problem, e.g. that it was perhaps a much wider problem than that initially hypothesised, or by not having appointed, trained individuals specifically responsible for the management and oversight of the water systems, or having one large system instead of a number of smaller systems, or caused by the piece of brick that was removed from a pressure reducing valve, or the level of maintenance on the systems or because there was no dosing system installed as part of the original installation, potential back-flow issues and routes of contamination between the waste and potable water systems, the presence of flexible hoses with EPDM materials installed into the water systems to connect appliances etc, etc, I believe, is infinitely complex.

All of these issues have implications for the presence and possible proliferation of microorganisms, but to determine the proportion of each and all of these issues and the relative contribution of each, or the extent to which two or more of the issues worked together to produce the various problems experienced, is, I believe, infinitely difficult. It is considered that harmful microorganisms can be managed in a way that minimises the risk of harm. It is therefore essential that all of these individual elements are eradicated through the design, construction and management of the systems and appropriate professional arrangements are put in place at the right time and being immediately operationally effective, particularly when the systems are charged and that the risks of all of these issues. All of this would be helped, I believe, by the NHS being a better, ‘informed client’, with the necessary engineering experience, expertise and input, at senior management level, to recognise when anything other than high standards are not being applied. From my personal understanding, I would attribute, at least, all of the above to the incidence of higher than expected levels of patient infections.

239 At 2.9 you're write: ‘the subsequent investigation by the board identified Microorganisms not normally investigated for under the national standard monitoring regime common across the NHS in Scotland and although not categorically identified as the source of infection, were thought most likely.’

a) What subsequent investigations were carried out by the board, what evidence did you see of this in carrying out your investigations which form the findings of your report?

A There are routine monitoring activities carried out by Microbiology, which, if infections are identified that are giving concern, would then be considered in concert with a Programme Assessment Group (PAG). If appropriate an Incident Management Team (IMT), would be set up to investigate any concerning incidents more fully. I understand, these actions would be triggered by parameters set out in the National Infection Prevention and Control Manual. Routine HIIART reports are provided to, I understand, the Board’s Acute Infection Control Committee, (I understand this to be a ‘formal Committee of the Board’). In relation to Ward 2A&B, in addition to previous voiced concerns from clinical staff about the patient environment, I understand that concerns were heightened by the identification of ‘unusual’ microorganisms, over a period of time (2016-2017).

There were then a further high incidence of Blood Stream Infections identified (BSIs) in early to mid-2018 (i.e. 23 No. – Ref HPS Report of October 2018 Page 3). Following this, further investigations, (noted in the IMT minutes) were carried out, including the increased incidence of sampling and testing from different locations with the range of testing of the samples to look for less common microorganisms. I believe colleagues from Microbiology, Infection Prevention & control and Estates could provide more detail. Assistance was sought from HPS and form other national leaders in the field of Water science, e.g. Susanne Lee, Tim Wafer, Tom Makin and also with input from the Board’s independent Authorising Engineer (Water) Dennis Kelly. There were various Risk Assessments and as the knowledge and understanding increased enabled by the more intensive focus and testing decisions were

taken and actions employed to mitigate the emerging risks that were being identified. Audits of nursing practice and cleaning audits were carried out by Infection Prevention & Control to identify any related issues.

Later on in mid-2019, although unconnected with the time when I was writing my report, Scottish Water undertook an audit in relation to the Scottish Water Bylaws. They produced a report with a number of recommendations to correct installations where backflow of water could have been an issue and where there were locations where different categories of water could possibly have become connected, (e.g. Potable water systems in showers could have potentially been mixed with Waste Water systems because the shower hose was of a sufficient length to reach to a WC, potentially causing contamination to the potable water system). I was involved with assisting the Estates team with the prioritisation, monitoring and management of the Estates' team's actions to quickly achieve solutions on all of the recommendations. Later on in 2020 there was an investigation by the Infection Prevention & Control and Governance Subgroup - NHS Greater Glasgow and Clyde/Queen Elizabeth University Hospital Oversight Group, which produced a report with recommendations. Although produced at a later time to the writing of my report, the issues which these investigations commented on were potentially present at handover and had possibly been current at handover. These investigations may therefore be of interest to the Inquiry.

b) What microorganisms were tested for?

A At and after the early part of 2018, in addition to the routine testing of water samples for Legionella, E. Coli, Pseudomonas and TVC / Total Count, I understand that the following microorganisms were typed at one time or another: Acinetobacter Ursingii, Chryseomonas Indologenes, Cupriavidus Pauculus, Enterobacter Cloacae, Klebsiella Oxytoca, Klebsiella Pneumonia, Pantoea sp, Serratia Marcescens, Stenotrophomonas Maltophilia and specific strains of Pseudomonas, i.e. Fuorescens, Pseudomonas Putida. The list is perhaps not exhaustive. I am aware that fungi was also considered problematic at certain points in time and also Aspergillus was considered,

perhaps more in relation to ventilation as a possible source. Again, I would suggest Microbiology colleagues would be better placed to give information and detail about how many samples were tested for these microorganisms, when these were taken and the results observed. I learned that there had been an earlier incidence of patient infection in 2016 on ward 2A that Microbiology had determined that it was caused by Cupriavidus Pauculus, which was considered 'unusual'. I understand that concern was raised when a second patient's infection in late 2017 / early 2018 was also identified by Microbiology as being from Cupriavidus Pauculus. I believe that the Microbiologist 'drew the line between these two dots' and began further investigation to find out if this was present in the water system and if so, was this localised (which I understand, due perhaps to the incidence of this organism being 'unusual', was the initial theory). The initial theory was, I believe, altered when the incidence of Blood Stream Infections sharply increased between early to late 2018.

c) What microorganisms where identified?

A Others would be better placed to provide this detail about what, when and where. See response to Q239 part b) above.

d) What evidence did you see that these were most likely the source of infection?

A I cannot recall seeing detailed evidence that specifically identified a specific source of infection other than discussion about one or two patient infections which were being considered as possible nosocomial infections. I recall that there was 'hypothesising', presumably because of the difficulty of being certain about source. Initial investigations about cleaning and nursing practice accompanied water testing and investigation into ventilation and fabric issues in order to seek to understand possible sources.

e) Do you have any comment/ observations regarding microorganisms not having been tested for and the potential impact this may have had?

A The routine testing process that had initially been carried out (looking for Legionella, Pseudomonas, E.coli and assessing TVC) was in line with the testing regime that would have normally been applied in any other hospital. The typing of other microorganisms, that emerged over time in NHSGGC, e.g. Cupriavidus etc, would not have been applied.

To the best of my knowledge this more extensive typing is still not routinely typed elsewhere in other hospitals in Scotland. One might consider that further guidance might be helpful to clarify whether more extensive testing should be applied either routinely, periodically, or when the circumstances prevail that would make such testing necessary. If any wider typing is thought appropriate, some guidance about what circumstances would prevail in order to trigger such an investigation, what to type for etc. Also, some guidance about applicable precautions to take to minimise the potential and also to minimise the circumstances that might cause the proliferation of these 'unusual' microorganisms, if these precautions might be different from those employed to manage the potential for Legionella and Pseudomonas, which are currently being routinely applied. E.g. are any of these microorganisms more resistant to biocides like Chlorine Dioxide etc? Some action on this may already be in progress as I understand, from memory, that the Montgomery et al report, recommended that HPS give some consideration of this issue, which I understand might include some thought being given to alterations to the scope of water testing protocols.

240 What is evidence was there that the water system was filled with water that bypassed the installed filtration system prior to commissioning? If so, why what mechanism would the system have been filled bypassing the filtration system?

A I learned that this had been done from several people that I interviewed as part of my investigation. In addition, the 2015 DMA Risk Assessment identified that a water main by-pass had been left in the open position from a

point prior to handover to the time their Assessors had undertaken their assessment. I learned that the operation of the main filtration unit was very problematic, with frequent failures being experienced. It may have also have been the case that the bypass facility was utilised to keep the hospital operational. From memory, I think there may have been an issue with the functionality of the valves in or around the bypass pipework which perhaps affected the time it took to correct this anomaly. Others may have a more detailed recollection of these circumstances.

241 Who filled the water system with water and bypassed filter system?

A I understand the water systems were charged with water several months before handover by staff from Brookfield/Mercury Engineering, which was witnessed by a few NHS GGC Estates staff.

242 What would have been the purpose of doing this?

A I have not seen this detailed but I speculated that the systems would be filled in order that testing and commissioning could be carried out. Given that the 0.5 micron filtration plant was presumably provided a mitigation against the introduction of contaminants to the water systems, it is unclear what the 'logic' was, about bypassing the filtration unit to charge the system. I understand that filtration at 0.5 micron will remove most, if not all, microorganisms. Bypassing the filtration units could have been done to save time and expense. The filtration unit would presumably present a challenge (resistance) to the volume of water that would be required to fill to whole system, potentially slowing down the fill rate.

Had filters been utilised for the filling of the systems there may have been a concern that the filter media might have needed to be replaced during or after the charging process, with implications for expensive maintenance to elements of the plant. There could have been a consideration that any potential contamination introduced from the filling of the system would be dealt with by flushing and then dosing the system with a biocide. I heard that there had been dosing of the water systems but also heard that there had

been concerns expressed about the concentration of the biocide and the dwell time of the dose; both being too low. I appreciate that a lot of this is speculative but, it explains the thought process I applied when considering these circumstances.

The questions that, in my opinion remain however, are that, irrespective of the reason *why* the system was filled by bypassing the filtration units, is, why would it be thought okay to design in this filtration unit, presumably as a safety precaution, and then not utilising it for filling the system? Also, was there, as one might expect, any risk assessment to cover this action? It might be an excusable action, in an emergency situation, to sustain the operation of the hospital, but it is hard to contemplate how this action might be justified during the initial fill of the system. Hopefully, further clarity can emerge from the other evidence that is provided to the Inquiry about the detail of what happened when, and by whom.

243 Provide detail on how this could have encouraged dead legs/ temperatures out with acceptable limits?

A The bypassing of the filtration units would not have encouraged dead legs in the system, but there is a possibility that dead legs could have been seeded with contaminates in the unfiltered fill-water. DMA had identified a number of dead legs and other weaknesses in the system, (e.g. expansion vessels not being the ‘flow through’ type, dissimilar metals in the system construction and even instances of malleable-iron pipework and Cast-steel components, (which, I understand was apparently surveyed for by the contractor, but there was concern expressed about how effective this survey could have been without having removed the insulation covering the pipes etc)), and suggested that these may have been flushing points that had been installed at installation and left in place at handover. If that was the case, these original flushing points would have become pipework dead legs and therefore have the potential to contain stagnant water and therefore, have an increased risk of microbiological contamination with the potential to introduce these contaminants to the rest of the system.

Arguably, contamination via dirt and dust could have been introduced into the systems during construction. The HFS report recorded incidences where pipe end caps were missing from pipe-lengths used for the construction of water systems on the site. So, potentially, the systems could have been contaminated at the time of construction and perhaps then compounded by the filling of the system through the bypass pipework. It is difficult to determine the extent to which systems may have been contaminated because of this poor construction practice and site management, but the possibility must logically exist, if this was the case. The bypassing of the filtration units would not, I believe, have any significant impact on the temperature of the water in the system.

The reason for my conclusion about this is that the water fed through the bypass pipework would be at the same (or at a similar) temperature of water being fed into the water system through the filtration unit. The more likely circumstances that I think might lead to temperatures being outside normal running parameters within the water systems, would possibly be increased temperature of cold water intake from the public supply, compounded by temperature ‘pick-up’ from ‘heat generating’ plant and equipment and sensible heat-gains from the internal service routes etc, or a lack of flow in the system, possibly caused by improper balancing of water tanks or the lack or turnover in all or part of the water systems, or a problem with temperature controls or settings, or a failure of central heating plant, calorifiers, pumps etc. possibly causing a temperature variations in the systems.

In relation to the temperature of the incoming water mains supply, there is a known discrepancy between the standards applied by the Supply Authority and the NHS. The supply authority’s action trigger for cold water temperature is (from memory 3^{o}C-5^{o}C) above the 20^{o}C upper limit for cold water temperature recommended within the NHS guidance. This routinely presents an increased risk to hospitals during particularly hot summer weather when water can sometime be at or above 20^{o}C as it enters hospitals.

244 How did this, if at all, potentially impact the integrity of the water supply?

A See the response to Q242 and Q243 above.

Completion of water findings report

245 During the preparation of your report, did you come to form a view regarding the size of the water system installed at QEUH/RHC?

A No

246 Would multiple smaller systems have been beneficial? If so, why?

A Yes, I believe so. Whilst it would possibly have increased construction cost implications, a number of smaller systems would offer improved flexibility and resilience. It would also offer the opportunity to provide dedicated water supplies to departments where patients' care may be particularly affected if biocides, used to disinfect water systems, is allowed to affect the safe functionality of equipment and systems used to provide their treatments, e.g. Renal. Having the Renal department, for example, served from the same water system as the rest of the hospital means that special arrangements need to be employed to ensure that disinfectants being used in the main hospital's water system do not affect the operation of the Renal service. Further, any issues needing action that arise in a separate (smaller) water system could be contained to that system and not have any effect on other parts of the hospital. It would be easier to turn over water in smaller water systems than it is in a larger system, where any issue with the large, single system effectively affects the whole hospital.

247 When you completed your report who did you deliver it to?

A Jane Grant

248 Are you aware of your report having been shared with infection control staff? If so, who?

A No

249 Were you aware of concern is being raised by members of staff, clinical and/ or non-clinical, at NHS GGC regarding the operation and safety of the ventilation system in ward 2a? If so what where these concerns, when did you become aware of these concerns, and who held these concerns?

A When I started with NHSGGC in May 2018, I became aware, through conversations with Ms Kane and Mr Powrie, that there had been historical concerns about the ventilation systems provided in Wards 2A&B were not fit for purpose. This, I understand had been expressed by Dr Brenda Gibson. Over time, and at different times, through conversations, (few of which I recall specifically in detail about who and when), and reading of documents and reports, I learned that concerns had been expressed almost immediately after handover and these concerns had persisted over time.

250 What work are you aware of having been carried out following the recommendations in your report?

A I don't necessarily believe that work that was carried out was as a direct response to my report in particular.

I do know that a concerted effort was applied to clearing all of the actions recommended in the DMA Risk Assessments, when it was recognised that the recommendations had not received an appropriate response. These 502 actions were all concluded apart from 3 at November 2018.

Water Safety Group

251 Please set out your understanding of the requirement to have a water safety group in place for governing the water system at QEUH.

A It is a statutory requirement and this is reflected in the various guidance documents.

252 Was such a water safety group existence when you were first instructed to prepare a review of the DMA risk assessments at QEUH?

A Yes

253 From when was it in place?

A I cannot answer this question. From the Inquiry Bundle provided to me it appears that minutes have been noted of a WSG since October 2014.

254 Did you participate in the water safety group? From when?

A Yes. I was 'in attendance' at one meeting of the WSG in July 2019.

255 How will did the group function? Did the group achieve appropriate engagement among necessary participants?

A It appeared to me to function well enough from the short time that I was there. There was a multidisciplinary attendance at the meetings and all of the sectors of the Board were represented, feeding in from their own Sector Water Safety Groups. The agenda items appeared to be appropriate. I learned however that Dr Susanne Lee, in her report of April 2018, commented that, "the WSG as described within the scheme of control does not comply with the latest best practice guidance (WHO, HSG 274 and HTM 04-01) and is still very much geared to *Legionella*." Dr Lee made some recommendations in her report, suggesting a wider focus on other microorganisms, so, whilst it seemed to be functioning well in respect of Legionella precautions etc, there was always room for development and improvement. I cannot really comment about the appropriateness, or otherwise, of the participant's relationships, as it was difficult to ascertain this from attending one meeting.

256 Were its activities properly recorded?

A Yes. The meetings were minuted and Mr Gallacher used a 'spreadsheet system' (Smart-Sheet) as a tracker on the actions that were assigned by the WSG to the various participants.

257 What contributions did you make? **Page 108 within the water safety group bundle.**

A I was at the meeting to speak about a Water Safety Policy that I was reviewing and updating.

258 How effective was the group as a whole and contributing to the proper operation over the water system at QEUH?

A The agenda looked to be appropriate and actions were being taken forward, e.g. training of APs etc, but the measure of its timing of initiating and delivering actions, etc, in the light of hindsight and comments made by Dr Lee, could have been more effective.

259 Did it meet your expectations?

A I didn't personally focus much detailed attention to the effectiveness of the group at the meeting I attended. It did appear to function reasonably well in my view, but Ms Kane, I recall did express some frustration about the time it was taking to get actions delivered. There wasn't really anything that I recall that struck me as being particularly dysfunctional.

260 Please make any other comments which you feel appropriate regarding your experience of the water safety group.

A I don't feel that my time involved with the WSG was sufficient for me to draw any wider opinion than that already provided in my evidence.

Conclusion

261 Looking back, how would you assess your reports in respect of the ventilation system in ward 2a and water system QEUH/RHC?

A I'm assuming that what is being asked here is, 'am I satisfied with the ventilation and water reports' I produced? I feel it is unfortunate that I got confused with the ward layout in ward 2 and the names of the different parts of the ward. This contributed to some of the inaccuracies in the ventilation paper. In general, however, I feel that much of the comment might have been useful and may have stimulated consideration by others. In respect to the water paper, the process of gathering and considering the information available to me at the time, I still believe arrived at reasonable conclusions. With both papers, I did try my best to provide comment on what was to the best of my understanding at the time.

262 Are you pleased you took the role?

A Yes.

263 Do you regret taking the role?

A No.

264 How effective would you assess your involvement to have been?

A For others to assess perhaps, but I believe my involvement to have been largely positive and helpful. People were kind enough to express their appreciation of my input from time to time.

265 How much improvement were you able to see in water matters at QEUH/RHC since preparing your report?

A A marked improvement. The team did well to turn it round from where it was. I'm sure the team will be focussed on sustaining this position and they will recognise that there will always be areas that can be improved.

266 How much improvement were you able to see in ventilation matters within the ward 2A following your report?

A I don't believe that the improvements were made as a result of the report I produced, but the Estates Team did make significant improvements to the ventilation and wider patient environment in ward 2.

267 Which aspects you assess to still have required improvement?

A All aspects! Generally, there needs to be an attitude of continual improvement to always seek to improve the systems and the facilities to deliver the safest and most effective patient clinical environment. Specifically, the correction of many of the deficiencies that are still present in the building's plant and systems, (e.g. the efficient functionality of the energy centre including the CHP and cooling systems, Ventilation systems, etc.), might never be fully achieved, in my opinion.

268 Which aspects were you able to contribute to the most?

A During my time with NHS GGC I gave contribution to a wide range of issues.

269 Please comment on any other matters which seem to you important.

A I think may of the weaknesses related to this and other major capital projects are significantly impacted from people in decision-making and leadership positions not having Hospital Engineering competence or expertise, particularly on the Client staff at Senior Level. An under-appreciation of the essential nature and need for statutory compliance of hospitals' engineering systems; the associated risk and the skills and resources that need to be deployed to liaise with contractors and then carry the associated statutory responsibilities and accountability for the safe operation and maintenance of the installations, inevitably contribute to poor decision making. This is particularly the case when their comprehension of the detail and subtleties of technical guidance is absent or sub-optimum. This can lead to derogations, without fully appreciating the possible impact of these actions. There is currently a particular shortage of experienced senior hospital engineering professionals. NHS Assure may increasingly help to plug the gaps on the Client team's expertise, but I think it would be a significant help if the Client was 'an informed client'. If thought important (or essential), it would help if there was a development of the skill sets of suitably qualified individuals in each of the Scottish Health Boards to take up these suggested leadership roles.

The level of operational preparedness, I believe, needs to vastly improve, with sound, safe operational arrangements and operational systems in place and tested end-to-end before any hospital reaches handover.

I think there needs to be a significant improvement in record keeping and in the detail contained in the records, such that a clear audit trail is provided, particularly of decisions taken, who took the decision and who is accountable for the decisions, the reason for the decision, e.g. what is the objective of the decision, what other options were considered and the reason why those were

rejected, what risks are considered to be associated with the decisions being taken, etc.

Technical systems that are relied upon to ensure safe and effective operation of the maintenance function need to be in place and populated with the necessary data prior to handover. These systems should be effectively commissioned and tested, end to end by the client's technical representatives to ensure appropriate functionality.
Ideally, some influence should be afforded to those who will maintain the hospital, in relation to the quality of the assets being procured to enhance the longevity of efficient and effective operation of assets and fabric.

The appointment of technical roles should happen at an early stage and the level of training and familiarisation provided should be sufficiently intensive to allow those appointed to satisfy the Authorising Engineer of their competence to take up the roles and responsibilities of their appointments at an early stage, before handover, in order that the handover does not inhibit effective patient and staff safety or maintenance activities.
Adequate resources (Human and Financial) need to be more accurately defined to determine the optimum levels that will be required to safely maintain systems and processes. This may perhaps require some relaxation of the Scottish Futures Trust's construction benchmarks.

Declaration

I believe that the facts stated in this witness statement are true. I understand that proceedings for contempt of court may be brought against anyone who makes, or causes to be made, a false statement in a document verified by a statement of truth without an honest belief in its truth.

The witness was provided with the following Scottish Hospital Inquiry documents for reference when they completed their questionnaire statement.

Appendix A

A43293438 – Bundle 6 - Miscellaneous Documents
A47390519 – Bundle 11 - Water Safety Group
A47069198 – Bundle 12 - Estates Communications
A43872137 - Discussion - Review of Issues Relating to Hospital Water Systems' Risk Assessment alias.
A41602105 - 2018-10-01 2A Ventilation Findings. - JL Comment Ver Final alias.

Scottish Hospitals Inquiry
Witness Statement of
Sandra Bustillo

Introduction

1. My name is Sandra Bustillo. I am employed by NHS Greater Glasgow and Clyde ('NHS GGC') and I am currently the Director of Communications and Public Engagement.

2. I am a member of the Executive Leadership Team and provide strategic advice to the Executive Team and the NHS Board on corporate communications and engagement. I am responsible for the delivery of corporate communications and public engagement with our staff, patients, the general public, the media and other stakeholders. This includes developing stakeholder communications and engagement approaches for a wide range of, often complex, issues affecting NHS GGC. I lead a Directorate comprised of the corporate communications team and the Patient Experience Public Involvement Team. I have held this position since May 2019, initially as Interim Director, before being appointed to the substantive role in February 2020.

3. I began my career in the NHS in March 1992 as a graduate management trainee with Greater Glasgow Health Board. Following a two-year training programme, I specialised in corporate communications and have held various roles managing this function in the period since, including Head of Communications for North Glasgow University Hospitals NHS Trust (2001-2004), Head of Communications for NHS GGC's Acute Services (2004-2008) and Associate Director of Communications, NHS GGC (2008-2019).

4. I have a Master of Arts degree in Politics and History, obtained from the University of Glasgow, and a post-graduate diploma in Management Studies, obtained at Glasgow Caledonian University.

5. The Scottish Hospitals Inquiry, the 'Inquiry', has asked me to provide a written statement relating to the concerns summarised in paragraph 7, sub paras (xvii) to (xxiii) of Counsel to the Inquiry's closing submissions to Glasgow I and paragraphs 365-455 and questions in paragraph 456 of Counsel to the Inquiry's closing submissions to Glasgow II.

6. This statement seeks to provide that information to the best of my recollection.

Functions of a Communication Team

7. Firstly, I have been asked to summarise what the functions of a Communication Team in an organisation like NHSGGC are. The Corporate Communications Team for NHSGGC provides a range of communication functions within the Communications and Engagement Directorate to support the organisation deliver its objectives. My post reports to the Chief Executive and the communication priorities are delivered through 3-year Stakeholder Communications and Engagement Strategies and Internal Communications and Employee Engagement Strategies.

8. I am responsible for a team of 11 corporate communications staff and eight staff who deliver the patient experience and public involvement function. The team are based in JB Russell House, NHSGGC's headquarters. We cover services provided throughout NHSGGC, including all acute services and corporate functions, mental health, sexual health and primary care.

9. The key functions of the Communications and Engagement Directorate are:
    - Publication of proactive press releases and reactive media handling (responding to media enquiries) including a 24 hour on-call service, media monitoring, liaison with Scottish Government communications and other local partners and other stakeholders.
    - Delivery of corporate-level communications for 41,000 staff
    - Public information

- Digital communications, including full technical support and information population of the NHSGGC website, and corporate social media and YouTube accounts
- Creating and delivering campaigns for staff and the public, including service advice, social marketing and public health information campaigns
- Preparation for emergency comms handling
- Event management, including Ministerial visits, Royal visits, Celebrating Success Event, Annual Review
- Graphic design
- The design and delivery of the Board's corporate public engagement programme (including major service change).
- Management of corporate feedback systems, including Care Opinion, to support the organisation to listen and learn from the experiences of people
- Providing training, support and expert advice to staff on local engagement and involvement activities along with best practice advice on ensuring they are reaching as wide a range of their service users as possible
- Monitor and report on what patients and carers are telling us about their experiences including key themes and trends to the NHS Board and clinical teams to identify and learn from positive practice and highlight areas for improvement
- Evaluating engagement to identify good practice and areas for improvement.

The range of activities of the function are demonstrated in the attached public Board paper which was a summary of the previous three years' activity.

Communication with Patient and Families

10. I was heavily involved in the preparation of documents in response to the Inquiry's Request for Information No. 6 which cover communications by NHS GGC and its senior officials to patients, their families and other stakeholders. In the interests of efficiency, I will not replicate the full detail of the responses to Request for Information No. 6 but will summarise the relevant aspects which

respond to evidence heard at the Glasgow I and II hearings in relation to communication with patients and families.

Issue 1: Overall communications strategy/Requirements of the National Infection Prevention and Control Manual in relation to communications

11. One of the comments to have been made by parents at Glasgow I hearing was that NHS GGC lacked any communications strategy for dealing with the infection incidents and the ongoing questions over safety concerns.

12. At all times in the management of infection outbreaks and incidents, NHS GGC follow national guidance in determining the communications response to the incident. The key guidance is as follows:

(a) National Infection Prevention and Control Manual (NIPCM) which is the national framework for managing infections and outbreaks. This includes guidance on how such incidents should be communicated.

(b) Healthcare Improvement Scotland standards on Healthcare Associated Infections (HAI), which includes a communications standard. When this set of standards was first published in 2015, NHS GGC became the first Health Board to develop a Healthcare Associated Infection Communications Strategy [submitted under RFI 1 22.1] to bring together key processes to ensure compliance with the national HAI communications standard. This process has been followed since its commencement in 2015, and with the exception of a short period between 2019 and 2021 (due to the focus on managing infection incidents and the response to the pandemic), the strategy has been subject to a two-yearly review and update, including in 2021, learning from the experiences of families in the QEUH/RHC incidents of 2018-19 [the current version is on the NHSGGC website at HAI Communications Strategy and Guidance for IMTs - NHSGGC].

(c) Associate Chief Nursing Officer letter on behalf of the Chief Nursing Officer to HAI Executive Leads, copied to Chief Executive Officers and Infection Control Managers, dated 11 February 2019, which stated:

"It is a requirement for all infection incidents/outbreaks that the Incident Management Team (IMT):

- Communicate with all patients affected and where appropriate their families.
- Communicate with all other patients and where appropriate families who may be affected or concerned e.g. those in the same ward/unit as patient(s) affected.
- Prepare a press statement (holding or release) for all HIIAT amber or red assessed outbreaks/incidents. If a proactive media communication is planned then this should be undertaken in consultation with HPS and Scottish Government communication team colleagues."

13. NHS GGC communications complied with relevant guidance throughout 2018 and 2019 in relation to infection outbreaks and incidents at QEUH/RHC. In addition, as the situation continued into the second half of 2019 and parents outwith those in the unit were becoming anxious, we went beyond the requirements of the national guidance.

14. On 9 September 2019, the Cabinet Secretary for Health and Sport, Jeane Freeman, MSP, asked the then Chair of NHS GGC, Professor John Brown CBE, for a briefing on the Ward 6A Incident, including NHS GGC's communications approach. This briefing noted a plan to extend communications with parents to include those whose child or young person was not a current inpatient, amongst whom a number had expressed concern about the Board's communications. The following is an extract from the briefing [submitted as part of Ward 6A narrative under RFI 6]:

"We have established and continue to provide regular communication to staff and family/carers with patients on Ward 6A. We are committed to resolving concerns

and issues raised by patients/ families and press briefing statements are agreed after each IMT to facilitate communication with patients and families.

1. Face to face communication with all inpatient families. Our experience with patients and their families suggests that this method is very effective and it is well received from patients/ families as well as staff. We will also provide patients with a written briefing in the form of a question-and-answer information leaflet.

2. There continues to be an open offer to patient/ families on the ward who wish to have a discussion with senior charge nurse/ infection control advisor/ senior manager (RHC) on a one-to-one basis.

3. We will draft a letter to all other patients (day cases, shared care and outpatient clinic patients) offering a point of contact to address any issues and concerns with an offer to contact a senior manager to arrange a meeting with clinicians.

4. We will share any patient/ family patient briefings with other in-patients in other locations (e.g. NHS Lothian).

5. The GM (General Manager) has a regular call with the other centres who care for our patients and to provide an update on any relevant issues.

6. Staff Communications. We currently facilitate face to face briefings with all staff following each IMT and we will continue to deliver this. Our aim is to ensure all staff are updated with relevant information to multi-disciplinary teams.

7. The patient population is geographically dispersed, and we will consider additional forms of communication including Facebook, Twitter and are being informed in our communications by SNIFFER risk communication in managing large scale group meeting (Though aimed at contaminated land

incidents, SNIFFER contains information to support communication on environmental risks).

I have been asked what SNIFFER is, to explain its significance and why it was used under these circumstances. Scotland and Northern Ireland Forum for Environmental Research (SNIFFER) was suggested for inclusion in the briefing to the Cabinet Secretary by Dr Iain Kennedy, Consultant in Public Health. This document describes a framework for a good communications strategy. Its only connection to 'environmental risks' was that it was devised in relation to the management of land contamination risks, but otherwise it offers general advice and a framework for communications including information on the following "Hallmarks of an effective communication strategy; Recommendations on how to develop an effective, robust communication strategy; and Practical advice on how to deliver your message effectively."
Risk_communication_booklet_Sniffer.pdf

8. Wider communication - we continue to communicate with the Board, HPS, and Scottish Government through our national guide protocols of infection control reporting. The communications for staff, patients, and media is regularly discussed and is a standing item on the IMT agenda."

15. The Cabinet Secretary agreed to this communications approach. From this time forward, NHS GGC widened out its communications from those parents directly affected to include a wider cohort of parents, including parents of outpatients and day cases. Also, from September 2019, with the establishment of the closed Facebook account for Ward 6A parents and patients, statements were also posted and shared with parents who had joined the page. In addition, the Chair, Chief Executive and other senior executives also personally met parents in Ward 6A and also wrote to all other parents and offered to meet them, including a meeting with families on 2 November 2019.

16. In November 2019, the Cabinet Secretary for Health and Sport advised that she wanted to see and clear all NHS GGC communications relating to infection,

prevention and control at the QEUH and RHC, to include 'enquiries where there is a claim of a contention even if it is not the case'. This was conveyed to me in an email from Suzanne Hart, Senior Media Manager, Scottish Government [submitted with Narrative 7 under RFI 6 in an email dated 28.11.2019].

17. The process of Scottish Government oversight and Cabinet Secretary clearance was not routine and not consistent with NHS GGC strategy or internal governance procedures and this is covered in greater detail in paragraphs 135 - 191 within this statement.

Reflections on the use of the National Infection Prevention and Control Manual (NIPCM) framework and strategy:

18. From early 2019, comments began to be made by third parties that NHS GGC was not following the NIPCM in how it reported incidents, for instance, the Cryptococcus incident. As a result, suggestions were being made that NHS GGC was withholding information, lacking transparency and that our communications were not timely. My witness statement will cover the Cryptococcus incident elsewhere, but these criticisms I believe, in part, stem from a degree of ambiguity in the national guidance and a lack of awareness amongst some public commentators on what the guidance advises in relation to communications.

19. All incidents and outbreaks are assessed by the Incident Management Team for their severity of illness, impact on service, risk of transmission and potential to cause public anxiety. Any incidents which are assessed as 'Amber' require the NHS Board to prepare a holding statement, a statement which can be used to react quickly and respond to news of an incident emerging in the public domain. Any 'red' incidents require the NHS Board **either** to prepare a holding press statement or issue a press release proactively. The NIPCM states that the '*Incident Management Team will determine which course of action is in the best interest of the patient(s) directly involved and the public*'. This current guidance was changed in 2017. Prior to that, the guidance stated that 'all incidents rated as 'red' **must** have a press statement proactively released in the public domain'.

20. I am aware from conversations with journalists and politicians that there was a misunderstanding about the manual and what a Board should do in the case of a 'red' rated incident. One journalist for instance had been given the pre-2017 version of the guidance by an unknown source which may have led to an incorrect assessment of how NHS GGC should be managing communications. The absence of an automatic release of information into the public domain, whilst sensible and proportionate, can also result in an inconsistency in approaches, which in our case, resulted in unwarranted criticisms of a lack of openness and transparency. I would add that, regardless of the assessment of the incident as either 'green, amber or red', it is open to the IMT Chair to decide that a proactive statement is in the public interest.

21. As we continued to investigate a series of incidents and outbreaks in NHS GGC throughout 2018 and 2019, IMTs were sensitive to the heightened level of public anxiety generally on healthcare associated infections being investigated by NHS GGC. This made the IMTs more inclined to take a proactive approach, which in turn, further heightened levels of anxiety. The ambiguous nature of the national guidance, and the lack of a definitive framework, added a level of challenge in how communications were managed and how this was perceived by patients, the public and other stakeholders. However, at no time were I or my team involved, or aware of, any deliberate concealment or misrepresentation of information on the part of NHS GGC in our public communications.

Issue 2: Communications regarding water issues relating to Wards 2A, 2B, and 6A, particularly whether facts as they were known were withheld/ concealed/ misrepresented by the Board.
Plus
Issue 3: Communications regarding closure of Wards 2A and 2B and the decant to Ward 6A and the reasons given for this, particularly whether facts as they were known were withheld/ concealed/ misrepresented by the Board:

Communications Regarding Water Incident (2018)

22. An Incident Management Team was established on 1 March 2018 to investigate and manage infections on Ward 2A/B of the RHC. I personally did not attend the Incident Management Team meetings. As is normal practice for IMTs, these would be attended by one of the press officers who directly reported to me in my role (as Associate Director of Communications) at the time ['water incident' IMT minutes were submitted as part of a timeline under RFI 1 6].

23. In line with national guidance, underpinned by NHS GGC's Healthcare Associated Infection Communications Strategy, IMT meetings were the principal means by which decisions were made on communication in relation to outbreaks and incidents. Communications with patients, public, staff and media were an item on the agenda of every meeting, in accordance with the NIPCM. Actions around communications flowed from every meeting.

24. In accordance with the NIPCM and communications standards specified by Healthcare Improvement Scotland, the IMT Chair was personally involved in decisions regarding communications with parents, staff, the media and the public. The role of the press officer was to support the IMT in the delivery of their communications actions.

25. A patient's interface with a Health Board is routinely and primarily through their relationship with the clinical team. It is normal practice during an IMT for communications with patients therefore to be led by the clinical team providing their care. This is standard practice and, in my experience, it would be highly unusual in the management of incidents for senior Executives or members of the corporate communications team to communicate directly with patients and their families.

26. Throughout the water incident IMT, the bulk of communications with parents/carers was carried out by senior ward staff, and notes from the water incident Debrief Meeting on 15 May 2018 show that an additional nurse was put on the rota with the specific purpose of 'water incident communication' to liaise

with parents/carers and staff [submitted with 'water incident' narrative under RFI 6]. Recollections of Jennifer Rodgers, who was Chief Nurse within Women and Children's Directorate at the time of the incident, are that the additional nurse was in place as early as 5 March 2018.

27. I have been asked who the additional nurse is that I refer to, whether liaising with parents and carers was specific to them and their role, who they reported to, where they received instructions on what to communicate and when and were there records of these communication. A ward nurse was rostered on duty for that role each day as a communication conduit providing information that had been agreed by the IMT. This would be a senior Band 5 or Band 6 nurse who played a supporting role to the Senior Charge Nurse in liaising with staff and families around the activity linked to the IMT actions. The nurse reported to the Senior Charge Nurse. The hot debrief also describes this process. I have no further information on whether their conversations would be recorded.

28. IMT minutes show that senior infection control, clinical and managerial staff, including IMT Chair and Lead Infection Control Doctor, Dr Teresa Inkster, Chief Nurse, Jen Rodgers, and Women and Children's Directorate General Manager Jamie Redfern, regularly visited the ward to support Emma Somerville, Senior Charge Nurse, Ward 2A with staff and family/carer communications, personally handing out letters/briefings, answering questions and addressing concerns. These actions were not routine practice in NHS GGC and were put in place to offer an additional level of support to families/carers.

29. Relevant clinical disciplines responsible for the care of patients were represented on the IMT, and communications actions flowed from these representatives to clinical staff through team briefings and staff huddles.

30. We provided support to the clinical staff by arranging for management representatives to speak regularly to parents. Jen Rodgers and Jamie Redfern were senior managers within the Royal Hospital for Children and during the water incident IMTs, the decant and the later Ward 6A IMT they attended the unit to speak to parents after every Incident Management Team meeting to brief them.

In addition, as the Ward 6A incident continued in the second half of 2019, a senior Estates and Facilities management representative also attended the ward to speak to any parents who wished information. The Chief Executive and Chair also attended the unit in 2019 and separately offered to meet families of any patient who had been in the unit since it opened.

31. I have been asked whether there are records available of communications which took place with patients and families other than those which are noted in the IMT minutes. There may potentially be a record of discussions with patients and families in a patient's medical records but this would be a question for clinical staff to answer. There were also written communications between individual families and the organisation, which was recorded and managed by Jennifer Haynes, Corporate Services Manager – Governance. An action plan was also developed responding to the key issues raised by the families who met the Chair and Chief Executive on 2 November 2019.

32. The IMT also communicated significant developments with the wider staff across NHSGGC through Core Brief – a system of briefings and corporate messages shared with all NHSGGC staff in real-time by email. My team are responsible for the preparation and publication of messages via the Core Brief system, and this would be co-ordinated between the IMT, my press team and the internal comms desk. My then Communications Director, Ally McLaws, and I would have oversight of these actions.

33. It has been suggested to me that Core Briefs were not a suitable source for the information about the issues with the hospital environment for a variety of reasons including the extent to which everyone had time to access them was mixed, some did not have ready access at all, and they also carried a wide range of other information.

34. There were a variety of methods for communicating these issues with staff.

35. Those directly impacted were represented on the Incident Management Team meetings by Senior Charge Nurses, Consultants and senior members of the

hospital management team. As part of their role on the IMT, these individuals would communicate with clinicians and ward staff both verbally and also using the written briefs that were prepared for staff and families.

36. The Core Brief supplemented this activity but also provided an opportunity for the wider NHSGGC staff to be kept updated on key developments. Core Brief is issued by email to every email account holder within NHSGGC (approximately 49,500 mailboxes). It is also published on the organisation's intranet, Staffnet (accessed via the IT network), and on the public website, enabling anyone to read Core Brief at any time. We also ask for printed copies to be shared with staff who do not have access to a PC in the workplace.

37. From time to time, we conduct audits of our internal communications channels. The last audit, carried out in 2020, found that of a survey response of more than 2500 staff members, Core Brief was rated higher than all other forms of internal communication, with 89% rating it average, very good or excellent and 1.69% not having used it.

38. My team were also responsible for the issue of media releases and media statements in response to specific media enquiries. These communications were agreed with the Chair of the IMT in line with the NIPCM. Depending on the issue or significance of the content of the release, media statements could also be agreed with other colleagues, including senior NHS GGC officials. The press officer responsible for drafting releases and statements would also take advice from the Communications Director and me and copy us to the email communications that took place with the IMT Chair and other colleagues to draft and agree a media release or media statement for issue. As per the NHS GGC Standard Operating Procedure for issuing press statements [submitted under RFI 1 22.1], all statements would require approval from a senior officer, in this case, from the IMT Chair, and where relevant, other senior officers, before being issued. My press team would not issue information that had not received this approval. There was a very low risk threshold for managing the release of information to the media.

39. As such, the process to agree a media statement was an inclusive one, intended to ensure that it reflected accurately the current situation, with the result that the approval process could be lengthy involving a number of people. This at times impacted on the organisation's ability to communicate responsively and at pace.

40. It was also routine for NHS GGC to update the Scottish Government on developments and decisions of IMTs, with proactive and key reactive statements regularly shared for information. The then Director of Communications or I would email the lead for the press desk within Scottish Government, Suzanne Hart, and her team, to share statements and alert them to developing issues.

41. From the outset of the water incident, as evidenced by IMT minutes, parent/ patient communications with those on the ward at the time was prioritised, along with staff communications. The minute of the IMT of 6 March 2018 reported that communications with families were ongoing [submitted in a timeline under RFI 1 6]. A proactive media release was first issued 10 days later, on 16 March 2018, by my team following approval by the Chief Executive, Jane Grant, Medical Director, Dr Jennifer Armstrong, and IMT Chair, Dr Teresa Inkster. The media release was shared with the Scottish Government for information and published on the NHSGGC website. We also informed the NHS GGC Board. The information contained in the media release was consistent with a written briefing prepared for families and issued on the same day [submitted within 'water incident' narrative under RFI 6].

42. The media release made clear that NHSGGC were investigating the presence of bacteria in the water supply to wards in the Royal Hospital for Children in Glasgow and that three children were receiving treatment for infections potentially linked to these bacteria found in the water supply. We also confirmed that a number of mitigations were in place and set these out in detail, including "alternatives to tap water supplies to paediatric patients in wards 2A, 2B, 3C and the hospital's intensive care unit". A Core Brief containing the proactive media statement was also issued to all staff [submitted within 'water incident' narrative within RFI 6, dated 16.3.2018]. This statement, agreed with the IMT Chair, was open and transparent in setting out the detail on our understanding of the issue.

43. Following the publication of this information in the public domain, the IMT managed the release of further information proactively as their investigations continued and also responded to all requests for information from the media. Throughout, the IMT, working with my team, sought in good faith to co-ordinate the release of accurate information proactively to the media with updates for parents and families, and where appropriate, with other stakeholders, including the NHS GGC Board, wider staff and the Scottish Government.

44. The water incident IMT was closed on 27 March 2018, upon completion of mitigation measures and since no new cases had been reported since 16 March 2018. When the water incident IMT was reconvened on 29 May 2018, it continued to take the same approach, with information provided to patients and families being prioritised and co-ordinated with any proactive media statements. This included the proactive release of information about a chemical disinfectant treatment of the drains in Ward 2A/B, with the first information on this measure being published on 4 June 2018 [submitted within 'water incident' narrative under RFI 6]. This statement made clear that treatment was being carried out on the drains in the unit because traces of bacteria had been found during testing. It further confirmed that there was a potential for patients to be moved temporarily to another ward within the hospital, if required, to allow the work to be completed and that our infection control experts believed the bacteria to be linked to an earlier issue with taps which had since been fitted with filters. This was an accurate, open and honest account of the potential hypothesis, potential for harm and the actions being taken to remedy the situation.

45. This media statement, which was approved by the IMT Chair, Dr Teresa Inkster, was shared with Jamie Redfern and senior ward staff to brief parents/carers. It was also shared with Scottish Government for information.

46. The minutes of the IMT show that parents continued to be updated on the hydrogen peroxide vapour (HPV) decontamination process after this by staff, including a further update on 13 June 2018 which also confirmed that prophylaxis was being prescribed as a precaution for some patients [submitted in a timeline under RFI 1 6]. This information was made public in a proactive media release

issued by my team on 13 June 2018 [submitted within the 'water incident' narrative under RFI 6].

47. I have been asked for clarification about communication with parents regarding the HPV decontamination process and prophylaxis being described as a precaution for some patients.

48. My team was not responsible for the provision of information to parents on HPV cleaning but did co-ordinate media statements with information provided to parents.

49. As is noted in IMT minutes, HPV cleaning commenced on 5 June 2018 until 17 June 2018.

50. In the minute of the IMT held on 4 June 2018 (A36690448), there is reference to a patient information leaflet specific to HPV cleaning. I do not have a copy of that leaflet and my team were not involved in the production of the leaflet.

51. On 6 June and 8 June IMT minutes (A36690461, A37989601 and A36690464), it is noted that parents were updated on the HPV clean process. This was not carried out by my team, but by Jen Rodgers, Chief Nurse, and nursing staff. I cannot say whether this was a verbal update and whether the patient information leaflet was given to parents at this time.

52. The minute of the meeting of 8 June noted that "parents continue to be updated on the HPV process, and that TI (the Lead Infection Control Doctor) has spoken to 3 sets of concerned parents".

53. The further minute of 11 June (A36690462) notes: "TI to draft a statement for families who have children already in ward 2A explaining what works will be going on."
[TI in this context means Dr Teresa Inkster]

54. A copy of a patient information sheet dated 13 June 2018 **(A38662234 Bundle 5)** has been previously provided to the Inquiry under RFI 6. It states:

> "Information for parents about cleaning in ward 2a
> The week beginning 12th June we will be using a new cleaning method in ward 2A. Your child's room will be cleaned as normal by the ward domestic. After this we will be using a mist to spray each room - this is called Hydrogen peroxide vapour (HPV).
>
> This is a fairly new cleaning technology which we have used elsewhere in the children's hospital and also in the adult hospital. It works by coating every surface evenly with HPV and is therefore more reliable and effective than the human eye for cleaning.
>
> To clean your child's room you will need to move into another room whilst the process is undertaken for approximately three hours. Most things can stay in your child's room but any item made of fabric or paper such as bedding, soft toys and books will need to be removed. Nursing and domestic staff will remove these items for you.
>
> You will notice a technician and two machines on the ward for the whole week. The technology is very safe. The hydrogen peroxide quickly dissolves into oxygen and water. Your child can go back into the room once it is finished.
>
> We will also be taking the opportunity to clean ceiling areas and sink drains which ordinarily can be difficult to access, so you may notice this also.
>
> Because this technology is very effective it may be used as a cleaning method 2-3 times a year in ward 2A."

<u>Decant of Ward 2A/B – Timescales</u>

55. As the water incident IMT continued to investigate a number of infections in Ward 2A/B, it was decided to move the patients out of these wards to allow

investigations to continue into the build-up of biofilm in the drains. These wards treated children with cancer who have very low immunity to infections so to let technical staff in and put cameras down the drains it was decided to decant the ward to another ward.

56. Whilst collectively, the IMT, myself and my team and fellow senior managers, endeavoured throughout to ensure that patients were briefed at the same time or ahead of information being released to the media, this regrettably did not happen when the decision was made to decant patients from Ward 2A/B to Ward 6A. A number of parents reported at the Glasgow I hearing that they found out about the decision to decant patients from Ward 2A/B through a report on STV news rather than from NHS GGC, and that this indicated a culture of secrecy and poor communications with parents.

57. This arose as my team was ultimately unable to control how news of the decant decision was managed because of a premature release of information to the media from an unknown source whilst the decision was still being made.

58. I was on leave during the period of 16-18 September 2018, but I am aware from communications subsequently shared with me by the then Director of Communications, and through emails which I have subsequently seen, of the timeline for communicating the news of the decant which I understand to be as follows [email summaries, media statements and briefings supplied as part of 'water incident' narrative under RFI 6]:

    1. The press office received a media enquiry on the late afternoon of 17 September 2018 from an STV journalist enquiring about an issue with bacteria in the drains at the Royal Hospital for Children. The journalist had been informed that chemotherapy for at least one child was delayed for a few days and that children may be transferred elsewhere for cancer treatment and that the affected ward was at one point not taking new patients. The journalist was content to receive a comment the following day given the late hour of the enquiry.

2. A detailed statement was drafted by the Director of Communications and one of the press officers and shared with Dr Inkster, Chair of the IMT, and senior managers on the morning of 18 September 2018. The IMT agreed that written statements for parents/patients, staff and the press would have common content.

3. As this detailed statement was being finalised, STV made a further inquiry, having interviewed the family of a patient on Ward 2A. At this stage a draft written statement was still in circulation for approval by Dr Inkster and senior officials of RHC and the Executive Team. With STV now able to report a first-hand account of the information that had been shared with families, this effectively removed the ability to for us to control the timings of how we could inform parents of the decant decision.

4. Throughout the remainder of the afternoon, the NHS GGC statement was finalised, including comments from Dr Inkster at 4.30pm, and at around 5pm it was shared with senior staff and ward staff to be used as the basis for conversations with parents on Ward 2A/B.

5. At 5.16pm the media statement was shared with STV in order to provide comment for their evening bulletin, before being issued to the wider media at 5.24pm. At 5.28pm, the statement was issued to all staff via Core Brief, and at 5.39pm a communication was issued on NHS GGC's Involving People Network. The statement was also published on the NHS GGC website.

6. Unfortunately, colleagues were detained in meetings discussing the decant arrangements and there was a delay in confirming to Jen Rodgers and a senior medical colleague who were in the Ward that they should go ahead to speak to families face-to-face with the written brief. This delay was due to Jen Rodgers awaiting confirmation from Keven Hill, Director, Women and Children's Services who himself was delayed as he was in a meeting with other Directors discussing the decant. At 6pm, STV news aired and reported on the decant decision. The responsibility to manage communications with staff and pass on details of the decant arrangements were with the IMT

representatives from the service, Jamie Redfern, General Manager, Jen Rodgers, Chief Nurse, Professor Brenda Gibson, Clinical Lead and Emma Sommerville, Senior Charge Nurse.

59. Former Counsel to the Inquiry, Alastair Duncan KC, asked Jamie Redfern about a press release on the proposed decant issued on 17 September 2018 in Glasgow hearing II. I am able to clarify that no press release was issued. I believe that the document being asked about was a draft press statement, which was in circulation, but not issued until 18 September 2018.

Decant of Ward – Accuracy of Statement

60. The full proactive written statement provided to patients, families, media and the public on the decant has been provided to the Inquiry. This was a full statement on the history of the water issues in the hospital, how they had impacted on patients and what steps were now being taken to remediate further the perceived problems. This had been approved by Dr Inkster, as Chair of the IMT, and I therefore believe this to be an accurate account of the assessment of the IMT on the decant.

61. There were detailed written communications prepared to explain the decant and these have previously been provided to the Inquiry. For ease these are reproduced here.

The following briefing was prepared for families:

'WARD 2A AND 2B UPDATE
We appreciate that you have been experiencing disruption whilst we have introduced an enhanced cleaning programme.

As you may be aware we initially experienced a build-up of material (known as biofilm) in the sink drains in Ward 2A and 2B. This is the same sort of biofilm we get in domestic sink drains but as the patients in these wards are being

treated for cancer their immune system is compromised and they are more susceptible to infection.

Today we have introduced a new cleaning product called Hysan to clean the drains. Hysan is a hard surface disinfectant effective against bacteria.

Whilst this will work in the short term; longer term we require a permanent solution. This will require us to temporarily transfer ward 2A and 2B to another ward in QEUH adult hospital.

This will provide opportunity for drainage and technical experts to undertake a comprehensive investigation and complete any remedial works required. We are working to make this happen as soon as possible and will keep everyone in the two wards fully updated on our plans as they develop.

As this only affects immuno-compromised patients and no other patients at the Royal Hospital for Children are affected.

Thank you for your cooperation and assistance to ensure the highest standards of care and treatment continue to be provided for your child.

The following media release was issued and was also shared with all NHSGGC staff.

NHS Greater Glasgow and Clyde statement on drains at the Royal Hospital for Children

From January until June this year we experienced issues with the water supply in wards 2A and 2B of the Royal Hospital for Children when a number of patients were affected by bacteraemia.

Our technical experts advised the metal parts inside taps were replaced with plastic ones, filters attached to the taps and the drains cleaned with a chlorine

based detergent. In addition the ward environment was cleaned with Hydrogen Peroxide Vapour (HPV).

After this work was completed there had been no new cases of bacteraemia for several weeks.

But more recently there have been six new cases and although all the children have recovered and been discharged or are continuing with their normal treatments we instigated an Incident Management Team to further investigate and manage the situation.

What we are seeing is a build-up of biofilm in the drains which is the same sort of biofilm we get in domestic sink drains. This build up has happened only seven weeks after they were cleaned by HPV.

We have worked with national experts in Scotland and sought advice from UK experts on the issue as we seek to find a permanent solution and understand why this has happened.

These wards treat children with cancer who have very low immunity to infections so to let our experts in and put cameras down the drains we need to move the patients.

Ward 2A has a combination of haemato-oncology patients and other cancer patients. Four bone marrow patients will move to the bone marrow adult ward (4b) in the adjoining Queen Elizabeth University Hospital (QEUH).

The remainder of the 22 patients from ward 2A and the outpatients who attend ward 2B (this is a day care ward with no inpatients) will move to another ward in the QEUH.

Patient safety is the one key overriding issue and this temporary move will enable our technical experts to make thorough investigations.

No other services at the Royal Hospital for Children are affected.'

Reflections on Communications Handling of Water Incident

62. Throughout the period of the management of the water incident which extended over two periods from March 2018 to December 2018, there was significant proactive parent/carer communications activity by clinical staff, members of the IMT and senior managers, supported by me and my team, which were focused principally on those patients and families present in the unit directly impacted by events. As public, media and political interest in issues affecting the unit grew and became more sustained into 2019, it became increasingly evident that we needed to communicate with families beyond those whose child or young person was in hospital and so we developed approaches to facilitate this. I appreciate that, for some parents who were not in regular contact with the unit, until the launch of the Facebook page in September 2019, their main source of information may have been through the media coverage which was not at all times accurate.

63. Furthermore, I believe that the information that parents were being given from different sources may have caused confusion and mistrust of the information and updates we were providing. For instance, once the measures had been taken on the water supply, our statements – as agreed with the IMT Chair and the Director of Estates and Facilities - reported that the water was safe to use. However, the continued use of bottled water to 'build up the confidence' of parents in the water supply, combined with posters asking patients only to use the clinical sinks for handwashing, could understandably give a different, conflicting impression; the experience of patients and carers in this regard was at odds with our statements.

64. I have been asked who was responsible for making decisions such as continuing to use bottled water when the water had been cleared as safe to use. I was informed by Jamie Redfern, who was the then General Manager, Hospital Paediatrics, that it had been agreed within the Royal Hospital for Children to

continue to supply bottled water. I am not aware whether that was an active decision or who was involved.

65. I have been asked could this have been handled differently. On 4 June 2018 IMT, the minute notes that: ""TI responded that the filtered water remains safe to use and she is comfortable that patient's [sic] continue to use showers." It was also noted that bottled water continued to be issued at that time as the kitchen was closed, meaning that parents were unable to refill water jugs.

66. Had the use of bottled water ceased when the kitchen was re-opened, then this may have reduced confusion or conflicting messages.

67. Any mistrust may have been compounded by an error on the part of my press team when, in October 2019, in response to an enquiry from the Herald on Sunday, it was mistakenly stated that we had not given advice to stop drinking water. Whilst this was accurate in the case of the Ward 6A IMT underway at the time, there had been a period in the early stages of the water incident IMT in March 2018 when such advice had been given at the Royal Hospital for Children. The detailed narrative and associated documents provided to the Inquiry in RFI No. 6 explains the events which led to this inaccurate statement being issued. This mistake was regrettable and undoubtedly impacted trust [the narrative is the 'water advice' narrative provided under RFI 6].

Issue 4: Knowledge of the Board of issues with the water supply since 2015 and "suppression" of the DMA Canyon report. The Inquiry has heard evidence, in particular from [redacted], of an allegation that the Board failed to act upon the issues raised in the DMA Canyon report regarding the water supply and failed to communicate with patients and families as to the issues raised in the report in terms of how these issues may impact upon patient safety.

68. I have only limited knowledge of the DMA Canyon reports.

69. I was not a member of the NHS GGC Executive team when the DMA Canyon Reports were first brought to the attention of the Chief Executive, Mrs Jane Grant, in early summer 2018. The then Director of Communications, Ally McLaws, may have been party to discussions about the reports, but did not share this with me.

70. I first became aware of the reports when the Leader of the Scottish Labour Party, Anas Sarwar MSP, referred to them in the Scottish Parliament on 28 November 2019.

71. In my role, I was responsible for working with colleagues to respond to media questions about the DMA reports, including enquiries that followed comments by Mr Sarwar in November 2019 [see the media statement issued 28.11.2019 and submitted under RFI 1 22.6], a question from the BBC Disclosure programme makers in 2020 [as included in the Disclosure narrative submitted under RFI 6 in an email thread dated 18.6.2020], and an enquiry from Hannah Rodgers at the Herald on Sunday [see response made 24.5.2019 submitted under RFI 1 22.6]. These media statements were all prepared during the period of Scottish Government oversight of NHS GGC communications (as per paragraphs 135 - 191 of my statement) so would all have Cabinet Secretary clearance and have been provided to the Inquiry.

72. When the DMA Canyon water risk assessments were raised with the Chief Executive, the potential issues with the water supply were already being investigated, about which we had been open and transparent with patients, their families and the public, as I describe elsewhere in my witness statement.

Issue 5: Communications ventilation issues relating to Wards 2A, 2B, and 6A, particularly whether facts as they were known were withheld/ concealed/ misrepresented by the Board; [December 2018 to March 2022]

73. The decision to remain in Ward 6A to enable work to take place to upgrade the ventilation system was communicated to parents, staff, the NHS GGC Board, the public and media in December 2018. The water incident IMT was continuing to meet at this time, and it is noted in the minute of the meeting on 30 November

2018 that “Dr Inkster wishes Comms to be released informing parents and staff that the ward will not be moving back on 14 December due to ventilation issues” [as included in a timeline submitted under RFI 1 6].

74. The then Director of Communications, Ally McLaws, prepared a core message on the work to be undertaken on the ventilation system which he shared with Dr Inkster, Grant Archibald, the then Chief Operating Officer, Kevin Hill, Director, Woman and Children’s Services, Tom Steele, Director of Estates and Facilities, Tom Walsh, Infection Control Manager and Jonathan Best, who was to take over the role of Chief Operating Officer from Grant Archibald.

75. The content of this message was to be used proactively as the basis for a patient and parent briefing, a media release, staff communication, NHS GGC Board Member briefing and to be published on the Involving People Network for the general public.

76. Given the significance of the issue, Ally McLaws also shared the draft with Jane Grant, Chief Executive and Dr Jennifer Armstrong, Medical Director.

77. It was through this iterative process that the final version of the statement was agreed, and this was given to parents and issued to other stakeholders on 6 December 2018 [media statement submitted under RFI 1 22.6]. This statement advised of the decision to upgrade the ventilation, the anticipated cost of doing so and the consequences of this for patients. I understand this to be accurate at the time of writing and do not believe this was misleading.

78. It has been stated to me that there is evidence that patients (and not only patients) were told that ‘the opportunity was being taken to upgrade the ventilation’ during the decant of Ward 2A. I have been asked if this is a full and transparent explanation of why works were done and if ‘upgrade’ was a fair description of what was done.

79. This communication was drafted by the then Director of Communications, Ally McLaws, and shared with the Incident Management Team, the Lead Infection Control Doctor, Teresa Inkster, other Directors and the Chief Executive. The version of the statement that confirmed the ventilation was to be upgraded was approved by the Chair of the IMT, Directors and the Chief Executive. The statement included the anticipated cost of £1.25m, confirming it would take an anticipated "12 month programme to design and install the upgraded system'.

In addition, a background note was provided which explained the timeline:

'Background note
In March of this year bacteria was found inside the taps of patient rooms in ward 2A of the Royal Hospital for Children. The water supply from the main tanks to the hospital tested clear and we identified the taps and shower heads as potential sources - all have been replaced.

The drains were also tested and in September we took the decision to move the patients out of wards 2A, 2B and the adjoining Bone Marrow Transplant unit into wards in the adult hospital next door. This allowed our technical staff to carry out remedial works and to make investigations into the whole ward environment. It was during this period that our teams identified the opportunity to upgrade the ventilation system and this work is now being progressed."

80. Whilst the programme did take considerably longer, and cost considerably more, not least due to the impact of the pandemic, I believe the statement to be accurate at the time of writing.

Issue 6: Communication as regards the Cryptococcus incident, including leak to media; [November 2018 to May 2019]

81. An adult patient being treated in Queen Elizabeth University Hospital had a positive blood culture for Cryptococcus neoformans on [redacted] November 2018. A paediatric patient had a positive blood culture for Cryptococcus neoformans

reported on [redacted] December 2018. Both patients sadly died. The two cases were reported by a microbiology colleague to the Lead Doctor for Infection Control, Dr Teresa Inkster, on [redacted] December 2018. A Problem Assessment Group met the following day, and the first meeting of the Cryptococcus Incident Management Team took place on 20 December 2018 [IMT minutes were submitted within a timeline under RFI 1 6 and are discussed within the cryptococcus narrative submitted under RFI 6].

82. Communications was a standing item on the agenda of the Cryptococcus Incident Management Team (IMT) meetings in line with the National Infection Prevention and Control Manual (NIPCM).

83. Using the Healthcare Infection Incident Assessment Tool (HIIAT), the incident was assessed as red on 20 December 2018 and, in line with the NIPCM, the IMT considered whether to issue a proactive release.

84. In this instance, the IMT noted that the funeral of the paediatric patient who tested positive for Cryptococcus was due to [redacted], and the parents would not know the outcome of the Fiscal instructed Postmortem until after [redacted]. The IMT also noted that there were no wider public health implications and that the cause of the incident remained unknown. The press officer advised that a press statement should not be released before the parents of the paediatric patient were informed, to prevent them finding out via the press.

85. Within this context, the IMT decided against a proactive release and agreed that a holding line should be prepared in the event of any media enquiries. Relevant clinical disciplines responsible for the care of patients were represented on the IMT, and communications actions flowed from these representatives to clinical staff through team briefings and staff huddles.

86. When the IMT next met on 27 December 2018, the Chair of the IMT, Dr Inkster, fed back that she had discussed the incident with the NHS GGC Medical Director who agreed that, in line with Duty of Candour, patients must be told of the concerns of the IMT. The adult patient who tested positive for Cryptococcus had

been spoken to by the Lead Doctor for Infection Control about the blood culture results. The parents of the deceased child did not yet know the outcome of the Fiscal instructed Postmortem and the current hypothesis. The patient's funeral had been held on [redacted] and the parents were to take a break for a few days. Discussion took place as to the content of what the parents would be told and when. The IMT agreed that the final Fiscal report would be helpful, prior to speaking to the parents, however, if this were to take a considerable amount of time, it was important to tell the parents before the report was available. It was agreed that the Procurator Fiscal should be contacted to find out when the report would be available.

87. As was subsequently noted by the IMT, a meeting with the parents of the paediatric patient took place on 4 January 2019. I was not present at that meeting.

88. On 7 January 2019, there was a further Incident Management Team when the incident was rated as green, as there had been no further cases. There was agreement by the IMT that no proactive communications were required at this time.

89. Following this meeting, and in response to a letter from the Lead Clinician for Haemato-oncology on the ongoing situation, the Medical Director convened a meeting with a number of colleagues involved in the IMT, at which it was agreed that HEPA filters should be deployed to Ward 6A and that there was a need to supply rapid information to staff and parents to explain this [the meeting minutes of 9.1.2019 are contained within the cryptococcus narrative submitted under RFI 6].

90. A written note was initially planned and then an aide memoir was instead agreed and distributed to ensure staff were fully briefed and messaging was consistent for parents and families [copies are included in the cryptococcus narrative submitted under RFI 6, dated 9.1.2019].

91. Parents on Ward 6A were briefed verbally on 10 January 2019.

92. This was followed up on 13 January 2019 by a written communication, following concerns from four families being raised directly with the Cabinet Secretary for Health and Sport. The written briefing was drafted by a press officer and agreed with IMT representatives, senior officials and the then Director of Communications, Ally McLaws.

93. The written briefing was given to parents on Ward 6A individually, face to face, with a verbal update and an opportunity for discussion by Jen Rodgers, Chief Nurse, and members of the clinical team [included in the cryptococcus narrative submitted under RFI 6].

94. As the IMT continued to meet to review and manage the situation, including the results of a second round of air sampling, one of my press officers reported to the IMT that the Sun newspaper had made an enquiry about the situation. The newspaper subsequently confirmed that they were speaking with parents. A reactive media statement was agreed and issued to the Sun on 17 January 2019.

95. The Sun journalist confirmed that the paper was not planning to run their story until the weekend. The IMT agreed that if, NHS GGC was going to release a press statement, then information would also be needed to distribute to patients/parents and staff and a further written communication for parents and patients in the unit was issued on 17January 2019 [included in the cryptococcus narrative submitted under RFI 6].

96. A number of IMTs were organised over 17 and 18 January to review the results of the air sampling obtained on 16 January 2019.

97. On 18 January 2019, the decision was taken by the IMT, and senior officials within NHS GGC, to issue a proactive press release and a briefing for all staff. I agreed the draft release with the Chair of the IMT, Dr Teresa Inkster, and other colleagues. There was agreement that the release should only be issued once the families of the two patients who had tested positive for Cryptococcus were

notified that a release would be issued, and that media coverage was expected. This delayed the issuing of the release until 8pm on the evening of the 18 January [included in the cryptococcus narrative submitted under RFI 6].

98. I updated Scottish Government and Health Protection Scotland communications officials on our plans to issue a proactive release and shared this with them ahead of issue. I also alerted NHS GGC Board members [included in the cryptococcus narrative submitted under RFI 6, at 18.1.2019].

99. There was significant resulting media coverage over the weekend, with further requests for details of the cases. An all-staff briefing was issued on the QEUH site on 20 January 2019 and verbal briefings were given by the then QEUH Director, Anne Harkness, to all receiving consultants/Emergency Department/ ICU team at the 12.00 noon huddle (communications and safety meeting representing all parts of the adult hospital) [correspondence and written briefing included in the cryptococcus narrative submitted under RFI 6].

100. In the aftermath of the initial proactive statement from NHS GGC, there was intensive and sustained media and political scrutiny of the Cryptococcus incident which continued for a number of weeks. This was compounded by further unrelated infection incidents in NHS GGC hospitals, all of which contributed to a heightened public anxiety and media and political scrutiny of infections.

101. Throughout the period that the IMT continued to meet to consider the incident, communications were a core agenda item in line with the NIPCM. At no time were I, or my press team, asked to withhold any aspect of the incident, unless to protect patient confidentiality. We were proactive in our communications throughout.

Reflections on the Cryptococcus IMT Communications

102. There were a number of key issues in the communications handling on this incident which I would highlight.

(a) Challenge in balancing the public interests with the need to respect patient confidentiality

103. Central to the considerations and planning of communications about the incident, were the two patients and their families. At all times, the IMT, senior officials, my team and I endeavoured to respect and protect patient confidentiality. The risk of deductive disclosure was a key concern, particularly in the case of the paediatric patient, and this restricted the level of detail that, collectively, we were prepared to confirm on the cases. When the IMT agreed to a proactive release confirming the investigation of two cases, we agreed with the IMT Chair and other senior officials to the release of information, without providing details of the deaths of both patients. Given the small number of paediatric patients within this cohort and the very small number of deaths over this period, to have disclosed this might have revealed the identity of the patient and thus breach professional codes respecting patient confidentiality. This position was agreed in good faith but unfortunately had negative consequences:

(i) Release of information on deaths was uncontrolled

Comments began to appear on social media within a few hours of our press release on 18 January that two patients had died. This included misinformation that both of the patients were children. Both STV and BBC contacted the press office to enquire about this and I worked with a number of officials to agree a statement that would confirm the deaths, and clarify that this did not involve two children, whilst still seeking to protect the identity of the paediatric patient by not confirming that a child had died.

Despite a number of enquiries from media, we maintained this stance on not confirming further details of the patients due to patient confidentiality. This was not consistent with other authorities, including the Crown Office and the Cabinet Secretary for Health and Sport who did release details of the patients in the public.

(ii) Complaint by the family of the adult patient

In seeking to protect the identity of the paediatric patient, we inadvertently caused distress to the family of the adult patient by the use of language in the public statement issued on Saturday 20 January, for which we subsequently apologised. We referred to the patient as 'elderly', a term that gave offence to the family of the adult patient. The use of this term, to distinguish between the two patients, had been carefully considered in the drafting of the statement and was felt to be respectful. Unfortunately, it caused distress to the patient's family, which I very much regret.

(iii) Criticism from politicians on 'failure of Board to answer legitimate media questions'

The decision not to share patient specific details was a factor in subsequent claims by politicians that we were seeking to 'cover up' the incident. NHS GGC was criticised in the Scottish Parliament by Cabinet Secretary for Health and Sport, Monica Lennon MSP, for a failure to answer legitimate questions over the weekend. These questions related specifically to the deaths as well as the timeline for the incidents (see below).

(b) Misunderstanding of the NIPCM

104. There were comments made by third parties that NHS GGC was not following the NIPCM in how it reported this incident, with a suggestion that the infection should have been reported publicly within 24 hours of it being confirmed. As is explained in Paragraph 111 below, this is incorrect.

105. Questions about the timeline for the incident began to be asked by media on 20 January to which NHS GGC responded, [included in the cryptococcus narrative submitted under RFI 6 at 20.1.2019 as 'third proactive statement'] confirming the following:

"These two cases of infection were identified in December and an Incident Management Team was formed. A likely source was identified and dealt with

immediately. The small number of paediatric and adult patients who are vulnerable to this infection are receiving medication to prevent potential infection and this has proved effective."

"Air sampling was carried out and HEPA filters were brought in on 10 January to specific areas before conclusive results were available. Results identifying the organism were obtained on 16 January."

106. The Scottish Labour Party began to ask questions about the timeline for the announcement about the infections on 21 January 2019 in a general news release issued that day: "It has already been confirmed that the government knew about fungal infections at the hospital last December." Scottish Labour Shadow Cabinet Secretary for Health and Sport, Monica Lennon, was quoted.

107. Again, we confirmed the timescales for managing the incident [media statement dated 21.1.2019 , included in cryptococcus narrative submitted under RFI 6].

108. On 22 January, Alex Neil MSP stated:

"..a great deal of anxiety has been created unnecessarily as a result of the way in which external communications have been handled by NHS Greater Glasgow and Clyde. If the information had been made available more timeously, I am sure that much of the anxiety that has been created in recent days could have been avoided. Will the cabinet secretary make sure that the health board learns lessons on the need, in such circumstances, for effective and timeous communications and transparency as part and parcel of the strategy for handling such outbreaks?"

109. On 26 January 2019, Hannah Rodgers, journalist with Herald on Sunday, enquired about the timescales for informing the public about the Cryptococcus situation, suggesting incorrectly that our guidelines stated that given the seriousness of the situation we should have shared this rapidly [included in cryptococcus narrative submitted under RFI 6].

110. In fact, this line of enquiry misunderstood and misrepresented the NIPCM. Firstly, the guidance no longer states that all HIIATs that are assessed as red must have a press statement proactively released in the public domain. The NIPCM makes clear that the decision on whether to make a proactive statement on an incident is at the discretion of the Chair of the IMT. The guidance changed from the former to the latter position in 2017. NHS GGC is aware that Ms Rodgers had been given the pre-2017 version of the guidance by an unknown source.

111. Secondly, the timing in the guidance also does not relate to the date when an infection was confirmed, but the date of an IMT meeting. The guidance states that the IMT should complete a Healthcare Infection Incident and Outbreak Reporting Template (HIIORT) within 24 hours and prepare a press statement and send to Health Protection Scotland (now ARHAI Scotland) but it does not state that it has to be released publicly within 24 hours. The statement can be issued proactively, at the discretion of the Chair of the IMT, but the guidance does not state that this must be within 24 hours.

112. In this case, there were a number of factors which influenced the media handling of the incident and the decision not to issue a proactive statement including the personal circumstances of the family of the paediatric patient, together with the timescales for the post-mortem and also, critically, the timescales for the air sampling and the confirmation on 16 January of the presence of the organism within the hospital environment as detailed in paragraphs 81-107 of this statement.

113. Finally, the NIPCM states that, in the case of a red HIIAT, the Board should complete a report using the Healthcare Infection Incident and Outbreak Reporting Template (HIIORT) and share this with HPS within 24 hours – again this was carried out. It is the responsibility of HPS to share the report with Scottish Government.

114. In a statement to the Scottish Parliament on 22 January 2019, the Cabinet Secretary for Health and Sport confirmed:

"The Government was first informed of the Cryptococcus infection in two patients on 21 December. That was the right time for the Government to be informed, because it was the post-mortem following the child's death that identified the second case. As I said, a second case is the trigger for additional infection control action. We were rightly informed and kept up to date." [correspondence and briefings around this statement and the visit of the same day included in the cryptococcus narrative under RFI 6].

(c) Source of the infection

115. The decision was taken to release information on the potential source of the Cryptococcus organism – the plant room - which was being considered as the hypothesis at the time. This action was taken in order to address potential public anxiety about the safety of the wider hospital environment. However, as has since been concluded by the technical Incident Management Team established under the chairmanship of Dr John Hood, this hypothesis has been shown to be technically infeasible. The speed at which we reported on the hypothesis was made with good intentions but was ultimately confirmed too quickly – and once in the public domain was difficult to undo.

116. At the NHS GGC Board meeting on 19 February 2019, the Medical Director gave a report on the incident to Board members. She advised that an Expert Advisory Group had been set up to report to the Incident Management Team to help establish whether a definitive source of the Cryptococcus could be found, "although it was noted that an American study has reported that the organism can lie dormant in a healthy human and only become harmful when a person becomes extremely unwell with suppressed immunity". The then Director of Communications, Ally McLaws, recorded this in the Core Brief issued as a summary of the meeting. The Core Brief has been submitted within Request for Information No.6 [included within the cryptococcus narrative submitted under RFI 6, dated 19.2.2019]. This was published after the meeting. Later that evening, I received a call from the Medical Director asking me to phone to apologise to Dr Inkster for this point having been highlighted in the Core Brief as Dr Inkster would

be upset by this. I did so; it was my impression that Dr Inkster was unhappy that this possible alternative hypothesis was put into the public domain as this questioned her hypothesis and her personal judgement.

(d) The pace of reporting of the incident

117. In the days and weeks following the announcement of the Cryptococcus incident, intense media scrutiny continued, and this made it more difficult to manage the release of information into the public domain. Establishing the facts takes time and the investigation of an incident does not necessarily align with the media cycle, a point that was recognised by the Cabinet Secretary for Health and Sport in a statement to Scottish Parliament on 22 January 2019. She said: “However, we must understand that, in order to be sure of one’s facts, one cannot always work exactly to the timetable of the news cycle. There will be times when I or a health board cannot answer questions from our friends in the media at the precise point at which they are asked.”

118. The fast pace of the development of the narrative around the incident was exacerbated by comments running on social media. This was difficult to respond to and undermined our ability to manage and control the release of information to the public.

Issue 7: Operation of the IMTs

119. I don’t personally attend Incident Management Team (IMT) meetings, but corporate communications are represented by a member of the press team. Their role is to support the IMT in its communications handling. They draft and prepare written communications as agreed with the Chair of the IMT and other colleagues.

Issue 8: Effect of third-party leaks to media and politicians upon communications, including by those identified as whistleblowers

(a) Leaking of documents

120. Beginning in February 2019 and continuing throughout that year, a series of internal documents, including those containing information about individual patient cases, was shared by unknown sources with journalists and politicians from opposition parties. This impacted significantly on the organisation and on our ability to engage proactively with patients, their families and the public; it eroded trust, caused significant harm and distress to parents and carers, as well as staff, unfairly and unjustly resulted in accusations of cover up and ultimately contributed to NHS GGC being escalated to Level 4 on the performance framework for issues relating to communications and engagement with patients and families.

121. It also impacted personally on me and my team, as it led to a significant, intensive and pressurised workload for the press team, responding to a large volume of complex enquiries, including many media enquiries and Freedom of Information requests.

122. The journalist, Hannah Rodgers of the Herald on Sunday, was a regular recipient of internal documents from unknown sources, initially between February and May 2019 and then again from September to November 2019, when information leaks were also shared with politicians and political journalists. She confirmed to my team that there were three unnamed individuals providing her with information, which included physical copies being left at the offices of the paper.

123. Information leaked to Hannah Rodgers, other journalists and politicians included:
    - Patient details including information relating to the deaths of three children at RHC Paediatric ICU, one with Serratia and two with Pseudomonas infections, information on an individual patient who was treated for Stenotrophomonas, and information that ‘one patient was taken to Edinburgh for treatment’ when Ward 6A was closed temporarily.

- Numerous internal documents including SBARs, ‘documents relating the Queen Elizabeth University Hospital and Royal Hospital for Children which show evident problems in the hospital’s ventilation system’, an Innovated Design Solutions Feasibility study regarding increasing ventilation air change rates in Ward 2A – October 2018, minutes of meeting to discuss BMT Unit RHC, Health Protection Scotland and NSS situational report on the SBAR raised about QEUH Bone Marrow Transplant Unit.

- Internal staff information relating to the Infection Prevention and Control team and relationships with Estates and Facilities, as well as information seeking to discredit colleagues.

- Details of ‘a clinician-led probe’ into infections linked to the water supply at the flagship Queen Elizabeth University Hospital in ten cases in 2016 and twenty-six cases uncovered in 2017. [media enquiries were submitted under RFI 1 22.6, and some are also discussed in narratives submitted under RFI 6].

124. The leaks were investigated by the Head of Information Governance, Isobel Brown, and a report was submitted to the NHS GGC Information Governance Committee and the UK Information Commissioner. This investigation found that, whilst it was not possible to obtain any definite evidence that personal identifiable information had been released to external bodies, the documented timelines “would imply that individuals with knowledge and access to information have been operating out with the Board’s formal communication channels or recognised whistleblowing process”. It was confirmed by the Head of Information Governance that the NHS Whistleblower referred to by the MSP, Anas Sarwar, when he spoke of the ‘clinician-led probe’ did not report this through NHS GGC’s whistleblowing policy. [Timeline and Report submitted 14.6.2024 with this statement]

125. There is evidence that the information released by these unknown sources, when put in the public domain, caused considerable distress to family members who had no prior knowledge that their child’s case would be made public. For

instance, when the details of [redacted] case were put into the public domain, neither we nor, importantly, [redacted] family, knew that their [redacted] was the case raised in Parliament. In a letter from [redacted] to NHS GGC dated 14 November 2019 [redacted] said that [redacted] found it very upsetting that [redacted] was being discussed. In response, NHS GGC agreed that a letter should go to families in Ward 6A from Kevin Hill, Director, Women and Children's Directorate to apologise for any anxiety caused by the media coverage that followed the debate in Parliament [letters included in Narrative 7 submitted under RFI 6, in email dated 15.11.2019]. This was also the case for other families whose children were discussed without their knowledge in Scottish Parliament and who spoke to NHS GGC colleagues of their anger at that.

126. The leaking of information by unknown sources also caused considerable anxiety amongst other families and staff and had the potential to cause anxiety amongst the thousands of patients who were cared for in the QEUH/RHC every week. These actions and the criticism that resulted from opposition politicians ultimately led to 23 clinicians writing a letter to the First Minister to outline their immense disappointment and frustration at the way the QEUH and RHC were being portrayed unjustifiably in the Scottish Parliament and in the media undermining public confidence in the hospital. In the letter, the clinicians also outlined their grave concerns about the erosion of trust between clinical staff and their patients and families. [submitted 14.6.2024 with this statement]

(b) Impact of whistle-blowers on communications

127. Three staff members have been identified in Scottish Government documents provided to the Inquiry at Bundle 13 – Miscellaneous Volume 10 as whistleblowers. These were Dr Christine Peters, Dr Teresa Inkster and Dr Penelope Redding.

128. On the whistleblowers, the Cabinet Secretary for Health and Sport, Jeane Freeman, MSP, said in an update to Scottish Parliament on 10 December 2019:

"I have also met recently with a number of NHS Greater Glasgow and Clyde clinicians who have raised concerns. I have found their insights to be incredibly helpful in shaping the actions we are now taking. I want to thank them not only for making their concerns known, for persisting in following their professional responsibilities and to thank them for accepting my invitation to continue to work with us to consider the evidence we have, the decisions taken and the steps needed to resolve the outstanding issues."

129. Dr Peters and Dr Redding have also identified themselves as whistleblowers in the BBC Disclosure programme, 'Secrets of Scotland's Super hospital' which aired on 24 June 2020. As well as speaking to the media, the clinicians were also in contact with the Leader of the Scottish Labour Party, Anas Sarwar MSP. He confirmed in a radio interview to Good Morning Scotland on 25 June 2020 that he had been closely communicating with them 'for almost a year, if not longer than a year'. Dr Inkster has also spoken publicly to the Herald on Sunday.

130. Drs Inkster and Peters raised the accuracy of various media statements issued by NHS GGC with Dr Marion Bain, who was the Scottish Government appointed Director of Infection Prevention and Control at NHS GGC following escalation to Level 4 of the performance framework. Dr Bain held this position from January to May 2020. Dr Bain gave me details of these complaints and asked me to respond. A full review of the comments and challenges from Drs Inkster and Peters to the media statements was carried out, with independent oversight by Professor Angela Wallace, NHS Forth Valley Nurse Director and NHS GGC HAI Executive Lead appointed by Scottish Government and Mr Mark White, Finance Director, NHS GGC, who was not personally involved in the issues being investigated [correspondence concerning the review is included within Narrative 7 submitted under RFI 6, at 26.3.2020]. A full report into each of their claims was provided to Dr Bain before she stood down from her role with NHSGGC (18 May 2020). This review accepted only one point made by the two microbiologists; all others were not upheld. [see 2 emails submitted 14.6.2024 with this statement]

131. All statements produced by me and my team and agreed with the relevant senior director(s), were made in good faith and reflected the corporate understanding

and position on a range of complex issues. The statements were not inaccurate. The challenges to them, rather, reflected the difficulties we faced in handling and responding to two sets of opposing views about matters.

Issue 9: Communication on use of prophylaxis medication and whether any necessity for its use due to concerns about the hospital building:

132. Elsewhere in my witness statement, I refer to public, media statements issued on the use of prophylaxis. Communication with parents on the use of prophylaxis was the responsibility of clinicians. I can offer no further information on this.

Issue 10: Effect of escalation of Board, including prior requirement to clear communications with Scottish Government:

133. It is routine for me and my team to alert the Scottish Government press team for awareness to contentious and sensitive media issues that we are handling ahead of sharing them with media. This was the case before the formal clearance processes were established in November 2019 (following escalation to Level 4) and remains the case today.

134. Prior to establishment of formal clearance processes, NHS GGC informed the Scottish Government of emerging issues in relation to issues relevant to the Inquiry including handling of the adult Bone Marrow Transplant transfer (2015), the water incident (2018), Ward 2A/B decant (2018), the Cryptococcus Incident (2019), Mucor investigation (2019) and cladding issues (2017/18).

Background to Level 4 Escalation and Scottish Government Oversight of Communications – Ward 6A Incident and Communications [June 2019 to November 2019]

135. An NHS GGC Problem Assessment Group was held on 3 June 2019 to discuss four cases of gram-negative bacteraemia (GNB) in patients being treated within Ward 6A of the Royal Hospital for Children haemato-oncology unit. Following

this meeting, an Incident Management Team (IMT) was set up and met for the first time on 19 June 2019. This IMT updated the incident to five cases of GNB, together with a patient who had an atypical mycobacterium [PAG and IMT minutes were submitted under RFI 7 2.18, with a few IMT minutes also previously submitted in timelines under RFI 1 6].

136. From the outset of the investigation, there was full consideration of an appropriate communications response to the cases being investigated. Decisions on communications were made in line with NIPCM, the NHSGGC's Healthcare Associated Infection Communications Strategy, and the Associate Chief Nursing Officer letter of 11 February 2019, which is explained elsewhere in my witness statement.

137. The Scottish Government, via Health Protection Scotland, were notified of the Problem Assessment Group and the cases being investigated. In an email dated 7 June 2019, responding to an email from the Senior Media Manager within Scottish Government Health Directorates, I explained the initial communications response: [included in the 6A narrative submitted under RFI 6].

> "A full multi-disciplinary team, including infection control doctor, has assessed each individual case and, as you say, the assessment was green. Three of the four cases were considered to be acquired outwith the hospital environment. In addition, it is believed that the HAI case has another source associated with the patient's own gut. In view of the green assessment there was no action to develop a holding line."

138. When the Incident Management Team was subsequently set up on 19 June 2019, 'communications' was a standing item on the agenda in line with the NIPCM. A press officer was in attendance to support the Incident Management Team and the Chair, Dr Teresa Inkster, in delivering the agreed communications actions from each meeting.

139. Using the Healthcare Infection Incident Assessment Tool (HIIAT), the incident was initially assessed as amber. The hypothesis was that the 'atypical

mycobacteria patient has been exposed to unfiltered water source somewhere on site and the GNB cases had possibly been acquired out with the healthcare setting given negative water sampling'. The Incident Management Team agreed that patients/parents would 'not to be informed of GNBs at present as no conclusive evidence that it is due to healthcare environment'.

140. It was noted that Professor Brenda Gibson, Lead Clinician, Haemato-Oncology, would meet the family of the patient with the atypical mycobacterial infection and the IMT agreed that a holding statement should be prepared on the atypical mycobacteria case.

141. It was also agreed that a staff briefing would be prepared by one of the haemato-oncology consultants.

142. In response to the incident, steps were taken to monitor the water and to install point of use filters in the operating theatres. The Lead Infection Control Doctor, Dr Teresa Inkster, wrote to inform surgical and anaesthetic colleagues of these measures on 21 June 2019 [included in 6A narrative submitted under RFI 6].

143. At their next meeting, the Incident Management Team continued to discuss and agree the communications response and noted that parents of the patient with the atypical mycobacteria met Professor Gibson and Dr Inkster on 26 June 2019. A briefing on the case was also to be prepared for other parents on the unit. The information was given to parents that evening by Jamie Redfern, General Manager, Hospital Paediatrics [included in 6A narrative submitted under RFI 6].

144. Following the meeting with Professor Gibson and Dr Inkster, the parent of the mycobacteria patient posted critical comments about the safety of the hospital on a closed Facebook page used by families.

145. At the next meeting of the Incident Management Team, it was noted that Dr Inkster had drafted some lines that 'can be used for a general communication to the patients/parents. Dr Inkster will send this to Kevin Hill for agreement before forwarding it to Angela Howat.' Kevin Hill was the Director of the Women and

Children's Directorate at the time and Angela Howat was a Senior Charge Nurse in Daycare.

146. The Incident Management Team continued to agree to a holding statement being prepared and did not decide to issue a proactive statement.

147. On 25 July 2019, Hannah Rodger of the Herald on Sunday contacted the press office with an enquiry about a new water-based outbreak incident. A statement was issued in response confirming a single case. The following Sunday, in an article in the newspaper, Ms Rodger wrote that a source had informed her that "tests are going on to determine if other children have been affected by the latest bacteria, said to be a mycobacteria linked to the water". A second senior NHS GGC source had also spoken to the paper, according to the article [included in 6A narrative submitted under RFI 6, at 4.8.2019].

148. The focus of subsequent Incident Management Team meetings remained on proactive communications with parents of children in Ward 6A and a further written communication was prepared and delivered in person to parents on 2 August 2019.

149. This communication confirmed the need to create capacity in the ward in order to carry out further investigations and that the IMT had taken the decision to temporarily suspend new admissions to the ward to allow this to take place. The communication also confirmed that as a precaution, prophylactic antibiotics were being prescribed for patients on the ward [included in 6A narrative submitted under RFI 6, at 2.8.2019].

150. On the same day, a follow-up enquiry was received by Hannah Rodger, Herald on Sunday - "Have you identified the source of this infection yet and if so, what is it and what steps are being taken to address that? Was this infection discussed by an incident management group, was there a report to HPS, and was it given a HIIAT score? Just looking at doing a small update for this week. I presume no other patients have tested positive for this infection apart from the one patient?

And no other issues with hospital-acquired infection in this ward at present?" [included in 6A narrative submitted under RFI 6, at 2.8.2019]

151. We confirmed in a statement to Hannah Rodger that investigations were also underway into two cases of rare infections [included in 6A narrative submitted under RFI 6, at 3.8.2019].

152. In the minute of the IMT on 9 August 2019, it was noted: "A press statement was issued on Saturday 3rd of August to the Herald on Sunday newspaper, the day after the letter was shared with families and the two families directly affected were spoken to about the likelihood of media coverage at the weekend. We followed the guidance completely on notifying the patients."

153. On 9 August 2019, Hannah Rodger followed up again asking for details of the specific cases reported the previous week. We issued a further response to the Herald on Sunday, explaining why we were not in a position to provide the newspaper with the specific bacteria being investigated as detailed below: [included in 6A narrative submitted under RFI 6, at 9.8.2019]

"You asked us to also give the reasons why we are unable to name the bacteria/fungi involved in each infection.

"Our primary responsibility is to our patients and their families. When considering what information to put into the public domain there are a number of issues to consider. This includes questions of whether there is a public interest in learning of the specific nature of the infection and whether there is any public health implication for the wider health of the population.

"A further key consideration is clearly whether we would breach patient confidentiality if we shared information about a single case.

"In this case, there is no risk of transmission of these infections from patient to patient and no public health consequence.

"These are three unique cases which mean that we would be releasing confidential information to the media about individual patients.

"The NHS code of practice on confidentiality sets out that key identifiable information includes:

- patient's name, address, full post code, date of birth.
- pictures, photographs, videos, audiotapes or other images of patients.
- NHS number and local patient identifiable codes.
- anything else that may be used to identify a patient directly or indirectly.

"For example, rare diseases, drug treatments or statistical analyses which have very small numbers within a small population may allow individuals to be identified.

"Whilst we have reported on single cases in the past, lessons learned from previous incidents, including criticism from the families concerned, have led us to review this position and in view of the above, we will not in this instance be confirming the specific nature of the infections.

"Scottish Government have also made clear that they will not discuss these specific patients due to the strict rules of patient confidentiality.

"We will of course continue to be open and transparent about any issue of material interest on the management of the infections."

154. As the incident continued, regular updates continued to be provided to parents in the unit after subsequent Incident Management Team meetings. These were all delivered in person, supported by a written briefing, to ensure consistency of message, whilst also providing an opportunity for families to ask questions.

155. On 8 September 2019, as the regular proactive communications to families continued, Hannah Rodger interviewed the parents of the patient with an atypical mycobacterium [included in 6A narrative submitted under RFI 6].

156. The following day, the Cabinet Secretary for Health and Sport asked the Chair, Professor John Brown CBE, for a briefing on Ward 6A, including NHS GGC's communications approach. This briefing noted a plan to extend communications with parents to include those whose child or young person was not a current inpatient, amongst whom a number had expressed concern about NHS GGC's communications [included in 6A narrative submitted under RFI 6, at 9.9.2019].

157. As explained elsewhere in my witness statement, the Cabinet Secretary agreed to this communications approach. From this time forward, NHS GGC widened out its communications from those parents directly affected to include a wider cohort of parents, including parents of outpatients and day cases. From September 2019, with the establishment of the closed Facebook account for parents and patients, statements were also posted and shared with parents who had joined the page. In addition, the Chair, Chief Executive and other senior executives also personally met parents in Ward 6A and also wrote to all other parents whose child or young person had been treated in Ward 2A/B (and/or Ward 6A) since 2015 and offered to meet them.

158. In late September and early October 2019, the Cabinet Secretary met a number of parents, and on 4 October 2019, she appointed Professor Craig White of the Scottish Government as a point of liaison with families. From this time forward, NHS GGC communications were overseen by the Scottish Government.

Escalation and Communications Impact

159. Over two meetings held on 28 September and 1 October 2019, during the period of the Ward 6A Incident Management Team, the Cabinet Secretary for Health and Sport, Jeane Freeman, MSP, met with 14 family members of patients treated by the haemato-oncology unit. From these meetings, her officials compiled a series of 70 questions put to her by the families. These questions covered environmental issues, treatment issues, communications issues and issues that might fall within the scope of the Inquiry; this included issues set out in Request for Information 6 Annex 1 2. (iii) (a, b, c, d, e) and iv (a, j), (v), (vi), (vii) [covered in Narrative 7 submitted under RFI 6, at 28.9.2019].

160. On 4 October 2019, in response to a Government Initiated Question, the Cabinet Secretary announced that she had appointed Professor Craig White as family liaison.

161. This was the first phase of Scottish Government oversight of NHSGGC communications on the issues of infection prevention and control in relation to QEUH/RHC. In this phase, from 4 October 2019 until 28 November 2019, Professor Craig White worked with NHS GGC on communications as follows: [extensive examples are given in Narrative 7 submitted under RFI 6]

- Commenting on, amending and approving the responses to the 70 questions from families (Lesley Shephard, HAI Policy Unit, Scottish Government, also commented on the draft responses and made changes during the drafting stages).
- Commenting on, and approving, the content of letters sent by NHS GGC to parents of haemato-oncology patients about infection issues, including water safety and restrictions on water.
- Commenting on NHS GGC media statements.
- Commenting and offering advice on the NHS GGC's processes for communicating with families.

162. Craig White also joined the Chief Executive, Chair and senior officials when they met nine families on 2 November 2019. He also communicated separately with families.

163. NHS GGC was escalated to Stage 4 of the NHS Scotland performance framework on 22 November 2019 which was attributed to ongoing issues around the systems, processes and governance in relation to infection prevention, management and control at the Queen Elizabeth University Hospital (QEUH) and the Royal Hospital for Children (RHC), and the associated communication and public engagement issues.

164. In the immediate days after, there were no explicit changes to communications approval arrangements, although Craig White continued to contribute to drafting of media statements and parent communications.

165. On 26 November 2019, the Health Protection Scotland review of NHSGGC paediatric haemato-oncology data was published. Our media statement and the Scottish Government statement were inconsistent in their presentations of the findings of the review, leading one journalist to question whether both had read the same report. Our statement, shared in advance with Scottish Government and with their approval, stated: [both included in Narrative 7 submitted under RFI 6, dated 26.11.2019]

"From the Health Protection Scotland review of the data on test results of blood samples over the past six years, their report finds:

- One occasion when the number of infections linked to environmental organisms was greater than expected for this group of patients (Table 5). The period in question was June 2018 which was already being investigated by the infection control team and was identified as being potentially linked to the water supply.

- At no other time between 2013 and 2019 did the rate of infections linked to environmental organisms exceed the upper range of expected levels. This includes 2016 and 2017.

- An increase in Gram negative infections (including both environmental and enteric, i.e. intestinal infections) was noted in 2017, however, this remained within expected levels for the unit. During this time there was an investigation into the possibility that two of these cases may have been linked which was later confirmed not to be the case. This investigation was reported to HPS as per mandatory guidance.

- Since the move to Ward 6A and 4B in September 2018, infection rates have been similar to other Scottish paediatric units."

166. In contrast, the Scottish Government statement on the 2017 data suggested that the levels of infection were an indication of an issue and a reason for Scottish Government escalating NHS GGC; "The report identifies months in which rates of infection exceeded the trigger point requiring further investigation. These data confirm there was a spike in infections in 2018 – this led to the interventions over water contamination and the closure of wards 2A and 2B. These data also confirm higher levels of infections in 2017 and these incidents are part of the reason the Scottish Government announced last week that the board has been elevated to stage 4 of the NHS Board Performance Escalation Framework."

167. Following these statements, two days later, Scottish Government media manager Suzanne Hart informed me and confirmed by email in writing that, given the escalation to Stage 4, the Health Secretary had asked to see and clear all lines relating to infection prevention, management and control at the QEUH and RHC, to include enquiries 'where there is a claim of a connection even if it is not the case' [included in Narrative 7 submitted under RFI 6, at 28.11.2019].

168. In addition to communications with parents, from 28 November 2019 the Cabinet Secretary also cleared proactive and reactive media statements, written communications between NHS GGC and parents, correspondence with an MSP and Board papers. The range of communications to be cleared was confirmed on 2 December 2019 by Professor John Brown, former Chair of NHS GGC to Jane Grant, Chief Executive, and me, when he wrote in relation to a proposed response to an MSP: "As advised by Malcolm Wright yesterday, the SG believes that under Level 4, we must clear all correspondence concerning infection control, clinical governance and patient engagement with the Cabinet Secretary. So once you're happy with what I'm saying can you ask them to ask Jeane Freeman to approve its issue. Can you also suggest that we send Mr Sarwar a similar letter inviting him to meet us too and ask for Cab Sec's permission to take this step." Malcom Wright was the then Director General for Health and Social

Care and Chief Executive, NHS Scotland [included in Narrative 7 submitted under RFI 6].

169. Clearance also extended to letters to individual parents, and responses to a further series of questions from families of parents in the haemato-oncology unit, which were received following the BBC Disclosure programme.

170. Posts by NHS GGC on the Haemato-Oncology Closed Facebook Page were regularly approved by Craig White. The Cabinet Secretary also commented on some social media posts.

171. The clearance process involved initially sharing communications drafted by my team which had been through internal NHS GGC approval processes with Chief Nursing Officer, Professor Fiona McQueen, and Professor Craig White for their feedback and comments. Once that process was complete, the NHS GGC communications team shared the draft lines with the Scottish Government media team, who in turn I understand, shared them with policy colleagues, special advisors and the Cabinet Secretary for Health and Sport, who would either clear, make changes or ask further questions before clearing. Questions would then follow between NHS GGC communications team / senior officials and Scottish Government policy advisors and media team until lines were agreed. Statements were then issued. They were also issued to the senior hospital management team who would discuss with staff and families on the ward.

172. The additional clearance process was not limited to content but also included oversight of timing of release of information to parents and also suggested approaches including exploring individualised preferences to communication methods for engaging with families.

173. In December 2019, for instance, following discussions at the Scottish Government Communications and Engagement Subgroup of the Oversight Board, chaired by Professor Craig White, we developed a new microsite on the NHS GGC website on Wards 6A and 4B, to be used as the basis for improving the flow of information to parents, the public and media on the current situation.

Before going live, the staging site was shared with key stakeholders for comment, including Craig White and [redacted], the parent of a haemato-oncology patient and representative of families/carers on the Communications Subgroup of the Oversight Board.

174. The impact of this process on NHS GGC's communications was significant, not least in removing our ability to respond agilely to emerging issues, both in terms of our engagement with patients and families and with communications with the media. Media statements were often only being cleared late into the evening or the following day and regularly missed media deadlines. In addition, as well as the additional Cabinet Secretary clearance processes leading to changes in tone of response, there were also changes of substance to content, including, at times, relevant points of fact that we were keen to make being blocked. NHS GGC lost all autonomy in managing its public statements for the period from November 2019 to May 2021, when the clearance arrangement ceased.

Issues Relating to Clearance Process

175. A snapshot of some of the issues encountered was prepared by one of my press officers and emailed to me on 10 December 2019. She noted that on media statements which went through the clearance process, a number of issues arose, [included in Narrative 7 submitted under RFI 6] namely.

- Herald on Sunday article on reporting the death of a patient to the Crown Office. On the Friday our line was rejected, and a substituted response was provided by Professor White. The substitute statement was cleared by the Cabinet Secretary and issued to the newspaper. Unfortunately, on Saturday, the reporter came back and was unhappy with the response as it did not answer her question. We contacted Fiona McQueen and Professor White asking if we could issue the original statement that had been objected as this answered the reporter's question. Ms McQueen was happy with this suggestion.

- Mail on Sunday article on issues with the theatres at the QEUH. We provided a statement to Professor White and Professor McQueen. Professor White asked we provide a more prominent response re 'how Board gains assurance re infection prevention and control in theatres, something about processes outside of any annual one to provide assurance that problems are addressed timeously and something about processes to support any staff member to raise concerns re inaction through mechanisms in place for that'. The statement was amended to reflect Professor White's comments and issued to reporter. The subsequent article did not include any of the additional comments suggested by Professor White.

- We had a similar enquiry from both the Daily Mail and the Herald on the prescribing of prophylaxis to patients in ward 6A. This was shared with both Professor McQueen and Professor White. Professor White had a number of suggestions to change the statement. However, Dr Scott Davidson, Deputy Medical Director (Acute), had a conversation with Fiona McQueen on the complexity of prescribing prophylaxis. We agreed a form of words with Fiona as the information Professor White had asked us to include was too detailed and not appropriate.

176. There were also inconsistencies in the position being taken by Scottish Government on our handling of the process. On 18 December 2019, Jenny Clarke, Media Manager, Scottish Government, emailed me to advise: [included in Narrative 7 submitted under RFI 6]

> "For your future reference, I just wanted to flag that Cab Sec wanted this sentence omitted as the phrase "acceptable" levels of infections jarred."

177. We believed this to be inconsistent with previous agreed statements and Board papers as I indicated in my email response to Jenny Clarke on 19 December 2019: [included in Narrative 7 submitted under RFI 6]

> "This line was inserted in response to some initial feedback from the Cabinet Secretary that we should include information on infection control and reflected

the Board paper which was approved by SG and Cabinet Secretary which confirmed that our clinical outcomes showed that in terms of infection control and practice QEUH/RHC were not outliers. Also, on Sunday (15 December 2019), we had a line cleared that confirmed the following:

"The HIS report from March formed part of a wider routine inspection programme to provide assurance that best practice is implemented across health boards in Scotland. The independent report contained a number of positive findings and confirmed our staff have a good awareness of infection control, alongside high levels of hand hygiene compliance. The inspectors further highlighted infection rates were within acceptable levels.

"When we were made aware of the report's findings, immediate action was taken to implement any recommendations to ensure the safety of our patients.

"For additional reassurance, we asked Health Protection Scotland to carry out a detailed review of our infection performance compared to similar large hospitals over the past three years. Findings confirmed that at no time during this period did infection rates at QEUH and RHC exceed expected levels."

178. Scottish Government oversight of handling also caused me to contact Suzanne Hart on 29 November 2019, to flag concerns: [included in Narrative 7 submitted under RFI 6]

"We received approval to issue our lines on the [Anas] Sarwar claims to the BBC at approximately 18:20 but were told not to issue to any other media. We were then not given approval to issue to all other media until 20:46 by which time other outlets were fully aware that the BBC had been given the statement. We received a number of complaints from journalists that we had issued to the BBC but not to others. We also received complaints from journalists about the time it was taking to get a response issued from NHSGGC."

179. A further example of where information was delayed was a proposed briefing to update families on progress with the upgrading of Wards 2A/B which we had

committed to give to them. I shared a draft with Craig White and Fiona McQueen on 1 September 2020. Craig White emailed me on 2 September to advise:

"Further to your text last night and my commitment to update you this morning – this **cannot** be issued to parents and families at present. Further discussions and decisions are required internally." [included in Narrative 7 submitted under RFI 6]

180. Scottish Government only agreed to the release of this update some 20 days later [included in Narrative 7 submitted under RFI 6, dated 22.9.2020].

181. A key issue for us was when we were prevented from making factual statements, notably when the Scottish Government blocked a statement on the outcome of Stenotrophomonas testing in 2017 which confirmed that when the water was tested in September 2017, no Stenotrophomonas was detected. In response to a query from Hannah Rodgers on 6 December 2019, we proposed to say: [included in Narrative 7 submitted under RFI 6, at 6.12.2019]

"The death of any [redacted] is a tragedy and we continue to offer our sympathies to [redacted] family for their loss.

We have written to [redacted] this week to answer a number of [redacted] questions. We have also updated [redacted] on the significant amount of work underway to review [redacted] case and other cases.

These additional reviews have now confirmed that Stenotrophomonas was tested for in 2017 as part of the investigations to look into possible links between [redacted] and a second patient with the same infection. These investigations confirmed no link between the two cases.

Specialist water tests requested by infection control doctors in August 2017 also confirmed that Stenotrophomonas was not present in water samples from the Royal Hospital for Children – including Ward 2A.

More than 100 samples of water from the hospital were tested at the request of infection control doctors.

None of the samples tested positive for Stenotrophomonas.

We have now confirmed this to [redacted] family.

Jane Grant, Chief Executive, said: "I am truly sorry for the distress and pain being caused to [redacted] family by the uncertainty that has surrounded questions about the water supply and whether it was the source of [redacted] infection.

"[redacted] family deserves answers. We owe it them to thoroughly and fully re-examine the investigations that took place.

"We have now done so and we hope that this information will give some re-assurance to [redacted].

"We want to do anything we can to answer [redacted] questions, we have written to [redacted] this week and remain keen to meet [redacted] to discuss these results in more detail with [redacted]."

182. Professor Fiona McQueen would not support this, nor did she support a simpler statement of fact that I suggested instead –

"As part of this we have advised that a review of water tests looking for the presence of Stenotrophomonas has confirmed it was not present in the water samples from Royal Hospital for Children. This was requested by infection control doctors and more than 100 samples were tested in September 2017."

183. Our eventual public statement was issued without any of this detail, despite this having been confirmed to the patient's family.

"The death of any [redacted] is a tragedy and we continue to offer our sympathies to [redacted] family for their loss.

"We have written to [redacted] this week to answer a number of [redacted] questions. We have also updated [redacted] on the significant amount of work underway to review [redacted] case.

Jane Grant, Chief Executive, said: "I am truly sorry for the distress and pain being caused to [redacted] family by the uncertainty that has surrounded questions about the water supply and whether it was the source of [redacted] infection.

"[redacted] family deserves answers. We owe it them to thoroughly and fully re-examine the investigations that took place.

"We want to do anything we can to answer her questions, we have written to [redacted] this week and remain keen to meet [redacted] to discuss these results in more detail with [redacted]."

184. A further example of being prevented from making factual statements is in the preparation of NHS GGC responses to questions from families that we received following the publication of the Independent Review Report and the broadcast of the BBC Disclosure programme in June 2020. All NHS GGC responses to the questions from parents (prompted by the programme and the earlier publication of the Independent Review Report by Dr Andrew Fraser and Dr Brian Montgomery) were cleared by Scottish Government. One of the questions related to the issue of staff having access to all historical documentation and information in order to obtain the full picture and asked 'if 'certain documents and information [were] not within the 'public domain' and therefore not accessible to staff?' [correspondence included in Narrative 7 submitted under RFI 6 – see 29.7.2020, 31.7.2020 and 1.8.2020].

185. Our position on this was as follows:

"Clinical staff were fully involved in all Incident Management Team investigations and reviewed outputs from all independent reports that were available at the time. They had full access to all materials produced through the

IMT process to scrutinise these issues. [Email thread at 24.7.2020 included in Narrative 7 submitted under RFI 6 – quotation is from attachment to email dated 4.7.2020].

186. Phil Raines, Chief Nursing Officer's Directorate, Scottish Government, fed back:

"You'll be aware that Dr Inkster has stated publicly that she requested water-testing results on a number of occasions when ICD and chair of IMTs, especially during 2018, and these did not appear to be forthcoming. I raise this not to say that this should be addressed here, but for you to be aware that [redacted] will know this and might challenge this view. [PR]" referring to [redacted].- [included in Narrative 7 submitted under RFI 6 – comments on attachment to email dated 31.7.2020].

187. We then adapted the statement to include the DMA reports as an additional line but as I was advised that water test results would have been returned by the independent lab or the GRI lab to the microbiology system, we made no further changes in relation to this.

188. Our revised version of proposed response stated:

"Clinical staff were fully involved in all Incident Management Team investigations and reviewed outputs from all independent reports that were available at the time. As highlighted in response to question 17, the DMA reports were only shared with the Senior Executive Team in the middle of 2018." [Email thread at 31.7.2020 included in Narrative 7 submitted under RFI 6 – email dated 31.7.2020, and attachment to another email of the same date].

189. This was factual but Professor McQueen did not approve this version.

190. The final version of the response that was sent after a lengthy email exchange with Professor McQueen, Craig White and Diane Murray of the Scottish Government (the emails having been provided to the Inquiry), was:

"The former Lead Infection Control Doctor for QEUH/RHC has raised an issue about the availability of some reports during IMT investigations and we have confirmed that the DMA reports were only made available to the Senior Executive Team in the middle of 2018 when they were immediately acted on.

"These matters are being examined as part of the current review into NHS GGC's processes for investigating infections by the Infection Control sub-group of the Oversight Board and we anticipate that a report from the Oversight Board will be made publicly available." [included in Narrative 7 submitted under RFI 6, email dated 1.8.2020].

191. This was an example of how, through the Scottish Government clearance processes, we were prevented from making statements reflecting the corporate NHSGGC position.

Issue 11: Comments on communications in relation to Oversight Board:

Background

192. On 22 November 2019, the decision was taken by Malcolm Wright, Director-General of Health and Social Care in the Scottish Government and Chief Executive to NHS Scotland, to escalate NHS GGC to Stage 4 of the NHS Scotland Board Performance Escalation Framework.

193. An Oversight Board, chaired by Scotland's Chief Nursing Officer Professor Fiona McQueen, was established to support NHS GGC, focusing on three broad areas: infection, prevention and control; governance; and communication and engagement.

194. As part of its work, the Oversight Board published an Interim Report and a Final Report, setting out a series of findings and recommendations in relation to the Queen Elizabeth University Hospital (QEUH) and Royal Hospital for Children (RHC), and the handling of infection incidents affecting children, young people and their families within the paediatric haematology-oncology service between

2015 and 2019 [reports are in the public domain on the Scottish Government website].

The Oversight Board

195. Following its establishment in November 2019, the Oversight Board worked with NHS GGC to provide support with a range of issues, focusing on infection, prevention and control; governance; and communication and engagement.

196. A number of Subgroups of the Oversight Board was established, including a Communications and Engagement Subgroup chaired by Professor Craig White, to review NHSGGC's communications with patients and parents/carers, staff, the public, the media and other external bodies, including the Scottish Government. Craig White had been appointed by the Cabinet Secretary for Health and Sport to act as a point of liaison with patients and families in Ward 6A/B.

197. In this capacity, Professor White communicated directly with patients, and asked for and was given direct access to the Closed Facebook page set up for patients and families.

198. Throughout the period in which support was provided by the Oversight Board, NHS GGC also continued to be proactive in our communications with patients and families/carers, staff, the public and media. We were also in regular communications with Fiona McQueen, Craig White and the Scottish Government to inform them of developments, and to reach agreement over key proactive and reactive statements being shared with the public and the media.

199. As part of its work, the Oversight Board published an Interim Report on 21 December 2020 and a Final Report on 22 March 2021. These reports set out a series of findings and recommendations in relation to areas infection, prevention and control; governance; and communication and engagement.

200. Ahead of each publication date, NHS GGC was given the opportunity to review and comment on each report, suggest factual corrections and request changes to content and meaning [the full responses made by NHSGGC were sent to the Inquiry under RFI 1 6].

201. At the same time, we worked on our own proactive communications in relation to the reports for parents/carers, staff, the public and media, which were approved and cleared by the Cabinet Secretary for Health and Sport and in the days before publication, parents/carers on Ward 6A and 4B were given advance notice about when the reports would be published.

202. On the days of publication, these proactive communications were co-ordinated with communications activities from Scottish Government to ensure information was released appropriately into the public domain. In each case, communication with parents/carers was given priority, and significant effort was put into ensuring all possible parents/carers of patients – both current and those affected by previously infection issues at the RHC and QEUH – were captured with NHS GGC communications.

203. Throughout the period in which NHS GGC received support from the Oversight Board, proactive and reactive communications from NHS GGC made clear its support for the work of the Oversight Board, and its commitment to implementing learnings from and recommendations by the Interim and Final reports.

Issue 12: Comments on communications in relation to Case Note Review:

204. Communications with families involved in the Case Note Review were principally the responsibility of the Case Note Review team and the Scottish Government, although NHS GGC colleagues and I provided support to this process, and we were invited to contribute to the development of the Case Note Review communications plan. NHS GGC did communicate with other stakeholders including staff, the wider patient/parent cohort within the haemato-oncology unit, the general public and media on the review process and the Report. We developed a communications plan to seek to ensure that our activities were co-

ordinated with the Case Note Review communications. Public statements from NHS GGC at this stage required clearance from Scottish Government and the Cabinet Secretary for Health and Social Care.

Issue 13: BBC Disclosure Scotland programme and why the Board was not proactive in communicating with patients and families prior to its broadcast:

205. The first contact from the BBC to NHS GGC on a potential Disclosure programme came in January 2020 when the producers attended the Board meeting, and a number of Freedom of Information requests were made. One of my press team accompanied me to meet the production team at that stage to discuss the programme but we did not hear from them again for a number of months.

206. Following the publication of the Report on the Independent Review by Drs Andrew Fraser and Brian Montgomery, the press team was again approached by Health Correspondent for BBC Scotland, Lisa Summers, regarding a Disclosure Scotland programme on the QEUH/RHC. She outlined the areas the programme expected to cover in an email to me dated 16 June 2020 [included in Disclosure narrative submitted under RFI 6]:

"We will be looking at the stories of a number of families who have questions about treatment.

"In particular [redacted] has questions about the infection that [redacted] contracted. We'd like to address those and what action was taken by the heath board to test for Stenotrophomonas.

"Also the family of a patient who died after contracting Cryptococcus have questions about their care.

"We'd like to ask specifically about the investigation into Cryto and why the plant room has now been ruled out as a source. What is the health boards position on where it came from?

"We also have spoken other families who are worried about infection risk to the care of their children even now in the hospital. We'd like to ask about the care they are receiving.

"We have expert opinion on the water and ventilation systems. They have questions about decision making at the time of opening, and also about the prominence of infection control during the building and design phase and beyond.

"We'd like to ask about efforts to address the issues identified in the water system, whether in addition to the pipe work; taps and shower heads could have contributed to an increase in infections. And we'd like to discuss when issues with the ventilation system were identified and what action was taken as a result.
"We will also be looking into whether a culture of bullying and a lack of transparency impacted on patient safety.

"Not all of these issues were identified in the recent Independent Review and so we would really like to get an on-camera response from the Health Board that will address these concerns."

207. Given the nature of the questions and, in view of NHS GGC's ongoing legal processes in relation to design, build, commissioning and maintenance of the hospitals, we sought legal advice on participating in this programme. Our legal advisors recommended against this.

208. We also discussed the approach from Disclosure Scotland for NHS GGC to provide an on-camera interview for their forthcoming programme on QEUH/RHC with Scottish Government as we remained at that stage in escalation Level 4. Our Chair, Professor John Brown CBE, was also in direct communication with the Cabinet Secretary for Health and Sport about the programme.

209. The Cabinet Secretary indicated that she was content for us to decline to give an on-camera interview as per the explanation that I subsequently gave to the producer of the Disclosure Scotland on 17 June 2020 [included in Disclosure narrative submitted under RFI 6]:

> "Thank you for your helpful email last night and for explaining the decision to air the programme following the publication of the Independent Review findings. "We fully recognise the need for transparency and accountability and have assessed how we could positively contribute to the programme to give our response to the issues you will cover. We have considered the questions you wish to ask and we have concluded that we unfortunately will not be able to contribute to the programme. I wanted to explain our reasons for this.
>
> "As you know, Monday's Independent Review Report was the first of a number of independent investigations put in place by the Cabinet Secretary to examine these issues. The Public Inquiry and the independent case note review, which are still to be concluded, will address a number of the questions you have put to us. It is only right that the answers to your questions are provided following proper consideration through these independent investigations and that we do not pre-empt or anticipate what these investigations will find.
>
> "You specifically highlight a number of individual patients in the programme and ask for us to comment. This again poses difficulties as, at all times, we must respect and protect the right to patient confidentiality and we do not discuss individual patient cases in public.
>
> "Finally, as you know we have launched a legal action against our contractors and advisors and we are restricted in the public comment that we can make in order that we don't prejudice this process.
>
> "As some of the points in your programme have already been covered by the Independent Review and others relate to matters which are the subject of separate legal processes, we will not be providing any comment in response to your questions. We have had the opportunity to discuss this with our legal

advisors and they have agreed that, in view of the above, this is the correct course of action.

"We remain, however, keen to engage with the families participating in the programme. We have offered them meetings previously and continue to extend an invitation for them to meet us."

210. We subsequently received 20 questions from the programme makers and provided a statement and written responses to them. The statements were agreed with a number of NHS GGC colleagues and also reviewed by the NHS Central Legal Office and the legal team representing us in our legal claim. The statement and responses to the questions were also cleared by the Cabinet Secretary.

211. Following the broadcast of the programme, we were asked by families why we hadn't been proactive in sharing with them information that we had given the programme. There were a number of critical comments posted by family members on the private Facebook page on this point.

212. Unfortunately, there was a significant delay to a post being published by NHS GGC in response to this. This was delayed in part as a result of the clearance arrangements in place with Scottish Government. I was on annual leave on the day (26 June 2020) but was copied into correspondence between Dr Margaret McGuire, former Nurse Director, NHS GGC and Executive Lead for patient liaison and Scottish Government colleagues, including Craig White, in which Dr McGuire expressed significant frustration at the length of time it took for Scottish Government colleagues to clear the proposed NHS GGC social media comment in response to the families [emails are included in the Disclosure narrative submitted under RFI 6, dated 26.6.2020].

213. The handling of the communications in relation to the Disclosure programme was subsequently discussed at a special meeting of the Oversight Board Communications and Engagement Subgroup, convened urgently by Scottish Government. In this meeting, attended by members, including family

representative [redacted], I explained why we had not contributed to the programme and Dr McGuire and I also apologised for the delay in sharing information about the programme with families. Following this meeting, we were sighted on the post from [redacted] to other families on the meeting in which [redacted] noted: "The Director of Communications and Public Engagement provided an explanation, defending her decisions whilst reflecting on the complexities involved not least of all what can be said when legal proceedings are ongoing." [included in the Disclosure narrative submitted under RFI 6, in an email chain dated 2.7.2020].

214. In the series of questions put to us by families following the programme, we also explained the delay of the further communication with families:

"NHS GGC was given no advance sight of the Disclosure Programme and so any advance briefing on the programme to families would have been speculative on our part. We fully acknowledge that, once the programme had aired, we should have put in place arrangements to support families sooner than we did, for which we have apologised to families and have taken steps to improve, including confirmation of the role of Nurse Director as Executive contact for families. As we explained on the Ward 6A Facebook page, this was further delayed as we wished to take advice from the Scottish Government Oversight Board representatives who were considering the questions and concerns posted previously and some of our senior staff were involved in the activation of our Major Incident Procedure following the tragic events in Glasgow city centre. The Chief Nurse for Hospital Paediatrics went on the unit two days after the programme aired to offer support to families." [included in Narrative 7 submitted under RFI 6, as an attachment to an email dated 2.8.2020].

215. We also shared with families the full statement I had given the producers of the programme [included in Narrative 7 submitted under RFI 6, as an attachment to an email dated 2.8.2020].

Issue 14: Any other points which may be relevant to the Board's delivery of communications over the relevant period.

Reflections

216. The period between 2018-2020 was incredibly difficult for patients and families within the Schiehallion Unit and the staff of the unit. It was also a period of sustained stress and pressure for those working to respond to the issues, including me and my team.

217. Throughout this period, I and my colleagues acted in good faith and with honesty to manage and respond to a highly complex and challenging situation. I appreciate that families felt that communications with them should have been better. We have listened and learned from their experiences and used this experience to guide and frame our communication plan for the re-opening of Wards 2A and B in 2022 – which was praised by families who had previous been critical of us.

218. Over a sustained period, the character, integrity and professional reputation of the Chair, Chief Executive and Directors, including me, as well as many others within the organisation, have repeatedly been called into question, unfairly and unjustifiably.

219. Last year, a comment I had previously made in private to one of my team describing the situation in terms of a 'battle' was disclosed and reported in national media. This language, said in a private conversation, was inappropriate and I subsequently apologised for this. Whilst inappropriate, this period often did feel like being under 'siege' as I and my team sought to respond to a prolonged period of significant challenge with sustained media and political scrutiny. We had tremendous difficulty in having our, honestly held, position heard and reported in a balanced way, when others were putting forward counter positions and documents and information were being leaked to the media. This very difficult situation was made even more challenging by the loss of direct control of NHS GGC communications and public statements due to external oversight and

by a lack of a clear, definitive, and agreed position on whether there were, indeed, any links between the hospital and resulting patient harm.

Declaration

193. I believe that the facts stated in this witness statement are true to the best of my knowledge, information, and belief. I understand that this statement may form part of the evidence before the Inquiry and be published on the Inquiry's website.

Scottish Hospitals Inquiry

Witness Statement of Questions and Responses

Professor Craig White

Background

1. I am providing this witness statement to the Inquiry to provide an overview of the role I performed in respect of communications and engagement with families associated with the NHS Greater Glasgow and Clyde ("NHSGGC") paediatric haemato-oncology service regarding issues that had arisen and were continuing to arise at the Royal Hospital for Children/ Queen Elizabeth University Hospital (collectively referred to as "QEUH") in Glasgow.

2. In providing this statement, I want to thank all of the families who I engaged with for their time, for making contact with me and for helping me to appreciate and understand the additional distress they faced and experienced as a result of their concerns and experiences. I am very grateful to Professor John Cuddihy for his insights, support and collaboration in working with me and agreeing to link with wider families and for doing all this so while already dealing with the distress and challenges of caring for a child with a diagnosis of cancer.

3. I would also like to thank the staff of NHS Greater Glasgow and Clyde for responding to my many requests for information and meetings and for their responses to advice, challenges and suggestions for change and improvement.

Professional qualifications and experience

4. I graduated from the University of Glasgow as Bachelor of Science with First Class Honors in Psychology in 1992. I subsequently obtained the degree of Doctor of Clinical Psychology from the University of Manchester in 1995. I obtained the degree of Doctor of Philosophy in Psychological Medicine from the University of Glasgow in 2004. I obtained the degree of Master of Medical Law with Merit from the University of Glasgow in 2014. I obtained the Diploma of Legal Medicine, with Distinction, from the Faculty of Forensic and Legal Medicine in 2023.

5. I qualified as a clinical psychologist in 1995, and since the inception of the Health and Care Professions Council's statutory registration arrangements, I have had active statutory registration as a Practitioner Psychologist in clinical psychology and health psychology.

6. I am a Founding Fellow of the Academy of Cognitive Therapy, a Fellow of the British Psychological Society and Fellow of the Royal College of Physicians of Edinburgh. I am an Associate Member of the Faculty of Forensic and Legal Medicine of the Royal College of Physicians of London. I am a Member of the International Society for Traumatic Stress Studies.

7. Throughout my career, I have engaged in continuing professional development in support of my leadership development. I completed the Delivering the Future: Developing: Scotland's Future Strategic Clinical Leaders programme from 2006-7 and also the national Project Lift Talent Management and Leadership Development programme in 2019.

8. Following my qualification as a clinical psychologist, I worked in the NHS in Scotland in adult mental health services and in district general hospitals. In 1998 I was appointed Cancer Research Campaign Clinical Research Fellow in Psychosocial Oncology at the Department of Psychological Medicine of the University of Glasgow. I returned to work in the NHS in 2004 as Macmillan Consultant in Psychosocial Oncology and was subsequently appointed Deputy Director of Psychological Services for NHS Ayrshire and Arran. In 2006, I was appointed to a series of interim Associate Director roles across a range of corporate areas, including strategic planning and performance and health records services. I was the Clinical Lead for the Board's Management Clinical Network in Palliative and End of Life Care and Regional Clinical Lead of the West of Scotland Cancer Networks for Supportive and Psychological Care.

9. In 2009, I was appointed Assistant Director of Quality, Governance and Standards at NHS Ayrshire and Arran and had operational responsibility for a range of corporate departments, including complaints, adverse events investigation, litigation, risk management, information governance, research and development. I also held the responsibilities of Board Caldicott Guardian during this time. A Caldicott Guardian is a

senior staff member responsible for protecting the confidentiality of people's health and care information and making sure it is used properly. All NHS organisations must have a Caldicott Guardian.

10. In 2013 I was nominated to provide a service to the Scottish Government through appointment to the role of Divisional Clinical Lead in the Healthcare Quality and Improvement Directorate of the Scottish Government, undertaking the roles of National Clinical Lead for Palliative and End of Life Care and to lead work to develop and consult on policy development regarding the introduction of a statutory Organisational Duty of Candour in Scotland. I led the team that supported the development of a Bill that then subsequently incorporated the Organisational Duty of Candour provisions into primary and secondary legislation. I also led work nationally to support the introduction of person-centred flexible visiting across NHS Scotland hospitals and the use of Care Opinion by NHS Boards.

11. In 2017, I was appointed by the Minister for Mental Health to undertake a review of the arrangements for investigating the deaths of patients in hospital for treatment of a mental disorder. I established and Chaired a Review Group. Our report was published and submitted to the Scottish Parliament in December 2018, in accordance with the requirements of Section 37 of the Mental Health (Scotland) Act 2015.

12. In 2018, I led the support and coordination required to conduct an independent review of NHS Lanarkshire's plans for the redevelopment of the Monklands Hospital. I worked with the independent Co-Chairs and the Independent Review Panel, which reported to the Scottish Government in June 2019.

13. In June 2020 I was appointed to the Scottish Government role of Deputy Director, Test and Protect Portfolio. This role included being Senior Responsible Owner for a Pathways programme that had been established within the overall set of programmes in support of the national response to the Covid-19 pandemic. The Pathways programme ensured that processes were designed as part of the overall Test and Protect Portfolio outlining the range and sequence of actions required to implement policies on testing, contract tracing, isolation and support. I was responsible for the management of a team of civil servants and external contractors working on this programme, and for the

establishment of the Test and Protect Design Authority that was responsible for the prioritisation and co-ordination of the activities required for the development of pathways and processes to deliver the Test and Protect programme across the NHS and a range of public service settings.

14. I co-chaired the Scottish Government and the Convention of Scottish Local Authorities ("COSLA") Community Engagement Guidance Working Group's activities to develop the 'Planning with People Community Engagement and Participation Guidance' to support the delivery of statutory duties for engagement and public involvement. This was published in March 2021.

15. Outside of my role and the service provided to the Scottish Government, I practice on a sessional basis as a Consultant Clinical Psychologist in the independent sector and work as a skilled witness in the legal system, mostly in the civil legal system, in respect of claims relating to historical abuse in childhood, personal injuries, equalities, asylum and immigration, and negligence cases. I am an Honorary Professor at the Institute for Health and Wellbeing, College of Medical, Veterinary and Life Sciences at the University of Glasgow.

16. I currently provide the Scottish Government with a service through my role as Associate Director, Healthcare Quality and Improvement in the Directorate of the Chief Operating Officer, NHSScotland, and the Scottish Government Health and Social Care Directorates.

Appointment

17. On 4 October 2019, the Cabinet Secretary for Health and Sport appointed me to lead and direct work required to ensure that the voices of the families affected by the infection outbreaks at NHSGGC were heard and that they would be provided with information as a matter of priority.

18. My appointment was initially in respect of issues and questions raised with the Cabinet Secretary by parents of children and young people who had been, or were being, treated in the QEUH that had been in touch with Scottish Ministers and Scottish

Government officials. I was advised that the Cabinet Secretary, along with the Chief Nursing Officer (Fiona McQueen), had met with some affected parents and family members on 28 September 2019 and 02 October 2019.

19. The families had told the Cabinet Secretary that they wanted more information from NHSGGC on infection control initiatives, work ongoing in areas of the QEUH and the outcome and timeline of safety measures put in place by the Board. Having heard their concerns related to the infection outbreaks at the QEUH raised with her, one of the steps the Cabinet Secretary took was to arrange for my appointment. The Cabinet Secretary had thought it important that the patients and families had a single point of contact.

20. I brought to this role experience over the course of my career in the NHS, university sector and Scottish Government, reflecting my clinical professional background, senior management and leadership roles (clinically and in policy development) and roles in the senior civil service.

21. My understanding is that I was appointed because of the range of experience I have outlined above, together with my particular experience in relation to Organisational Duty of Candour (which I explain and say more about below) and the overall level of trust and confidence I had built with senior colleagues and Ministers as to my approach to engagement and complex governance scenarios.

22. My remit in relation to this role is outlined in a 'Scope, Role and Remit' document prepared by the Scottish Government dated 8 October 2019 **(A33949846 - Email chain - J Downie, C White and others - Attaching "Scope, Role and Remit of Professor Craig White re Concerns Raised by Patients and Families… - 08 October 2019" - 04 to 08 October 2019 - Bundle 27, Volume 12, Page 7) (A33949849 - Scope, Role and Remit of Professor Craig White re Concerns Raised by Patients and Families within Paediatric Oncology/Haematology Service at Royal Hospital for Children/Queen Elizabeth University Hospital, NHS Greater Glasgow and Clyde - 08 October 2019 - Bundle 27, Volume 12, Page 12)**. That document narrates that, on 4 October 2019, the Cabinet Secretary for Health and Sport (Jeane Freeman) appointed me to *"lead and direct the work required to ensure that the voices of the families*

affected by the infection outbreaks at NHS Greater Glasgow and Clyde ("NHSGGC") are heard and that the information they have asked for and entitled to receive is provided as a matter of priority".

23. I was instructed to:

23.1. Review the concerns of patients and families who have experienced care within the paediatric oncology/haematology service at RHC/QEUH ("those affected"), ensuring that these are addressed urgently and advising on those that should be considered by the ongoing independent review and/or (the then prospective) Public Inquiry.

23.2. Consider the work of NHSGGC's Incident Management Team ("IMT") to date in addressing the areas of concern raised by those affected and staff involved. I was to be supported, as necessary, by subject matter experts within Health Protection Scotland and provide advice and make recommendations to the Chief Nursing Officer.

23.3. Establish ongoing channels of communication, engagement and information provision with patients and families within the paediatric oncology/haematology service, their representatives and others as deemed appropriate.

23.4. Ensure that the issues raised by those affected are addressed by NHSGGC with a specific focus on infection control measures; the work underway in the haematology/oncology areas of the hospital; the intended outcome and timeline of the enhanced safety measures which NHSGGC had put in place; and other specific matters that had and may be raised by those affected.

24. In order to progress this work, I was mandated to:

24.1. Agree with the Chief Executive and Board of NHSGGC that I should be provided with all responses and supporting information requested in respect of ensuring that satisfactory responses are provided to the known existing questions, issues and requests for information from those affected.

24.2. Act as the Scottish Government's point of contact for affected individuals and work in partnership with NHSGGC's senior staff, providing direction, support and guidance on the actions required in support of my review of the issues, questions, concerns and needs of those affected.

24.3. Meet in person with any of those affected who wished me to do so.

24.4. Work with NHSGGC to ensure that the staff involved in considering and addressing the concerns of patients and families received the support that they identified as necessary.

24.5. Liaise with staff within NHSGGC who may be able to assist me in considering, understanding, supporting or advising on any aspect of the action required to review the work that has been undertaken by NHSGGC to date; that which needed to be undertaken at that point in time and may be required in the future to effectively address and respond to the issues raised by those affected.

24.6. Seek information in support of my exploration, consideration and examination of all actions, decision-making and any relevant supporting information as would be necessary to enable me to ensure that those affected receive responses that reflect best practice in the necessary communications, support and engagement in the current circumstances.

Ensure that my actions were at all times informed by best practice in the handling and management of the issues raised in respect of infection control, safety, clinical governance, effectiveness, improvement support and person-centredness of perspective, approach and response.

25. In discharging these responsibilities, I reported directly to the Cabinet Secretary for Health and Sport and was supported in my work by officials from the Directorate of the Chief Nursing Officer of the Scottish Government. In relation to staff within NHSGGC (referencing paragraph 24.5 above), my principal points of liaison were the Chief Executive, Executive Nurse Director, Director of Estates and Facilities, Head of Corporate Governance and Director of Communications, who were able to provide me with background information, documents and respond to requests for action to be taken.

I also liaised with other staff within NHSGGC when required on an issue-by-issue basis, for example the Lead Nurse for the Royal Hospital for Sick Children, the Deputy Medical Director for Acute Services, the General Manager, Women's and Children's Services and the Clinical Lead when individual family questions or concerns required this. I also attended meetings at which clinicians from the service were present.

26. I was instructed to make recommendations to the Chief Executive and Board of NHSGGC on any actions required to address the issues considered by the Cabinet Secretary for Health and Sport; including any actions required to improve the effectiveness of NHSGGC's responses to the incidents/outbreak (including those required in respect of the approaches required in the future by NHSGGC, HPS and Scottish Government). Although my scope, role and remit remained broadly similar to that outlined in this document, when NHSGGC was escalated in November 2019, my responsibilities then included making recommendations on actions through the established governance structures for the Oversight Board agreed in December 2019.

Communication with patients and their families

27. Following my appointment, I wrote to all patient/family representatives who had been in attendance at the meeting with the Cabinet Secretary **(A33949847 - Letter from Professor Craig White to Patient/Family Representatives following meeting with Jeane Freeman - 09 October 2019 - Bundle 27, Volume 12, Page 21) (A33949845 - S5W-25642 - To ask the Scottish Government what discussions it has had with families of paediatric cancer patients affected by the infection outbreaks at the Royal Hospital for Children and the Queen Elizabeth University Hospital, NHS Greater Glasgow & Clyde? - Bundle 27, Volume 12, Page 22) (A33949850 - Email chain - J Downie, A Corr, C White and others - Follow up work for Monday following GIQ and letters - Attaching "Prof White Letter - RHC Families - 091019, S5W-25642 GIQ and Prof White - Remit" - 04 to 09 October 2019 - Bundle 27, Volume 12, Page 15)**. I set out that, following the meeting with Jeane Freeman MSP, Cabinet Secretary for Health and Sport, I had been appointed by her to review the concerns that had been raised with her, to act as a dedicated point of contact and to work with NHS Greater Glasgow and Clyde to ensure that the representatives' wishes for responses to questions would be addressed promptly and also that the immediate practical issues raised would be dealt with swiftly.

28. I provided a copy of the Cabinet Secretary's response to a question posed in the Scottish Parliament **(A33949847 - Bundle 27, Volume 12, Page 21/A33949845 - Bundle 27, Volume 12, Page 22)**, along with a document outlining the scope and remit of my appointment and my contact details.

29. I explained that I had been meeting that week with the Chief Executive, Chair and relevant Directors within NHSGGC and would also be meeting with several other senior clinicians and managers over the coming week.

30. In my meetings with the Chief Executive, Chair, and relevant Directors within NHSGGC that week, I discussed with them the fact that patients' representatives had raised various concerns, issues, and questions with NHSGGC and the Scottish Government, to which they had indicated they had not received satisfactory responses. I provided advice to the Chief Executive of NHSGGC on what I saw as the required approach to address the ongoing concerns and dissatisfaction of a group of families whose children had recent or ongoing contact with the paediatric haemato-oncology service.

31. My approach was to ensure that I quickly established an awareness of the issues of most concern to the families that had previously met with the Cabinet Secretary, established contact with the families who were in contact with the services and with relevant senior staff at NHSGGC. I ensured that my contact details were available and that arrangements were put in place within Scottish Government for me to have dedicated support, including establishing a direct telephone line to officials who were supporting my work.

32. I prioritised ensuring regular communication with all families, aiming to provide timely responses to any communications received directly. I established communication channels and then provided updates regularly.

33. During October and November 2019, I recognised that I needed to have effective mechanisms in place for oversight of the totality of communications and engagement activities with affected families (with NHSGGC and with Scottish Government). I therefore asked NHS Greater Glasgow and Clyde to develop an electronic mechanism that could be accessed by me and authorised staff in NHS Greater Glasgow and Clyde

and the Scottish Government to capture, track and record the nature of communication and engagement activities relating to the concerns being expressed. I also emphasised the importance of the paediatric haemato-oncology service having mechanisms to have accurate and up to date contact information and preferences for all families in contact with in-patient, out-patient and daycare facilities within the service.

34. I had previous experience of establishing a similar electronic system to support my role as operational lead for the investigation of adverse event review processes when I worked in NHS Ayrshire and Arran and had the benefit of being able to be clear on what I required to be developed. This was useful in the commissioning and design of this system, which was possible through national work that had been undertaken to implement nationally consistent arrangements for secure access and use of Office365/ SharePoint software.

35. This system, when developed and implemented, provided me with an efficient and effective means of having oversight of activity in relation to all of the families in contact with NHSGGC or the Scottish Government. I was able to review details of contacts being made, actions being identified and review any supporting documentary evidence uploaded against actions and the contacts made with each family. I also made use of functionality within the system to set alerts to notify me when any changes were made or documents uploaded, as well as provide regular reports on communication and engagement activity. There were approximately 70 individual families where there was ongoing communication and engagement that I could then oversee and track through this system when it was established.

36. I based myself with NHSGGC's corporate offices at JB Russell House in Glasgow in order that I could establish relationships with the NHSGGC staff who were involved in responding to concerns, meet with them regularly and have direct access to the information I required to discharge my responsibilities, as reflected in the terms of my appointment by the Cabinet Secretary. In doing so, I had taken account of the Cabinet Secretary's response to a question in the Scottish Parliament that included a response to the concerns she had heard directly from affected families. She said "*All of this is information they are entitled to and should receive. Whilst this level of detail must come from the Board, families should not be expected to seek it piecemeal from a range of*

individuals. Nor would it be right that the responsibility for providing this should sit with the clinical teams. That is why I have appointed Professor Craig White, the Divisional Clinical Lead in the Healthcare Quality and Improvement Directorate at the Scottish Government, to review their concerns and act as their dedicated liaison person and single point of contact in respect to these issues".

37. NHSGGC provided me with an office and arranged for me to have access to the Board's email system and Intranet. This also meant that, because I was on site, I could be available at short notice to join meetings or speak personally to relevant Executive Directors and senior management when I needed to.

38. I continued to write to families in contact with the service (through the updated contact details developed for the service) and the group of families who had active ongoing contact through NHSGCC corporate departments, the Scottish Government, and me – to keep them updated on my work or respond to specific communications received.

39. I also met with Professor John Cuddihy on 23 October 2019 and subsequently agreed with him that we would work together given his established relationships with affected families and my awareness that a feeling of mistrust had developed following the experiences of some of the affected families.

40. I wrote again to affected families on 29 October 2019 **(A33903159 - Letter from Professor Craig White to [redacted] - 29 October 2019 – Bundle**

41. **27, Volume 12, Page 24)`** and attached a document **(A33943938 - NHSGGC Responses to Family Questions - Bundle 27, Volume 12, Page 26)** prepared by NHSGGC, which outlined NHSGGC's responses to the questions that had been raised by families the Cabinet Secretary had met previously. I had previously reviewed drafts of this document and provided my opinion on whether I thought that these were addressing the questions (based on my emergent understanding of the source of dissatisfaction and information needs of the families who I was beginning to engage with directly by that time). The Board had by then also agreed that they would nominate Jennifer Haynes, Board Complaints Manager, to be their single point of contact.

42. I further explained that I had met with the Chair of the Independent Review that was established to look at the design, commissioning, handover and ongoing maintenance at QEUH, and how these contribute to effective infection control. I explained that I had confirmed with the Chair of the Review that I would ensure that questions, feedback and experiences from patients and their families that are within the remit of the Review would be passed to them in order that they could consider them as part of their work. I asked the representatives for any follow-up questions or requests for information and offered to provide further support or information.

43. I again wrote to all families who had previously met with the Cabinet Secretary, the Chair and Chief Executive of NHSGGC, or who had contacted me personally, on 15 November 2019 **(A49651390 - Email chain - Letter from Professor Craig White to families after media coverage - Forwarded to Cabinet Secretary for Health and Sport - 15 November 2019 - Bundle 27, Volume 12, Page 43)**. This was prompted by coverage in the media of the concerns of a parent whose child died in 2017. Within that correspondence, I referred to NHSGGC's recognition, through my initial engagement with them, that they needed to improve their approach to communication and engagement with affected families. I also referred to the Scottish Government's recognition of the distressing impact of the news coverage relating to unanswered questions of the family of a child who had previously died.

44. I wanted to give assurance that all necessary steps were being taken to ensure that communication channels were in place and remind the families that I continued to be available to support them in any way they would find helpful.

45. I wrote to the families with a summary update on 16 November 2019 **(A33903190 - Email chain - C White and J Cuddihy - Update on Discussions with NHS Greater Glasgow and Clyde to families - 16 to 19 November 2019 - Bundle 27, Volume 12, Page 86)** in relation to arrangements for determining water safety, as this continued to be a source of concern to some families who had contacted me and was reflected in discussion with Professor Cuddihy. I narrated that my understanding that NHSGGC's decision to switch back to filtered water was taken following a new kitchen facility being opened and the standard precautions in place across all hospitals that discourage drinking water from ward sinks dedicated for handwashing. I also listed several other

ongoing actions and monitoring processes that I had been advised of as having influenced NHSGGC's decision-making about the safety of water. I indicated that I was asking NHSGGC for further information, reflecting the expressed needs of the families who had contacted me about their ongoing concerns about this.

46. I wrote to the families again on 18 November 2019 with a further update **(A33903190 - Bundle 27, Volume 12, Page 86)**. This reported on a meeting I had held that morning with NHSGGC's Director of Estates and Facilities, at which I had asked for summaries to be prepared of the water sampling arrangements that were in place together with illustrative examples of the data and a summary of what the data had shown over time. I had been advised that this was being worked on that afternoon and that I had arranged to meet with the Director again the following morning to review what had been collated. I also confirmed I would clarify the position in respect of sharing the findings and recommendations from the Health Protection Scotland report on a review of paediatric haemato-oncology data.

47. This reflected the importance I placed on ongoing, proactive and timely communication. This seemed to me to be a crucial aspect of good communication against a backdrop of ongoing media reporting and given the similar processes and contributory factors to those that had previously contributed to the dissatisfaction, distress and ongoing concern of the families I had been communicating with.

48. I issued further communications in November 2019 to those who had been in direct contact with me regarding actions I had taken in response to concerns expressed about clarity of decision-making, the water safety monitoring arrangements, arrangements to respond to child-specific concerns about care and their care plan, use of medicines, and parental concerns and fears about access to the hospital building. **(A49650838 - Email chain from C White - Update on Discussions with NHS Greater Glasgow and Clyde to families - Forwarded to Cabinet Secretary for Health and Sport - Attaching "QEUH WATER TESTING_REDACTED 1" and "Dr.Crichton - Explanation re Water Sample Report - 191119" - 19 November 2019 - Bundle 27, Volume 12, Page 45); (A49650913 - Email chain from C White - Update on Discussions with NHS Greater Glasgow and Clyde to families - Forwarded to S Bustillo, J Grant and others - Attaching "QEUH WATER TESTING_REDACTED 1"**

and "Dr.Crichton - Explanation re Water Sample Report - 191119" – 19 November 2019 - Bundle 27, Volume 12, Page 56); **(A33944092 - Email from C White to L Allan - Attaching multiple documents - 25 November 2019 - Bundle 27, Volume 12, Page 58)**; **(A33903190 - Bundle 27, Volume 12, Page 86); (A33939227 - Email chain - C White and [redacted] - Update on Discussions with NHS Greater Glasgow and Clyde - Concerns following update - 19 to 20 November 2019 - Bundle 27, Volume 12, Page 90)**.

49. The Cabinet Secretary wrote to the families concerned on 28 November 2019 **(A34059477 - Email from C White to [redacted] - Attaching letter from Jeane Freeman to families - Update on Public Inquiry 28 November 2019 - 11 December 2019 - Bundle 27, Volume 12, Page 94)** with an update in relation to the Public Inquiry. She indicated that she intended to share terms of reference with affected patients and families for comment before the Inquiry's formal setting-up date and invited them to share any thoughts or concerns they had with me.

50. I wrote to families that had been in contact with me on 29 November 2019 **(A33977151 - Email from C White to families - Establishment of Oversight Board - Communication and Engagement Sub-Group - 29 November 2019 - Bundle 27, Volume 12, Page 96)** to inform them of the escalation; and to all families with links to the service on 3 December 2019 **(A33977250 - Letter from Professor Craig White to families - Escalation of NHS GGC to Stage 4 of NHS Board Performance Escalation Framework - 03 December 2019 - Bundle 27, Volume 12, Page 97)** in relation to the escalation of NHSGGC on 22 November 2019 to Stage 4 of the NHS Board Performance Escalation Framework for matters relating to infection control governance, communication, engagement and public confidence. I emphasised the ongoing commitment to the work I had been doing and confirmed that there would be a specific communication and engagement subgroup established as part of the Oversight Board structure. I advised that Professor Fiona McQueen, the then Chief Nursing Officer for Scotland, would be Chairing the Oversight Board, that I would be a member and would also be Chairing an Engagement and Communication Sub-Group.

51. I wanted to ensure that the work of the Oversight Board was informed by feedback from the patients and their families on their experiences and provided a link to a bespoke

survey to facilitate feedback. From a total of 208 survey visits, 20 responses were received, some of which provided examples of areas where improvements were required in the support, information and transparency of communications. Suggested areas for improvement included improved openness and transparency, a broader range of mechanisms to support personalised communications and more emphasis on discussion and dialogue. All requests for meetings, information or concerns raised were actioned. **(A49438292 - Email from E MacKay to C White and others - QEUH Case Note Review - Communications & Engagement meeting 09 March 2021 - Attaching Agenda and Action Log - 05 March 2021 - Bundle 27, Volume 12, Page 98).** The Communications and Engagement Sub-Group considered the survey responses in formulating its workplan and approach to work. **(A49650900 - PART 2 - Papers considered at NHS Greater Glasgow and Clyde Oversight Board Communication and Engagement Subgroup Meetings - Bundle 27, Volume 12, Page 223).**

52. Throughout this time, I was also regularly engaged in providing briefings to the Cabinet Secretary and senior Scottish Government colleagues and contributing to civil service advice and work relating to responses to decision-making, correspondence and responses to Parliamentary Questions.

53. When the Oversight Board was established, I continued to work on all of the areas previously highlighted, though now through the Oversight Board governance structures and processes that were established in December 2019.

Closed Facebook Group

54. NHSGGC established a closed Facebook group in September 2019 for patients and families associated with the Paediatric Haemato-oncology Oncology service. A letter from NHSGGC, dated 25 September 2019, to the families referred to the intention of establishing this Group as "to help keep you informed." **(A38097056 - Letter for parents in Ward 6A about the Closed Facebook page, from NHS Greater Glasgow and Clyde Health Board dated 25 September 2019 - Bundle 5, Page 443)**.

55. As I began to build a broader understanding of the approach that had and was being taken to reactive communications and engagement, I identified possible opportunities to

enhance and improve this route as a means of engagement with members, building on the previously stated aim of using this as a route to provide information.

56. I offered support and advice to NHSGGC colleagues about how to further explore and maximise the benefits of the closed Facebook group. It was agreed that I would be provided with access rights to the Group so that I could review the content of postings and responses. NHSGGC continued to be responsible for reviewing and responding to requests from families who wished to join this Group. I subsequently began to use the Group and identified this as a further useful means of disseminating relevant information and updates, as well as encouraging dialogue and engagement with Group members.

57. This group's membership increased from around 50 to over 160 and became a useful way of engaging with parents. Families expressed positive feedback on the utility of this mechanism for informing them about statements from the Scottish Government, the work of the Independent Review and the Independent Case Note Review, as well as engagement in dialogue about concerns about issues that mattered most to them, their children and their wider family. This Group was also used when concerns about the Covid-19 pandemic were emailed to me and posted there, including use to circulate a letter to parents from consultants in the service as the implications of the pandemic were becoming clearer.

Independent Review

58. On 22 January 2019, the Cabinet Secretary announced in Parliament an Independent Review into the design, build, commissioning and maintenance of the QEUH. On 5 March 2019 Dr Andrew Fraser and Dr Brian Montgomery were appointed to lead the Review. The remit of the Review was: "*To establish whether the design, build, commissioning and maintenance of the Queen Elizabeth University Hospital and Royal Hospital for Children has had an adverse impact on the risk of Healthcare Associated Infection and whether there is wider learning for NHSScotland*".

59. I had an introductory meeting with Dr Brian Montgomery, Co-Chair of the Independent Review, on 30 October 2019 and agreed that any issues raised with me in my role by the families and within the scope of their remit would be noted and passed to them. I provided this input to the Independent Review on 3 December 2019 **(A49651792 -**

Family questions to Independent Review - Bundle 27, Volume 12, Page 105). I also subsequently agreed with the Independent Review Co-Chairs that I would act as a point of contact for the families, issue an embargoed copy of the Independent Review report and facilitate follow-up communications on any questions arising following the publication of the Independent Review from individual families.

60. One of the main findings of the review, published in June 2020, was "Communication about QEUH and its problems since opening has been variable ranging from appropriate and effective in relation to clinical communication with patients and families, to inadequate and reactive in relation to external communication about serious problems with the building and possible links to infectious disease events".

Oversight Board and Communications and Engagement Sub-Group

61. The Scottish Government escalated NHSGGC to Stage 4 on the NHS Scotland Performance Framework on 22 November 2019. As I outlined earlier, this resulted in the establishment of an Oversight Board. I joined this Oversight Board, Chaired the Communications and Engagement Sub-Group ("CESG") and was also a member of the Infection Prevention and Control Sub-Group. The work of the Oversight Board and Infection Prevention and Control Sub-Group will be addressed in other witness statements, so here I focus on the work of the CESG.

62. The work of the CESG was set within the framework of the CESG's (and the wider Oversight Board's) Terms of Reference ("TOR") and governed by the Key Success Indicators agreed by the Oversight Board. These were that families and children and young people within the haemato-oncology service receive relevant information and are engaged in a manner that reflects the values of the NHS Scotland in full; and that families and children and young people within the haemato-oncology service are treated with respect to their rights to information and participation in a culture reflecting the values of the NHS Scotland in full.

63. The CESG TOR set out membership of the group (see page 18) **(A34187840 - QEUH Oversight Board - Communications and Engagement Subgroup - Terms of**

Reference - DRAFT - Bundle 27, Volume 12, Page 108). The outcomes for the group were listed as being to:

63.1. positively impact patients and their families in relation to how complex infection control issues and all related matters are identified, managed and communicated;

63.2. demonstrate a proactive approach to engagement, communications and the provision of information; and

63.3. identify what has worked well and where the provision of information, communication and engagement could have been and could be enhanced and improved to ensure that the outputs from the group are disseminated to key stakeholders and any wider learning points or recommendations are shared nationally.

64. In order to achieve these outcomes, the CESG was to retrospectively assess factors influencing the approach to communication and public engagement associated with the infection prevention and control issues and related matters at the QEUH/RHC. Having identified these issues, the CESG was then to work with NHSGGC to seek assurance that they had already been resolved or that action was being taken to resolve them; compare systems, processes and governance with national standards and make recommendations for improvement and good practice as well as lessons learned across NHS Scotland.

65. The CESG met on seven occasions between December 2019 and March 2020 **(A49434684 - NHS GGC and QEUH Oversight Board - Communication and Engagement Sub Group - Minute - 05 December 2019 - Bundle 27, Volume 12, Page 112); (A49434655 - NHS GGC and QEUH Oversight Board - Communication and Engagement Sub Group - Minute - 18 December 2019 - Bundle 27, Volume 12, Page 115); (A49435644 - NHS GGC and QEUH Oversight Board - Communication and Engagement Sub Group - Minute - 09 January 2020 – Bundle 27, Volume 12, Page 118); (A49435742 - NHS GGC and QEUH Oversight Board - Communication and Engagement Sub Group - Minute - 29 January 2020 - Bundle 27, Volume 12, Page 122); (A34187974 - NHS GGC and QEUH Oversight Board - Communication and Engagement Sub Group - Minute - 04 February 2020 - Bundle 27, Volume 12,**

Page 126); (A34187883 - NHS GGC and QEUH Oversight Board - Communication and Engagement Sub Group - Minute - 18 February 2020 - Bundle 27, Volume 12, Page 128); and (A34187906 - NHS GGC and QEUH Oversight Board - Communication and Engagement Sub Group - Minute - 03 March 2020 - Bundle 27, Volume 12, Page 131). An additional meeting was convened in July 2020 when parents expressed concerns about NHSGGC's response to the publication of the QEUH Independent Review and a media response following the BBC Disclosure programme **(A49435707 - NHS GGC and QEUH Oversight Board - Communication and Engagement Subgroup meeting - Minute - 01 July 2020 - Bundle 27, Volume 12, Page 136)**. I chaired all of these meetings. My approach was to create the conditions where the issues of concern to families could be explored and, through a balance of scrutiny, challenge and support, opportunities and actions for improvement could be identified.

66. The deliverables for the CESG were:

66.1. a prioritised description of communications and information to be provided to families, with a focus on respect and transparency (with an initial focus on ensuring that all outstanding patient and family questions raised are answered);

66.2. development of a strategic Communications and Engagement Plan with a person-centred approach as key. This should link to and be informed by consideration of existing person-centred care and engagement work within the Board, to ensure continued strong links between families and NHS GGC. Specific enhancements and improvement proposals should also be clearly identified and should consider how the proposals from parent representatives on an approach that identifies and supports the delivery of personalised actions through the 'PACT' proposal can inform further work;

66.3. a description of findings following a review of materials, policies and procedures in respect of existing practices with regards to communications, engagement and decision-making arising from corporate and operational communications and engagement, linked to infection prevention and control and related issues. This was to include consideration of Organisational Duty of Candour, significant clinical incident reviews, supported access to medical records (including engagement, involvement and provision of information to families in relation to these processes, which are explained below).

66.4. A significant clinical incident review was the term used by NHSGGC for the process used to review events that may have contributed to or resulted in permanent harm with a view to conduct a detailed review of such events to establish the facts of what happened and determine any links between care delivery and outcome or the potential for learning to inform service improvement. This term was subsequently changed to Significant Adverse Event Review to ensure consistent terminology for these types of reviews across the NHS in Scotland. Supported access to medical records is the process by which NHSGGC responded to requests for copies of clinical records. The focus on incident reviews was referred to so that any observations relating to communication and engagement with people where there had been such a review could be considered and the other scenario was included as the family representative had advised that some families were not satisfied with the timeliness or support received throughout the process of seeking to obtain copies of medical records; and

66.5. a description of findings and recommendations to: (a) NHS GGC; (b) Health Protection Scotland; (c) NHS Scotland; and (d) Scottish Government on learning to support any required changes and improvements for communications and public engagement relating to the matters considered by the Subgroup.

67. The findings and recommendations from work of the CESG were set out in a paper developed by the Group **(A34187934 - NHS GCC and QEUH Oversight Board - Communications and Engagement Subgroup - Findings/Recommendations - August 2020 - Bundle 27, Volume 12, Page 343)** and then considered in developing the Interim Report of the Oversight Board published in December 2020 **(A49652167 - NHS GGC and QEUH Oversight Board - Interim Report - December 2020 - Bundle 27, Volume 12, Page 139)**. The COVID-19 pandemic impacted the Oversight Board and the CESG's ability to proceed with this work as originally planned. Further discussions and work of the CESG was considered through the Oversight Board, which published a final report in March 2021 **(A33448010 - The Queen Elizabeth University Hospital/NHS Greater Glasgow and Clyde Oversight Board Final report dated March 2021 - Bundle 6, Page 795)**.

68. The CESG considered a range of papers and material presented by NHSGGC to the Subgroup's meetings, including the presentations; discussions at the Subgroup meetings, both with NHSGGC colleagues and amongst the Subgroup members; and the experience of operating the new processes put in place in response to the infection issues, such as the 'closed' Facebook page for families and NHSGGC's communication with all those in contact with the service. The CESG also identified actions that required implementation by NHSGGC during the course of its work, such as the need to review the approach taken to co-ordinate communication with all families with some form of contact with the paediatric haemato-oncology services **(A49650900 - Bundle 27, Volume 12, Page 233)**.

69. The CESG benefitted from having two parent representatives on the Group, Professor John Cuddihy and [redacted] Professor Cuddihy also joined the Oversight Board. Professor Cuddihy established effective communication channels with a larger group of affected families and this became a very effective mechanism to disseminate copies of documents generated or being considered by the CESG and, more importantly, for these to then be considered with all of the various sources of information on matters of importance to families.

70. In January 2020 I asked the parent representatives for feedback on the impact of the various mechanisms that had been established to communicate with affected families **(A49650922 - Email chain - C White and J Cuddihy - Oversight Board Communication and Engagement - Feedback and Communication Links Established - 13 January 2020 - Bundle 27, Volume 12, Page 324)**. Professor Cuddihy advised me that parents had provided positive feedback on the arrangements put in place for Professor Cuddihy to provide an information sheet following his attendance at CESG meetings. In particular, this had been appreciated by parents who did not wish to communicate using other mechanisms. He advised that parents had commented that I had responded to matters raised by him and had posted an update on the Closed Facebook Group which had provided a confidence that the communication channel was operating effectively and that parents were being listened to. His feedback emphasised the importance of providing a range of mechanisms to support communication and engagement and confirmed that arrangements for providing

updates and requesting contributions to inform his role on the CESG were working effectively.

71. The Report set out findings and recommendations under two key issues that were highlighted in the escalation to Stage 4, and which were the focus of the work of the CESG:

71.1. communication issues, which related to how NHSGGC communicated and engaged with individual families and patients affected by the infection issues at the QEUH, as well as the wider public; and

71.2. Organisational Duty of Candour, which related to how NHSGGC carried out its legal obligations under the Organisational Duty of Candour in the context of the issues that gave rise to escalation.

72. The Report highlighted, within its findings, possible areas of assurance ('what had worked well') and areas for improvement ('what needed to improve'). The Report also highlighted, within its recommendations, where national learning for NHS Scotland as a whole could be relevant.

73. The findings and recommendations considered NHSGGC's strategic intentions for person-centred care, as set out in its 2019-23 Healthcare Quality Strategy. The CESG also took account of the context, including that there was little precedent for the challenges – not least in understanding the scale and nature of the infection issues – arising from a large, newly-built hospital complex such as the QEUH; and the challenges and opportunities that arose as a result of the size and expanse of NHSGGC.

74. The CESG recognised that relationships with key groups and communities were vital to its work.

75. Under the heading of Communications, the key findings of the CESG as to what had worked well included:

75.1. Good communication at point of care;

75.2. Establishing new mechanisms for communication (e.g. establishment of the closed Facebook page and database to capture communication preferences of each family (with the caveat that these would have had greater impact if established earlier);

75.3. Senior engagement on communication issues (again with the caveat that these would have had greater impact if established earlier);

75.4. Management focus on service provision/business continuity was maintained, despite the 'crisis management' approach that appeared to continue for some time in the face of the continuing infection issues in the QEUH; and

75.5. Staff impact and wellbeing was considered, although a more targeted approach could have been adopted in relation to staff, patients and families.

76. Under the heading of Communications, the key findings of the CESG as to what needed to be improved included:

76.1. Several families reported a consistent lack of transparency in the communications by NHSGGC, creating an impression that there was 'something to hide' in terms of what might lie behind the infection incidents - while a minority may have voiced their views, that did not make addressing their concerns any less essential, nor could it be read that their views were not shared by the larger, more 'silent' group of families;

76.2. Frustration by families at NHSGGC's 'reluctance' to address questions about the infection incidents and their background was heightened by NHSGGC's difficulties in discussing some issues because of its pending legal case against Multiplex - continuing silence on issues would not address fundamental concerns on communications and engagement that gave rise to escalation to Stage 4;

76.3. Families did not always feel that communications with them was the priority for NHSGGC, as opposed to communication with other groups or the wider public – this might reflect the complex challenges faced by NHSGGC but led to an ingrained lack of faith in NHSGGC's ability to prioritise their needs among some families;

76.4. NHSGGC did not always demonstrate a clear, person-centred tone in addressing such sensitive issues among families - the willingness to recognise the nature of concerns, apologies for their impact and take decisive action in the face of unknown issues (such as the decision to de-cant Wards 2A and 2B) would have strengthened some of the communications effort and reduce the mistrust that appeared to build;

76.5. Not all the communications were as effective as more direct ward communications, particularly for patients and families not currently engaged with the service;

76.6. Timeliness of some communication, which could often be more ‘reactive’ than ‘proactive’;

76.7. NHSGGC ‘Management’ was perceived by some families as using frontline staff to communicate ‘difficult’ messages relating to NHSGGC corporate responsibilities, with senior management in NHSGGC not being sufficiently and consistently visible in speaking/communicating with them at an early stage;

76.8. The consistency of information and messaging was variable and key messages, especially when delivered directly on wards, could have sometimes benefited from a more joined-up approach of infection prevention and control (“IPC”) and facilities/environment personnel;

76.9. Further work was identified to find better ways of supporting co-ordination and communication of the ways in which families could raise and have their questions (about point of care or wider organisational issues) responded to and for those responses to be more rapid, noting the backdrop of social media acting as an accelerator and ‘echo-chamber’, the press and political demand for clear answers and causation and uncertainty as NHSGGC was trying to understand the source of a complex, and at times, resolutely unsolvable set of issues; and

76.10. The role and coordination of messaging by external bodies, particularly NHS Health Protection Scotland (HPS) and the Scottish Government, was not always clear during the period, and did not provide a consistent source of support or advice to NHSGGC in addressing the communication challenges that they faced. This reflected NHSGGC’s

feedback that greater external coordinated support and advice would have been helpful, though they did not believe that this was readily accessible.

77. Under the heading of Communications, the key recommendations of the CESG included:

77.1. The Health Board should learn from the challenges of communicating against a background of uncertainty and where a critical situation is slowly evolving by pursuing more active and open transparency by undertaking a review of how it engages with families in line with the principles of its communication strategies. That review should include close involvement of the families that were affected by the infection incidents;

77.2. The Health Board should embed the value of early, visible and decisive senior leadership in its communications and engagement efforts and, in so doing, more clearly demonstrate and communicate a leadership narrative that reflects this strategic intent. That should be manifested in consistent communications by senior leaders in the Health Board with families in such circumstances;

77.3. To ensure that a person-centred approach is embedded in all of its official communications – corporate to point of care – and that patients and families are responded to in a timely manner, the Health Board should ensure that the Executive leads for communications and for person-centred care jointly, regularly and systematically review the quality of their communications with family representatives, and report on this to Executive Team of the Health Board;

77.4. The Health Board should make sure that there is a systematic collaborative and consultative approach in place for taking forward communications and engagement with families and patients. Co-production should be pursued in learning from the experience of this challenge. Impact assessments should be considered more actively and used sensitively. The priority should be on reliable and consistent delivery of this in a way that empowers clinical leaders and directors across professions. The review of communications noted previously could provide recommendations that would enable this to be embedded in the Health Board's operations going forward;

77.5. The Health Board should ensure that the principles of direct, person-centred and compassionate communications on the ward with patients and families be applied in a way which ensures consistency of experience across all patients and families. While this was reflected in the experience of some patients and families, it was not widely experienced by all of them, particularly those with ongoing questions and concerns about infection prevention and control;

77.6. Finding the right ways of communicating to patients and families who are 'outside' of the hospital is a key challenge that Health Boards must address when faced with these circumstances. The experience of NHS GGC should inform national learning on how this can be improved across NHS Scotland in future;

77.7. The Health Board should systematically elicit and reliably act on people's personal preferences, needs and wishes, particularly in circumstances where longer-term communication with patients and families is taking place. An action plan setting out how the learning from the communication challenges of Healthcare Associated Infections in the paediatric haemato-oncology service within NHS GGC will inform that approach going forward should be presented to the Scottish Government by the Health Board. This should also support national learning;

77.8. The Health Board should learn from other Health Boards that have developed good practice in addressing the demand for speedier communications in a quickly developing and social media context. The issue should be considered further across NHS Scotland as a point of national learning;

77.9. The Health Board should review and take appropriate action to ensure that there is an environment where staff are open about what is happening and can discuss patient safety events promptly, fully and compassionately;

77.10. The recommendations and learning set out in this report should inform an updating of the Healthcare Associated Infection Communications Strategy for the Health Board, and indeed, the wider strategic culture and approach of the Health Board, with a view to forming the basis for wider national learning; and

77.11. The Scottish Government, with Health Improvement Scotland and Health Protection Scotland, should review the external support for communications to Boards facing similar intensive media events.

78. The Organisational Duty of Candour was also considered by the CESG. The Organisational Duty of Candour is a legal duty, applicable to all organisations that provide health services, care services or social work services in Scotland. It sets out how organisations should tell those affected that an unintended or unexpected incident appears to have resulted in or could result in harm or death. The procedure to be followed is set out within The Duty of Candour Procedure (Scotland) Regulations 2018 (which were made in exercise of the powers conferred upon the Scottish Ministers by section 22(1) and (2) of the Health (Tobacco, Nicotine etc. and Care) (Scotland) Act 2016, which came into force on 1 April 2018).

79. The organisation concerned is required to notify, apologise to and meaningfully involve those affected in a review of what happened. When the review is complete, the organisation should agree any actions required to improve the quality of care, informed by the principles of learning and continuous improvement. They should tell the person who appears to have been harmed (or those acting on their behalf) what those actions are and when they will happen. It recognises that when unexpected or unintended incidents occur during the provision of treatment or care, openness and transparency are fundamental. This is intended to promote a culture of learning and continuous improvement and places people at the heart of health and social care provision.

80. The CESG found that the Organisational Duty of Candour had been actively considered by NHSGGC during the relevant period, although it was not formally activated for any of the incidents of concern within the paediatric haemato-oncology service. There was evidence of clinicians involved with Incident Management Teams (“IMT”) of taking actions to reflect their recognition of their Professional Duty of Candour in respect of the incidents and outbreaks being considered, including the need to develop clarity on any Organisational Duty of Candour actions required to respond to incidents considered as part of the IMT process.

81. An IMT is a multi-disciplinary, multi-agency group with responsibility for investigating and managing a ‘public health incident’ or possible healthcare associated infections. The terms ‘incident’ and IMT are used as generic terms to cover both public health incidents and outbreaks.

82. My understanding of relevant guidance is that an IMT relating to potential healthcare associated infection is established:

82.1. if there are two or more people experiencing a similar illness which is temporally and spatially linked (time and place);

82.2. if there is a single case of a rare disease or a serious illness with major public health implications (e.g. botulism, viral haemorrhagic fever, extensively drug-resistant tuberculosis (XDR-TB), polio, diphtheria, rabies;

82.3. if there is a higher than expected rate of an infection which is over and above the usual background rate for the time and place where the outbreak occurred; or

82.4. if there is a high likelihood of exposure of a population to a hazard (e.g. a chemical, food, water or infectious agent) at levels sufficient to cause illness.

83. In response to a suspected incident/ outbreak, it is the responsibility of the NHS Board (specifically the infection control doctor (“ICD”)/consultant microbiologist and/ or consultant in public health medicine (“CPHM”)) to establish if an IMT is required.

84. The IMT has responsibility for investigating and managing the incident. The IMT provides a framework, response and resources to enable the NHS board and (where relevant) other statutory agencies to fulfil their remits which I understand are:

84.1. To reduce to a minimum the number of cases of illness by promptly recognising the incident, defining how cases have been exposed to the implicated hazard, identifying and controlling the source of that exposure, and preventing secondary exposure;

84.2. To minimise mortality and illness by ensuring optimum health care for those affected;

84.3. To inform the patients, actually or potentially exposed groups, staff, clinical and management colleagues, public, their representatives and the media of the health risks associated with the incident and how to minimise these risks; and

84.4. To collect information which will be of use in better understanding the nature and origin of the incident and on how best to prevent and manage future incidents.

85. The CESG also found that NHSGGC's policy in support of Organisational Duty of Candour legislation did not fully reflect the legislation and guidance, primarily in respect of the reliance placed upon harm being viewed to be avoidable and/or related to acts of omission/commission of the organisation. While it was recognised that the implementation of the Organisational Duty of Candour in these circumstances had particular challenges, the legislation does not require a view on causation to be determined in deciding whether to activate the Organisational Duty of Candour procedure and includes provision for unexpected events that have resulted or could result in outcomes included in legislation (including increases in treatment and psychological harm) to activate the Organisational Duty of Candour procedure.

86. The CESG made two key recommendations in relation to Organisational Duty of Candour:

86.1. given that Organisational Duty of Candour was considered, but not formally activated, in these circumstances, NHSGGC should review its approach to ensure that it was not simply focused on patient safety incidents, circumstances where causality was clear and where events could result in death or harm; and

86.2. the national challenges around the application of the Organisational Duty of Candour highlighted by these events should be explicitly considered and acted upon by the Scottish Government and NHS Scotland.

87. The Scottish Government did not agree with the conclusions of the Independent Review as regards Organisational Duty of Candour; or NHSGGC's interpretation of the Organisational Duty of Candour as reflected in its decision-making with respect to the activation of the Organisational Duty of Candour procedure relative to affected families.

This was reflected in the Scottish Government's response to a copy of the Independent Review report provided to Scottish Government for factual accuracy feedback prior to publication **(A49651803 - SBAR - QUEH Independent Review - Request for Further Background on Reference to Organisational Duty of Candour - 07 June 2020 - Bundle 27, Volume 12, Page 328)**. This feedback did not lead to any change in these conclusions upon publication.

88. NHSGGC provided detailed comments on content relating to Organisational Duty of Candour as part of a process to seek feedback on a draft report of the Oversight Board. These were reviewed in detail **(A49651778 - NHSGGC Oversight Board Final Report – Comments Received from NHSGGC on Content relating to Organisational Duty of Candour - 04 March 2021 - Bundle 27, Volume 12, Page 333)** and considered by officials who were coordinating the production of the Oversight Board's report. Some of these issues have already been considered by the Inquiry in respect of decision-making and associated communication decisions by NHSGGC.

89. My prior experience as a Health Board Caldicott Guardian and lead role in the policy, legislative and implementation support processes on Organisational Duty of Candour were relevant to the advice I was providing to the Scottish Ministers. For example, in October 2020 I provided direction to Scottish Government officials (such as Phil Raines, who was Unit Head of Scottish Government QEUH Business Support Unit) who received communications articulating concerns from Professor Cuddihy on the implementation of obligations relating to the Organisational Duty of Candour **(A49651169 - Email chain - J Cuddihy, P Raines and C White - J Cuddihy correspondence on Mycobacterium Chelonae cases and organisational duty of candour - 20 to 29 October 2020 - Bundle 27, Volume 12, Page 338)**. This focused on emphasising the importance of the way in which the balancing exercise (for both professional and Organisational Duties of Candour) required in respect of competing interests relating to confidentiality and candour could have been approached differently.

90. The CESG Report was completed in July 2020 **(A34187934 - Bundle 27, Volume 12, Page 343)** and then presented to the Oversight Board in accordance with the agreed governance structures in place for the Oversight Board.

91. The work of the CESG significantly influenced the approach taken to consider and coordinate responses to questions and concerns raised by Professor Cuddihy regarding the publication of the Independent Review, Professor Mike Stevens' appointment, and parents' concerns about the impact of the BBC Disclosure documentary, all in July 2020 and thereafter.

92. During the time that I worked as Communications and Engagement Lead on the Oversight Board and the Independent Case Note Review, I also followed up on individual concerns raised with me by parents in individual meetings with them. The concerns were mostly related to questions arising for parents in the context of the ongoing care of their children or feedback they wished to provide on suggested improvements in care experiences. During the pandemic concerns and questions about hospital access and shielding list questions were responded to.

Implementation of recommendations from the CESG Report

93. An Advice, Assurance and Review Group ("AARG") was set up by the Scottish Government to provide advice, assurance and review of all reports, recommendations and closed actions, based on NHSGGC's overarching action plan in response to the Oversight Board's recommendations. The AARG was chaired by the Chief Nursing Officer (at that time Amanda Croft) and its membership comprised various Scottish Government officials, me included, together with various representatives from NHSGGC and a representative from NHS Forth Valley.

94. The terms of reference for the AARG included the following:

- Undertake an initial formal review of progress in first meeting of the AARG;
- Implement the recommendations within the action plans and the reports relating to improvement;
- NHSGGC to establish an ongoing and regular monitoring process of the plan within the Board and update the AARG accordingly
- Provide advice regarding weekly progress meetings between SG Lead and NHSGGC, including on further interventions, if appropriate;
- Consider and provide advice to CNO in her discussions/liaison with SG colleagues;

- Undertake a timely formal review and produce a briefing with recommendations for the CNO to take to the Chief Executive of NHS Scotland/ Director General of Health and Social Care regarding the level of escalation and any recommendations in relation to this; and
- Progress that review with CNO and the Chief Executive of NHS Scotland/ Director General of Health and Social Care to inform a meeting with the Cabinet Secretary.

95. The outputs of the AARG were to be that the AARG Chair would formally report on progress to the Cabinet Secretary in September 2021; and additional reporting to the NHSGGC Board would occur, with briefing to the Chief Executive of NHS Scotland/Director General of Health and Social Care accordingly **(A49650690 - QEUH/RHC Advice, Assurance and Review Group (AARG) - Terms of Reference - June 2021 - Bundle 27, Volume 12, Page 363)**.

96. I attended two meetings of the AARG, on 7 June and 19 August 2021. At the meeting on 7 June 2021, it was agreed that my formal role as lead for communication and engagement would end, though I would be available to any colleague in NHSGGC who might wish to contact me **(see Minutes at A44777856 - QEUH/RHC Advice, Assurance and Review Group (AARG) - Minute - 07 June 2021 - Bundle 27, Volume 12, Page 368)**. The 19 August 2021 meeting noted that NHSGGC had conducted an internal audit of the Organisational Duty of Candour policy and procedures and that their policy had been changed "*to make it more consistent with the legislation in terms of unexpected and unexpected incidents*". A copy of their revised policy was tabled for review at this meeting **(A49650938 - NHS GGC - Policy & Procedure - Duty of Candour - Compliance - OB - Final 14 - 29 July 2021 - Bundle 27, Volume 12, Page 371)**. This meeting agreed that NHSGGC's action plans would be subject to an ongoing process of audit by them to ensure maintenance and sustainability of actions **(see Minutes at A49650695 - QEUH/RHC Advice, Assurance and Review Group (AARG) - Minute - 19 August 2021 - Bundle 27, Volume 12, Page 390)**.

97. My understanding is that a paper was considered by the Scottish Government Health and Social Care Management Board in September 2021, which recommended de-escalation of NHSGGC from Stage 4 to Stage 2 **(A49438165 - NHS GGC escalation**

review based on the outcome of the QEUH / RHC Advice, Assurance & Review Group (AARG) - 15 September 2021 - Bundle 27, Volume 12, Page 396). The minutes of this meeting note that the Director General took the advice of HSCMB and was supportive of de-escalating NHSGGC to Stage 2, acknowledging the work done and the action taken. It was also noted that, as part of the ongoing assurance arrangements, NHSGGC would provide a monthly exception report in respect of the action plan. Additionally, the Chief Nursing Officer and Chief Operating Officer would meet quarterly with the Chief Executive and members of the senior team of NHSGGC and that these assurance arrangements would be kept under review **(A49437501 - Health and Social Care Management Board - Minute - 15 September 2021 - Bundle 27, Volume 12, Page 409)**.

98. I was not involved directly in the work of the AARG after the meeting in August 2021. My understanding is that there was a further meeting of the AARG on 17 December 2021.

99. On 24 November 2021 I was copied into an email that referred to the actions taken by NHSGGC in respect of the Oversight Board's recommendations relating to Organisational Duty of Candour. I had concerns about the content of the email referring to NHSGGC's response to the Oversight Board's recommendations on Organisational Duty of Candour, particularly the use of the words "perceived insufficiency" and "impressive evidence". I replied to the Associate Chief Nursing Officer, Irene Barkby, referencing discussion at the August 2021 AARG where my recollection was that NHSGGC's Executive Medical Director, Jennifer Armstrong, confirmed that their review of the Organisational duty of candour work had been an exercise that had neither involved engagement with any staff or patients and families, nor looked at outcomes. I referred to my understanding that NHSGGC's internal audit had been based on a review of documentation, which may have included the Board's revised Organisational Duty of Candour policy. I also highlighted that I had not received a draft Minute of the August 2021 meeting **(A49434796 - Email Chain - J Birch, I Barkby, C White and others - Submission on aspergillus in the QEUH CWard response - 24 to 25 November 2021 - Bundle 27, Volume 12, Page 417)**.

100. I proposed the following wording would be a more accurate reflection of my recollections of the discussion in respect of NHSGGC's response to the Organisational Duty of Candour recommendation of the Oversight Board:

*"*In terms of their work on Organisational duty of candour, the Board commissioned a review by their internal auditors, Azets. This was a desktop review which considered changes in the Board's Organisational duty of candour policy made following recommendations by the Oversight Board. The AARG encouraged the Board to ensure that their ongoing assurance work on these changes considered the effectiveness of implementation and took account of the impact on staff, patients and families. Officials have continued to engage with the Board's Director of Clinical Governance on Oversight Board recommendations on the application of the Organisational duty of candour procedure to instances of hospital acquired infections."

101. I have had no further personal involvement since this time in respect of the extent to which the recommendations of the Oversight Board relating to communication and engagement have been effectively or sustainably implemented.

102. I understand that Louise Slorance has provided the Inquiry with feedback that communications and engagement have not improved in NHSGGC. The only personal involvement I had in respect of Mrs Slorance's communications with Scottish Government was in November 2021 when, in response to concerns she had expressed to Scottish Government, I emailed an official in the Chief Nursing Officer's Directorate to emphasise the importance of Mrs Slorance having a dedicated point of contact at NHSGGC for ongoing support and communication. I referred to this being relevant to the improvements that the CESG encouraged NHSGGC to prioritise as part of their actions to deliver on the changes recommended by the Oversight Board **(A49433379 - Email Chain - J Birch, A McMahon, C White and others - Submission on aspergillus in the QEUH CWard response - Response from Louise Slorance - 24 to 29 November 2021 - Bundle 27, Volume 12, Page 428)**. I also provided advice on the Organisational Duty of Candour and stated the obligations, as I understood them, of NHSGGC in respect of accountability for transparent, person-centred and supportive communication and engagement informed by reviews, questions and concerns expressed by Mrs Slorance, accountabilities that relate to the Board's statutory duty of

quality and how the various responsibilities of the accountable officer in respect of clinical and care governance apply **(A49434277 - Email Chain involving C White, C Campariol-Scott and others - Submission on aspergillus in the QEUH - 24 November 2021 to 30 November 2021 - Bundle 27, Volume 1, Page 540)**.

103. In relation to the national challenges around the application of the Organisational Duty of Candour highlighted in the Report, I ensured that, when I returned to work in the Directorate of Healthcare Quality and Improvement, I worked with colleagues to review the implementation of the legislation since it came into force in April 2018. I completed a review and recommendations to the relevant Scottish Government policy teams on 9 December 2022 **(A49650907 - SBAR - Organisational Duty of Candour Annual Reports Review - 09 December 2022 - Bundle 27, Volume 12, Page 442)**. The Scottish Government has subsequently conducted a review of the updates to be made to the non-statutory guidance supporting the Organisational Duty of Candour legislation and at the time of writing this is planned for publication later in 2024.

Independent Case Note Review

104. On 28 January 2020, the Cabinet Secretary announced in Parliament the plans for a Case Note Review ("CNR"). The CNR, to be undertaken by a panel of independent experts led by Professor Mike Stevens, commenced on 24 February 2020. I was the Scottish Government's Communications and Engagement Lead for the CNR and chaired a communications group relative to the CNR. This group met on 30 October 2020, 17 December 2020, 21 January 2021 and 06 April 2021. Professor Stevens, Professor Cuddihy and supporting officials from the Directorate of the Chief Nursing Officer's Directorate were members.

105. My responsibilities included the implementation of any actions assigned to me by the CESG relating to communications and engagement activities, final approval of all communications relating to the process of case note review and providing communication support and advice to Professor Stevens and his colleagues. This included ensuring that proposed written communications about the CNR reflected the issues and learning identified through the prior communications and engagement work and that the improved mechanisms now in place to communication and engage with

affected families were utilised. These arrangements were reflected in a Communications Plan that was approved in August 2020 **(A49624113 - QEUH - Case note review - Communications Plan - v0.7 - Final - 26 August 2020 - Bundle 27, Volume 12, Page 447)**. NHS National Services Scotland provided a project management support for this Group and coordinated this workstream with all of the other work required to implement the CNR.

106. Of the 86 patients initially identified as eligible for inclusion in the CNR, NHSGGC received communication from one family requesting that their child be excluded and so the CNR undertook no consideration of the clinical circumstances of this case. I passed on a further nine written communications to the review for consideration. One raised specific concern relating to nursing care, which was considered by the CNR to be out of scope; another requested a copy of their child's medical notes from NHSGGC and a copy of any reports about their child, which was again considered by the CNR to be out of scope; and the remaining seven included specific concerns relating to their child's infection.

107. The main themes addressed by these 7 communications were summarised by the CNR as follows:

107.1. lack of clear communication about the nature of the infection(s);

107.2. questions raised about medication prescribed for and/or to prevent infection(s);

107.3. describing the impact the infection had had on their child/themselves, including delay in treatment;

107.4. concern about the length of time before the central venous line was removed; and

107.5. concern about the timing and interpretation of microbiological typing results from the reference laboratory.

108. I was involved in discussions in relation to what should happen prior to and following publication of the CNR report. I provided advice on the content of communication

reflected by my prior engagement with families. This was a very important stage in the CNR process. Discussions as to the process to be followed, included Professor Stevens and his team, NHSGGC, Professor Cuddihy and myself. It was agreed that the CNR would prepare individual written reports for each of the infection episodes included within the CNR for every patient. These would summarise the CNR findings in line with the framework to which the CNR worked during the CNR process (section 3.6).

109. I also ensured that any issues escalated to me on areas relating to the remit of the Oversight Board were communicated to the Chief Nursing Officer. For example, in February 2021, when I was formally advised that following review of evidence shared with them the CNR panel believed not all relevant data had been shared by NHSGGC relating to the Review. I advised the Chief Nursing Officer of this and her officials agreed to take further action to investigate the CNR panel's concerns.

110. The CNR viewed these as private reports from the Panel to the patient and family concerned. The CNR Team took responsibility for distributing the reports having first worked with NHSGGC to ascertain up to date contact details and communication preferences for the patients and families concerned and to confirm the most up to date medical status of all relevant patients.

111. It was agreed within the discussion group that families would receive written information about the process approximately 4 weeks before the reports were distributed. This would explain the timescale and offer the opportunity for patients and families to meet with members of the Panel after receiving their report, if they wished to do so. They would also receive information about the support available to them should they find the details of the report distressing or if it raised other concerns about their treatment experience and its consequences. The CNR also ensured that those families who had been bereaved by the death of their child would be able to access appropriate support.

112. Whilst those within the discussion group believed that the individual report should be 'owned' by the patient/family, the CNR Communication and Engagement Group believed it would be appropriate, subject to the consent of the patient/family, that a copy of the report should be made available to the clinical team who was, or at that time may

still have been, responsible for the care of each patient. The opportunity to share the report with the relevant clinical team was set out in the advance letter to the families.

113. When the CNR Team sent families their reports, they also sent an information sheet and consent form requesting consent to share the report with the relevant clinical team. Families were then able to contact the CNR Team to make an appointment for a meeting with the Panel had they wished to do so.

114. To further facilitate direct contact with the CNR Team, a specific operating procedure was established and an electronic mailbox was set up and was operational prior to the distribution of individual patient reports. It remained available until the process was complete. A contact telephone number was also provided for families to use if they preferred.

115. During this time the closed Facebook group continued to be used to reach parents with updates on all of the work, including the CNR process. I was also able to review membership of the closed Facebook group and ensure that any families not registered on this group received relevant communications through alternative routes.

116. My understanding is that a written summary of the meeting held with a family was not prepared but families were able to bring an additional person with them to the meeting to act as a supporter who could, if wished, also keep notes for the family during the discussion. Any agreed action points that emerged from the discussion were documented and shared in writing with the family after the meeting. This included an indication of how and by when it was hoped these could be addressed.

117. It was agreed that the CNR would treat the proceedings of the meetings as confidential and would not share the content of the discussion with any other person or organisation unless specifically requested and agreed by the family.

118. It was also agreed that once all meetings had been held with families who requested these, this would complete the work of the CNR team; and the Oversight Board and NHSGGC would be notified. The CNR was completed in January 2021 and the CNR Overall Report was published in March 2021. The staff from NHS National Services

Scotland, who provided a project management and co-ordination function to Professor Stevens and his team, also provided support that included the storage and retention of relevant records relating to family engagement and communication.

Reflections

119. In my view, the Cabinet Secretary's establishment of a single point of contact for advice and coordination with external agencies was beneficial for several patients and their families, the Scottish Government, and NHSGGC.

120. I have considered the scope, role, and remit of what I was asked to do and believe that I contributed to effectively ensuring that the 'voice', perspective, and experience of affected families were heard, more meaningfully engaged with and proactively considered through the various processes, organisations and structures involved. I met with all of the families who requested individual meetings with me and, at all times, sought to advocate their perspectives and experiences in the various meetings and processes I have described in this statement.

121. I believe that improvements were made in establishing channels of communication to better reflect the Scottish Government's policy commitments to person-centredness and candour and that this was effective in supporting a range of developments that created the conditions for more open and supportive dialogue with affected families. I think overall, more people developed a greater appreciation of the importance of ensuring people's views are given greater prominence and that Organisational responses are more explicitly developed with a relational and restorative focus (see below). Mrs Slorance's statement to the Inquiry reflects similar issues to those I encountered when I commenced my role. This suggests that there may have been insufficient proactive action taken to prevent, minimise or address the compounded harm that can occur if that isn't the approach taken. This raises questions about the extent to which the recommended improvements in the approach to communication and engagement have been reflected in the experiences of people expressing concerns and questions of a similar nature to those expressed by those involved in the processes outlined in this statement.

122. I gained insights into the potential for compounded distress and a deep sense of mistrust to develop when families experience fear, shock and anger and when their experience was that their views appeared not to be fully appreciated or understood. I recognised the challenges of ensuring that Organisational viewpoints did not overshadow individual family experiences, particularly if these were at odds with this and the potential for personal engagement to create the conditions to rebuild trust and confidence.

123. Although I believe NHSGGC colleagues sometimes found my challenges and scrutiny tough, I believe I developed productive working relationships with all colleagues and they understood why, give my role and remit on behalf of affected families, such challenges and approaches were an essential part of my remit.

124. I believe that because of the work undertaken on communications and engagement, NHSGGC colleagues felt more able to recognise and take actions to reflect insights into the improvements identified as necessary. I gained a good understanding of the particular complexities and challenges of Executive Directors and their accountabilities in an NHS Board with the size and scope of NHSGGC. I also appreciated the importance of ensuring that Executives are supported to develop the skills and confidence to proactively engaging in a more explicitly supportive and open dialogue. The work also reaffirmed experiences throughout my career of the power of ensuring that people directly impacted by adverse events, following deaths of relatives or when they are dissatisfied in any way with the quality or experience of care must have the opportunity to feel personally and meaningfully involved and engaged with staff and through that feel involved with the process of reviews that should form part of the relevant governance and improvement processes established in furtherance of NHS Board's duty of quality per the National Health Service (Scotland) Act 1978 section 12H.

125. Communication and engagement following adverse events must be more prominently influenced by work on who has been hurt and what their needs are. In particular a restorative inquiry framework and its focus on a relational process where all those affected come together in a safe and supportive environment with the help of skilled facilitators, to speak openly about what happened, to understand the human impact and

clarify responsibility for the requisite actions for healing and learning. This requires consideration of:

- Who has been hurt and what are their needs?
- Who is responsible for meeting these needs and what are their obligations?
- How can harms and relationships be repaired?
- How can we prevent it from happening again?

Declaration

I believe that the facts stated in this witness statement are true to the best of my knowledge, information and belief. I understand that this statement may form part of the evidence before the Inquiry and be published on the Inquiry's website.

The witness provided the following documents to the Scottish Hospital Inquiry for reference when they completed their questionnaire statement.

Appendix A

A38097056 - Letter for parents in Ward 6A about the Closed Facebook page, from NHS Greater Glasgow and Clyde Health Board dated 25 September 2019

A33448010 - The Queen Elizabeth University Hospital/NHS Greater Glasgow and Clyde Oversight Board Final report dated March 2021

A49434277 - Email Chain involving C White, C Campariol-Scott and others - Submission on aspergillus in the QEUH - 24 November 2021 to 30 November 2021

Appendix B

A33949845 - S5W-25642 - To ask the Scottish Government what discussions it has had with families of paediatric cancer patients affected by the infection outbreaks at the Royal Hospital for Children and the Queen Elizabeth University Hospital, NHS Greater Glasgow & Clyde?

A33949846 - Email chain - J Downie, C White and others - Attaching "Scope, Role and Remit of Professor Craig White re Concerns Raised by Patients and Families… - 08 October 2019" - 04 to 08 October 2019

A33949847 - Letter from Professor Craig White to Patient/Family Representatives following meeting with Jeane Freeman - 09 October 2019

A33949849 - Scope, Role and Remit of Professor Craig White re Concerns Raised by Patients and Families within Paediatric Oncology/Haematology Service at Royal Hospital for

Children/Queen Elizabeth University Hospital, NHS Greater Glasgow and Clyde - 08 October 2019

A33949850 - Email chain - J Downie, A Corr, C White and others - Follow up work for Monday following GIQ and letters - Attaching "Prof White Letter - RHC Families - 091019","S5W-25642 GIQ" and "Prof White - Remit" - 04 to 09 October 2019

A33903159 - Letter from Professor Craig White to [redacted] - 29 October 2019

A33943938 - NHSGGC Responses to Family Questions

A49651390 - Email chain - Letter from Professor Craig White to families after media coverage - Forwarded to Cabinet Secretary for Health and Sport - 15 November 2019

A33903190 - Email chain - C White and J Cuddihy - Update on Discussions with NHS Greater Glasgow and Clyde to families - 16 to 19 November 2019

A49650838 - Email chain from C White - Update on Discussions with NHS Greater Glasgow and Clyde to families - Forwarded to Cabinet Secretary for Health and Sport - Attaching "QEUH WATER TESTING_REDACTED 1" and "Dr.Crichton - Explanation re Water Sample Report - 191119" - 19 November 2019

A49650913 - Email chain from C White - Update on Discussions with NHS Greater Glasgow and Clyde to families - Forwarded to S Bustillo, J Grant and others - Attaching "QEUH WATER TESTING_REDACTED 1" and "Dr.Crichton - Explanation re Water Sample Report - 191119" - 19 November 2019

A33944092 - Email from C White to L Allan - Attaching multiple documents - 25 November 2019

A33939227 - Email chain - C White and [redacted] - Update on Discussions with NHS Greater Glasgow and Clyde - Concerns following update - 19 to 20 November 2019

A34059477 - Email from C White to [redacted] - Attaching letter from Jeane Freeman to families - Update on Public Inquiry 28 November 2019 - 11 December 2019

A33977151 - Email from C White to families - Establishment of Oversight Board - Communication and Engagement Sub-Group - 29 November 2019

A33977250 - Letter from Professor Craig White to families - Escalation of NHS GGC to Stage 4 of NHS Board Performance Escalation Framework - 03 December 2019

A49438292 - Email from E MacKay to C White and others - QEUH Case Note Review - Communications & Engagement meeting 09 March 2021 - Attaching Agenda and Action Log - 05 March 2021

A49650900 - PART 2 - Papers considered at NHS Greater Glasgow and Clyde Oversight Board Communication and Engagement Subgroup Meetings

A49651792 - Family questions to Independent Review

A34187840 - QEUH Oversight Board - Communications and Engagement Subgroup - Terms of Reference - DRAFT

A49434684 - NHS GGC and QEUH Oversight Board - Communication and Engagement Sub Group - Minute - 05 December 2019

A49434655 - NHS GGC and QEUH Oversight Board - Communication and Engagement Sub Group - Minute - 18 December 2019

A49435644 - NHS GGC and QEUH Oversight Board - Communication and Engagement Sub Group - Minute - 09 January 2020

A49435742 - NHS GGC and QEUH Oversight Board - Communication and Engagement Sub Group - Minute - 29 January 2020

A34187974 - NHS GGC and QEUH Oversight Board - Communication and Engagement Sub Group - Minute - 04 February 2020

A34187883 - NHS GGC and QEUH Oversight Board - Communication and Engagement Sub Group - Minute - 18 February 2020

A34187906 - NHS GGC and QEUH Oversight Board - Communication and Engagement Sub Group - Minute - 03 March 2020

A49435707 - NHS GGC and QEUH Oversight Board - Communication and Engagement Subgroup meeting - Minute - 01 July 2020

A34187934 - NHS GCC and QEUH Oversight Board - Communications and Engagement Subgroup - Findings/Recommendations - August 2020

A49652167 - NHS GGC and QEUH Oversight Board - Interim Report - December 2020

A49650922 - Email chain - C White and J Cuddihy - Oversight Board Communication and Engagement - Feedback and Communication Links Established - 13 January 2020

A49651803 - SBAR - QUEH Independent Review - Request for Further Background on Reference to Organisational Duty of Candour - 07 June 2020

A49651169 - Email chain - J Cuddihy, P Raines and C White - J Cuddihy correspondence on Mycobacterium Chelonae cases and organisational duty of candour - 20 to 29 October 2020

A49650690 - QEUH/RHC Advice, Assurance and Review Group (AARG) - Terms of Reference - June 2021

A44777856 - QEUH/RHC Advice, Assurance and Review Group (AARG) - Minute - 07 June 2021

A49650938 - NHS GGC - Policy & Procedure - Duty of Candour - Compliance - OB - Final 14 - 29 July 2021

A49650695 - QEUH/RHC Advice, Assurance and Review Group (AARG) - Minute - 19 August 2021

A49438165 - NHS GGC escalation review based on the outcome of the QEUH / RHC Advice, Assurance & Review Group (AARG) - 15 September 2021

A49437501 - Health and Social Care Management Board - Minute - 15 September 2021

A49434796 - Email Chain - J Birch, I Barkby, C White and others - Submission on aspergillus in the QEUH CWard response - 24 to 25 November 2021

A49433379 - Email Chain - J Birch, A McMahon, C White and others - Submission on aspergillus in the QEUH CWard response - Response from Louise Slorance - 24 to 29 November 2021

A49650907 - SBAR - Organisational Duty of Candour Annual Reports Review - 09 December 2022

A49624113 - QEUH - Case note review - Communications Plan - v0.7 - Final - 26 August 2020

Scottish Hospitals Inquiry
Witness Statement of Questions and Responses
Professor Angela Wallace

This statement was produced by the process of sending the witness a questionnaire with an introduction followed by a series of questions and spaces for answers. The introduction, questions and answers are produced within the statement.

Personal Details

1. Full name
A. Angela Wallace

Background

2. Please state your name and professional qualifications, including qualification in any specialities.
A. My name is Professor Angela Wallace. The qualifications I hold are RGN, MBA and FRCN. I do not have any specialist qualifications in Infection Prevention and Control.

3. Please provide a summary of posts held by you and/or an up-to-date CV.
A. I enclose my CV **(A49689031 – Appendix C)**. Please see a summary of my posts below:

2022 to Present - Executive Director of Nursing, Midwifery & Allied Health Professionals and Health Care Scientist

2004 to 2022 Executive Director of Nursing, Midwifery & Allied Health Professionals
NHS Forth Valley - (2020 to 2022) Interim Director of Infection Control and HAI Executive Lead – NHS GGC

2003 to 2004 - Director of Nursing, Forth Valley Acute Operating Division

2002 to 2003 - Interim Director of Nursing
Forth Valley Acute Operating Division

2001 to 2002 - Deputy Director of Nursing
Fife Acute Hospitals NHS Trust

2001 to 2002 - Acting Director of Nursing, Quality, Therapies & Rehabilitation
Fife Acute Hospitals NHS Trust

1999 to 2001 - Directorate Nurse Manager – Medicine, Rehabilitation & Care of the Elderly
Fife Acute Hospitals NHS Trust

1996 to 1999 - Nursing & Quality Adviser – Senior Nurse Quality & Audit
South Glasgow University Hospitals Trust

1991 to 1996 - Charge Nurse – Intensive Care & Coronary Care Units
Victoria Infirmary, Glasgow

1983 to 1991 - Nurse Training & Staff Nurse Post
Victoria Infirmary, Glasgow

4. What is your current role?

A. I am currently the Executive Director of Nursing and Midwifery for NHS Greater Glasgow and Clyde (NHS GGC) with strategic leadership for, Allied Health Professions and Healthcare Scientists. I am the Executive Lead in NHS GGC for Quality, Public Protection, Infection Prevention and Control, Healthcare Safe Staffing Act, People Delayed in their Discharge.

Involvement with QEUH/RHC before the Oversight Board was set up

5. Did you have any involvement with QEUH/RHC before the creation of the Oversight Board and taking up your role as Interim Operational Director for IPC? Please give details e.g. when your involvement began, and what was your involvement?

A. I had no involvement with QEUH/RHC before the creation of the Oversight Board and taking up my role as Interim Director for Infection Prevention and Control.

Role as Interim Operational Director for IPC (IODIPC)

6. What were the full circumstances around your appointment? e.g. who suggested the appointment, how were you recruited, who approved the appointment?

A. I was approached by the then Chief Nursing officer (CNO) for Scotland Ms Fiona McQueen. She explained that Prof Marion Bain of Scottish Government was supporting NHSGGC in respect of Infection Prevention and Control (IPC) as Healthcare Associated Infection (HAI) Executive Lead. Prof Bain had requested a senior colleague to direct IPC at a strategic and operational level. The CNO asked if I would consider taking this interim post in support of Prof Bain and the Scottish Government Oversight arrangements. There was no recruitment process, there were discussions between Fiona McQueen CNO, the Scottish Government colleagues, NHS Forth Valley Chief Executive and GGC about this ask and my capacity to cover my role in NHS Forth Valley and the Interim Director of Infection Prevention Control. My understanding is that this was then jointly approved by the 2 organisations and Scottish Government Colleagues.

7. Why did you agree to take up the appointment?

A. As a senior NHS Scotland leader and director, we are required to deliver on a national and regional priority within our annual organisational and professional objectives as part of the national performance appraisal system. This ask of

me would sit within this space and I would therefore not take on additional regional and national areas during my term as Interim Director of Infection Prevention and Control. The initial secondment was for 6 months, 2.5 days per week. I agreed to take up this role as I was asked to by Scottish Government colleagues. It was explained that my significant leadership experience managing complex situations would provide additional leadership capacity at this time. In working in NHS Scotland for 40 years I continue to be driven by service and wanted to help colleagues if I could with the aim of supporting them as they continued to provide safe, person-centred care.

8. What was the brief you were given on taking up the role? Was this in writing? What was your understanding of what the role involved?

A. I was not given a written brief for the role. My understanding was that, initially working alongside Prof Marion Bain, I would operationally direct IPC across NHS GGC and establish a director of IPC role, it was explained that further colleagues from NHS Scotland would be released to also assist our GGC colleagues, due to the significant additional pressures that the oversight arrangements would place on the IPC team. The release of colleagues did not occur.

9. Who did you report to, and who reported to you?

A. I reported to NHS GGC CEO Mrs Jane Grant. There were no direct reports initially but within my time in this role the arrangements changed and developed, this resulted in the Infection Control Manager (ICM) reporting to me during 2020. I had no planned regular meetings with the CNO but I regularly reached out to her and her team including SG policy unit colleagues.

10. What were you told about issues at QEUH/RHC before taking up the role?

A. It was explained to me that NHSGGC as part of the Scottish Government oversight arrangements in respect of IPC required additional leadership capacity. CNO Fiona McQueen shared that there were some microbiology colleagues within NHSGGC who had, and continued to, raise concerns regarding infections which they believed was connected to the QEUH and RHC building and environment. Although I understood that I would be the

liaison between the NHS Board and colleagues in Scottish Government and despite reaching out to those with concerns this raising of issues out with process continued and this pattern of behaviours was supported by colleagues in SG which left me in the unfortunate position of trying to manage the issues within process but at the same time the channels between the microbiologists and SG continued. I was trying to build relationships with the team and build trust and transparency and new ways of working but this continual questioning of processes hindered this process and undermined the position I was asked to fulfil.

11. Additionally, what were you told about:

(a) Incidence of infection and bacteraemia

A. CNO shared verbally that there were concerns re infections and bacteraemia that continued to be raised by the whistleblowers… despite the work that had been commissioned by SG and undertaken by ARHAI in 2019 **(A49689613 - HPS Report - Review-of-nhsggc-paediatric-haematooncologydata – Bundle 27, Volume 10, page 350)**.

(b) Specific incidents of infection and bacteraemia, including but not restricted to, Cryptococcus, Mycobacterium Chelonae, gram-negative bacteria

A. I was not told about specific incidents prior to taking up this interim role. I was however aware that there was significant media attention with regards to unusual incidents.

(c) Issues with the water system

A. I was not told about specific issues with the water system, but as stated above, CNO Fiona McQueen shared with me that there were concerns regarding building and environment which included the water supply in QEUH and RHC and I was aware from the media attention.

(d) The water incident of March 2018

A. No details were given on the water incident of March 2018 prior to taking up this role.

(e) Issues with the ventilation system

A. No details were given on concerns re ventilation system prior to taking up this role.

(f) Suitability of the ventilation system to deal with the Covid pandemic

A. The Covid-19 pandemic began within weeks of me taking up this role, therefore I cannot answer this question.

(g) Infection link with the water system

A. Please see (c) above for my response to this question.

(h) Infection link with the ventilation system

A. Please see (e) above for my response to this question.

(i) Decanting of wards

A. I was not aware of specifics in relation to wards that had been decanted but I was aware from my initial discussions with Prof Marion Bain that there were patients in RHC, oncology ward receiving care in the adult hospital QEUH.

(j) Risk to patients.

A. Please see (9) and (a) above for my response to this question.

(k) Culture and relationships within IPCT

A. It was explained to me by the CNO and Prof Marion Bain that the relationships between colleagues who had raised concerns and a range of colleagues within GGC were completely polarised to the point that I was extremely concerned that parts of the system were working in a space that was not psychologically safe. It was shared with me that NHSGGC had previously put plans in place to support colleagues in this respect however I considered this to be an extreme example of a fractured system. In my first meeting with CEO Jane Grant prior to accepting this interim role, Jane explained that a key commission would be to design a new organisational development (OD) approach to again support team working and build relationships. Prof M Bain shared with me she had an objective a part of her

role to “re-integrate” colleagues who had raised concerns back into the organisation, however, despite my best efforts in became apparent quite quickly that this may not be possible.

12. What were you told about any risk assessments being done and any steps being taken in respect of the issues?

A. I was not told about any risk assessments that I can recall.

13. What were the key areas of focus in your role?

A. In taking up the role, I believed I had a unique opportunity to look at the context of the NHSGGC IPC from an independent perspective. I realised that this phase of independence may not have longevity therefore my initial focus was to seek to understand. Immediately prior to my role commencing, I spoke to colleagues mentioned in Scottish Government, CNO and Prof Bain including Scottish Government HAI Policy Unit, colleagues in ARHAI and NHS Healthcare Improvement Scotland (NHS HIS), NHS GGC Directors, acute colleagues. In taking up my role I immediately met with GGC colleagues beginning with the Infection Control Manager (ICM), lead infection control doctor, senior leader colleagues. In addition, I spoke to the people I knew across other boards and the royal college of nursing to gain insights, perspectives and gain any learning from their experiences of the current context that GGC colleagues were facing. I was asked to meet with Prof Marion Bain, and two microbiology colleagues, Dr Christine Peters and Dr Teresa Inkster who had raised concerns and continued to raise concerns. Simultaneously, I was utilising a Swot Analysis (Strengths, weaknesses, opportunities and threats) to compare IPCT approaches and performance internally (other hospital sites) and externally (Other NHS Scotland Boards). **(A49689091 - SWOT- PESTLE V1.docx Final – Bundle 27, Volume 10, page 202)**

14. What initial steps did you take on taking up the role? What key relationships did you form?

A. Please refer to my answer to Question 12 above and the approach to my role in the update provided to Oversight Board IPC and Governance

subgroup.**(A49689717 - QUEH IPCG Sub Group.pptx Draft Presentation.pptx Version 9 – Bundle 27, Volume 10, page 205)**.

Improvements to GGC Infection Prevention and Control

Please see: **(A49690639 - Email Chain - Angela _ Penelope _ Terri – Bundle 27, Volume 10, page 346) (A34187812 – QUEH Oversight Board – QEUH IPC and Governance Subgroup meeting Presentation – 17 December 2020 – Bundle 27, Volume 10, page 172) (A34187812 – QEUH IPCG Sub Group.pptx Draft Presentation.pptx Version 9 – Bundle 27, Volume 10, page 174)**

15. Please discuss the proposed improvements to GGC IPC e.g. provide a summary of the proposals, the intention behind them, who was responsible for implementation, have the proposals been implemented, how effective have they been, what is outstanding?

A. This report describes an update to the IPC and Governance Subgroup of the QEUH Oversight Board. This report was not titled GGC IPC improvements but provides an outline of my approach to understanding the current system, listening to the current context and aspirations of the colleagues in the system, applying my experience in delivering the Interim Director of Infection Prevention and Control role. The update follows the discovery and immediate assessment of this new system including internal and external stakeholder experiences and the findings of a Strengths, Weaknesses, Opportunities and Threats (SWOT) and Political, Economic, Sociological, Technological, Legal, and Environmental. (PESTLE) analysis to guide the focus of my interim role. The update shares the key areas and actions designed to enable IPC colleagues to move forward from the current context. The report touches on the exceptional situation that GGC IPC and wider colleagues were facing at a level of intensity that I had never encountered so far in my career. The intentions of my approach were to immediately support all colleagues equally, through my additional capacity, stabilise and take some of the unacceptable challenge, scrutiny and continual judgement from colleagues to allow them to focus on their roles unhindered and with non-negotiable respect. Furthermore,

the intention was to create the conditions, working with GGC IPC colleagues and wider teams, to plan a future state that they would wish for their patients, services and fellow colleagues.

16. What can you tell us about the Action Plans for the Paediatric Intensive Care Unit (PICU) and Infection Prevention and Control (IPC) dated May 2020? e.g.

(a) What do the Action Plans involve?

A. The Action plan had several components. I have added below who was responsible for each action:

NHSGGC confirm the validation results for the singe bed wards in PICU.- D.Conner/H Brown.

NHSGGC Consider options for increasing the dilution ventilation rate in the transitional corridors. - D.Conner/A Gallagher.

NHSGGC should assess any risk to patients as a result of keeping the solution as is currently implemented.

NHSGGC undertake annual validation/verification checks on all ventilation systems within PICU as per SHTM 03-01 should be recorded and noted on the corporate risk register together with appropriate mitigations in place - A.Gallacher.

IPCT should continuously monitor alert organism in line with appendix 13 NIPCM within this area – S.Devine/J.Redfern. **(A42378956 - NIPCM - NHS NSS - Version last updated 4 October 2021 (contains references to a relaunch on 11 July 2022 and the copy being generated on 2 February 2023) - Bundle 27, Volume 4, page 165).**

(b) Who is responsible for implementing them?

A. Please see my response to question (a).

(c) Have the plans been implemented in full? If not, why not?

A. The Action Plan/improvement plan was fully implemented. The improvement plan was returned to ARHAI on 30/07/2021 by email response sent on 30/07/21 (**A50589594 - Email Chain from Sandra Devine to Laura Imrie and others re PICU Improvement Plan - 29 July 2021 - Bundle 27, Volume 14, Page 55**) as follows: "I will update Chief Nursing Officers Directorate that you have shared the improvement plan and that we are content this will address the recommendations". The completed action plan was issued to members of the Board Infection Control Committee in August 2021 and can be found at **(A49690064 - PICU SBAR IMP PLAN UPDATED 300721 FINAL (1) - Bundle 27, Volume 10, page 233)**.

(d) How have the plans advanced since 2020?

A. The plan was completed and actions in place and the routine surveillance reporting continues today.

(e) How effective have the plans been?

A. PICU is and continues to be a challenging environment due to the vulnerability and complexity of the patient cohort. Therefore, PICU continues to be a focus and robustly managed, supported and monitored.

(f) What work remains to be done regarding the Action Plans?

A. Please see my response to questions (d) and (e) above

<u>Queen Elizabeth University Hospital / NHS Greater Glasgow and Clyde Oversight Board</u>

Please see **(A34187835 – Email from Angela Wallace to Philip Raines re Oversight Report - 28 August 2020 - Bundle 14, Volume 3, page 243)**

17. What was your role in relation to the Oversight Board? e.g. Were you a member of the Board? Did you make recommendations? Were you involved in decision making?

A. Prior to my Interim Director of Infection Prevention Control role (DIPC), I was invited to be part of the patient/public experience subgroup. After taking up the post of DIPC I was asked to attend the IPC and Governance subgroup. I was not a formal member of the QEUH oversight board but was asked to attend as part of my new role. I did not make recommendations, nor was I involved in the Oversight Board decision making.

18. To whom did you report and how often?

A. I reported to NHS GGC CEO, I had access to the CEO when required and had regular check ins with her. I also initially met with Prof M. Bain until she demitted her GGC role. I informally checked in with CNO, and SG policy colleagues, with regular meetings with Lesley Shepherd (Professional Nurse Advisor HAI Policy Unit) to establish effective communication. I presented the HAIRT to the board every 2 months.

19. What form did the reporting take?

A. I had one to one meetings with the CEO, who made considerable time for me when required, on site and ad hoc by telephone or Microsoft teams. I attended the Strategic executive group (SEG), the NHS GGC pandemic gold command structures and presented the HAIRT to the board every 2 months, as explained above.

20. What was the intention of the reporting?

A. The reporting allowed me to have access to the CEO at every opportunity to share work progress and update her on progress with regards to the brief given to me upon taking up this interim role and any planned changes. She also sought to understand how I was on an individual pastoral basis given the 2 roles and the complexities facing both organisations.

21. To whom did you owe any duty of care/candour?

A. Although this role was appointed by SG in response to oversight via CNO, I reported to GGC CEO. It was crucial that I maintained an open and inclusive approach and both GGC CEO and the CNO expected that candour.

Greater Glasgow and Clyde Health Board

22. Did you attend any meetings of GGC Board?

A. From the onset of my appointment, I attended NHS GGC Board meeting to present HAIRT.

23. What was your role at the meetings?

A. My role was to present the HAIRT which is mandated by SG and which all Territorial Boards have to report from. This report **(A50590012 - South Glasgow Paediatrics Sector Report - 03 July 2020 - Bundle 27, Volume 14, page 78; A50589610 - IPC Sector Report - Clyde - July to August 2020 - Bundle 27 Volume 14, page 62)** demonstrates individual boards performance with respect to the Scottish government infection indicators. In addition this report contains other IPC activities ongoing across the board including summaries of incidents and outbreaks and the presentation provides assurance and opportunities for NHS board members to test the information contained within it. The NHS board is a public meeting.

Queen Elizabeth University Hospital / NHS Greater Glasgow and Clyde Oversight Board: Final Report (March 2021)

24. Were you involved in preparing the Interim Report or the Final Report of the Oversight Board? If so, what was your involvement?

A. No, I was not involved in this.

25. Have you read the Interim Report and/or Final Report of the Oversight Board and noted its local recommendations in respect of Infection Prevention and Control?

A. Yes.

26. Have you read the Interim Report and/or Final Report of the Oversight Board and noted its local recommendations in respect of Governance and Risk Management?

A. Yes.

27. Have you read the Interim Report and/or Final Report of the Oversight Board and noted its local recommendations in respect of Communications and Engagement?

A. Yes

28. What steps have been taken by GGC to implement each of separate recommendations of the 'Local Recommendations' of the Oversight Board, when they were taken and to what extent does the witness considers the implementation to have been effective?

A. As part of the response to the recommendations, a QEUH/RHC Advice, Assurance & Review Group (AARG) was created to oversee the implementation of corrective actions. The group consisted of senior and executive leadership from Scottish Government and NHS Greater Glasgow & Clyde and met regularly throughout 2021. Corrective actions and subsequent evidence gathering has been ongoing since. Positive communication from Scottish Government has been received in the form of the de-escalation of NHS Greater Glasgow and Clyde from Stage 4 of the NHS Scotland Performance Escalation Framework in 2022. As part of the process to complete the Local Recommendations, each action was assigned an executive lead, along with an operational lead to implement the actions. An audit system was implemented in 2022 and is still currently live in 2024. The executive lead is requested to submit supporting evidence for each action and a review process is undertaken. To support and ensure effectiveness of each implementation, a monitoring audit report is completed with details of the recommendation, actions taken, and changes made. Documentation and other supporting material are also included. A summary of the audited area is recorded and logged with the Chief Executive's business manager. To oversee the effectiveness of this work and as part of robust governance, the progress of the AARG was first reported to the NHSGGC Board in February 2021, with regular updates at board meetings up until 2023. This allowed Board members to scrutinise plans and expected outcomes for assurance that the process would be effective. As part of the Oversight Board Local

Recommendations, all actions were considered for implementation, with evidence available where appropriate. Many of the actions which have taken place have built upon current processes in a continually improving manner. This has included updates to various strategies and published information including the Assurance Framework, the Duty of Candour policy and strategies which focus on risk management and communication and engagement with staff and patients. Infection control structures have also been adjusted and benchmarked against national guidance. This work has been undertaken between 2021 and 2023 and all policies, guidance and SOPs which have been updated have been published and implemented in an effective manner.

29. Can you point us to documentation that confirms your position in respect of whether recommendations have been implemented?

A. All completed action templates and supporting evidence is stored on our dedicated SharePoint site: Oversight and Case Note Review - Action Plan. Oversight and Case Note Review - Action Plan - Documents - All Documents (sharepoint.com) **(A37370185 - ARGG - Master OB Action Plan - Bundle 27, Volume 14, Page 25)**.

30. What recommendations, if any, remain outstanding? If recommendations are outstanding, why?

A. All recommendations of the Oversight Board have now been completed, as of August 2024.

Queen Elizabeth University Hospital: Case Note Review

31. Have you read the Case Note Review and noted its recommendations?

A. Yes

32. What steps have been taken by GGC to implement each of separate recommendations of the Case Note Review, and to what extent do you consider the implementation to have been effective?

A. A range of actions have taken place in terms of the Case Notes Review and all recommendations have been considered for implementation, with supporting evidence, where appropriate. The recommendations of the Case Note Review are subject to the same scrutiny as outlined in the response to the Local Recommendations of the Oversight Board recommendations as outlined in question 27. An executive lead was assigned to each action, with an ongoing audit process in place to monitor progress and changes made. The NHSGGC Board were regularly updated on progress with the opportunity to scrutinise progress for assurance that the actions would be effective. Many of the completed actions have focused on developing current systems as part of regular continuous improvements efforts. This has included enhancements to IT and recording systems, process reviews for some clinical procedures and the expansion of infection control information gathering including audits and benchmarking.

33. Can you point us to documentation that confirms your position in respect of whether recommendations have been implemented?

A. All completed action templates and supporting evidence is stored on our dedicated SharePoint site: Oversight and Case Note Review - Action Plan. Oversight and Case Note Review - Action Plan - Documents - All Documents (sharepoint.com) **(A37370185 - ARGG - Master OB Action Plan - Bundle 27, Volume 14, Page 25)**.

34. What recommendations, if any, remain outstanding? If recommendations are outstanding, why?

A. I refer you to the sharepoint in the above question. As far as I am aware all actions are now complete.

<u>Queen Elizabeth University Hospital Independent Review (June 2020)</u>

35. Have you read the Independent Review and noted its recommendations?

A. Yes

36. What was done to implement the recommendations of the Independent Review?

A. A range of actions have taken place in terms of the Independent Review and all recommendations have been considered for implementation, with supporting evidence, where appropriate. The recommendations of the Case Note Review are subject to the same scrutiny as outlined in the response to the Local Recommendations of the Oversight Board recommendations as outlined in question 27. An executive lead was assigned to each action, with an ongoing audit process in place to monitor progress and changes made. The NHSGGC Board were regularly updated on progress with the opportunity to scrutinise progress for assurance that the actions would be effective.

37. Who led on the implementation?

A. The CEO designed the approach to implementation with a programmed approach to delivering the actions and to achieve timescales. The then Acute services Chief Operating Officer (COO) J. Best presented progress at the Gold Command Better Every day that I attended.

38. What was your involvement in implementation?

A. I was involved in ownership of some areas of action and as part of the oversight internally in GGC, then externally reporting as part of my attendance at the SG Oversight Board.

39. At the BICC on 5 October 2020, please see **(A32812773 - Minutes BICC Meeting – 5 October 2020 - Para 98 - Bundle 13, page 468)** you said there was an Action Plan and a fortnightly meeting to look at the recommendations.

(a) Who attended the fortnightly meetings?

A. I was referring to the Gold Command Better Everyday meetings which were scheduled and Chaired by the CEO, with membership from Acute services COO, Director of Facilities and Estates, Director of South Sector, Interim Director of IPC, Infection Control Manager, Deputy Director of Nursing Acute and Other South Sector Clinical Leaders, Director of Communication and

Public Engagement. Progress against the 3 external reports, including the case note review were shared at these meetings that I attended.

(b) What actions were agreed on?

A. Please refer to Action Plan found at answer to Question (30).

(c) What action was taken?

A. Please refer to documents found at answer to Question (31)

(d) What, if anything, remains outstanding?

A. Please refer to answer to Question (32), in addition the focus of this work continued and became Business as Usual (BAU) following de-escalation from SG NHS Scotland Performance Management Framework.

40. Can you point us to documentation that confirms your position in respect of whether recommendations have been implemented.

A. All completed action templates and supporting evidence is stored on our dedicated SharePoint site: Oversight and Case Note Review - Action Plan. Oversight and Case Note Review - Action Plan - Documents - All Documents (sharepoint.com) **(A37370185 - ARGG - Master OB Action Plan - Bundle 27, Volume 14, Page 25)**, I also refer you to RFI 4.

41. What recommendations, if any, remain outstanding? If recommendations are outstanding, why?

A. I refer you to the SharePoint in my response above, as far as I am aware there are no actions outstanding.

Infection Control in General

42. What is your understanding of what Hospital Acquired Infection is? In your view, what is the distinction, if any, between Hospital Acquired Infection and Healthcare Associated Infection?

A. I refer you to the definition from ARHAI Point prevalence survey the onset of infection must have occurred within one of the following time frames; day 3 of current admission onwards (if day of admission is Day 1); present on

admission (or presenting on day 1 or 2) in patients discharged from hospital (acute or non-acute) in previous 2 days; surgical site infection present on admission (or presenting on day 1 or 2); Clostridium difficile infection (CDI) present on admission (or presenting on day 1 or 2) in patients discharged from hospital (acute or non-acute) in previous 28 days; device-associated infection (pneumonia, urinary tract infection (UTI), bloodstream infection (BSI)) following insertion of device (including day 1 or 2 of admission).

43. To what extent is infection, whether endogenous or arising from the environment (in or out of hospital), always a risk for certain sorts of patient? Is there a limit to what can be done to prevent this? Are there certain sorts of infection that can be expected to arise no matter the level of care taken in relation to IPC/hygiene?

A. As long as patient main defences against infection are compromised due to treatments e.g. chemotherapy antibiotics, steroids, operative procedures, or the use of invasive devices we will continue to have healthcare associated infections. However, we continue to focus unrelentingly on how we can prevent avoidable healthcare associated infections. However, I note that this is a specialist area and I am not a Infection Control Specialist.

Concerns about infection

44. Do you have any specific concerns about amounts, locations, clusters, or types of infection within the hospital from the time of its opening to date?

A. At the time of the hospitals opening I was not yet in post therefore cannot comment on infections within the hospital at this time. I instead refer you to the NHSGGC Positioning paper from April 2023 **(A43708013 - NHS GGC Positioning Paper on Infection, including Appendix 1 - Summary of Patient Safety Indicators by Sandra Devine - 05 April 2023 - Bundle 25, page 345)** and the ARHAI 2019 report **(See A49689613 - HPS Report - Review-of-nhsggc-paediatric-haematooncologydata - Bundle 27, Volume 10, page 350)**.

45. To what extent does the infection experience observed by you differ from what might have been expected by you before the hospital opened?

A. I only came into this unique role in 2020 so I am reliant on the reports commissioned by the Scottish Government specifically in relation to that context e.g. ARHAI 2019 Blood Stream infections **(See A49689613 - HPS Report - Review-of-nhsggc-paediatric-haematooncologydata - Bundle 27, Volume 10, page 350)**. I cannot speculate but would rely on reports from colleagues.

46. Do you have any concerns, or are you aware of any concerns, that patients either have been, or are at, increased risk of infection from exposure to pathogens via the water supply, drainage, or ventilation system?

A. I was not in post at the time therefore I refer you to the NHSGGC Position paper from April 2023. As stated in section C on taking up the role of interim director of IPC I undertook an independent review of how the IPC systems were working. While I am not an IPC specialist, I am a senior leader and directors in NHS Scotland who has been working at board and assurance level for years. As indicated in my answers to specific incidents within my time in the post I had oversight and close contact as the IPCT led and managed these incidents with their fellow clinicians. From the outset of my time working with NHSGGC and continuing today my colleagues at all levels are extremely aware that the environment could be a source. I believe that there is a heightened awareness, but this is in the context of a rigorous process whereby each and all hypotheses are tested to ensure appropriate actions are taken and that there is oversight in terms of reporting and actions taken for assurance. The performance of GGC as a system is demonstrated in the performance indicators in the HAIRT which shows an improving picture in recent times, and this is within the context of caring for some of the most vulnerable groups in healthcare.

During my time in post, which included the global pandemic, I have the opportunity to view many and varied reports from different sources and apart from the two cases documented from 2016 and 2019 I do not believe that the environment in QEUH/RHC poses an increased risk to patients. As I have

indicated throughout my statement this is a dynamic system and we continue to ensure that IPC is a key priority and that we continue to respond to any incidents or events and learn from these and create an ambitious agenda for IPC in NHSGGC.

Infection Control at QEUH/RHC

47. On taking up your role, how was infection within the QEUH/RHC:

(a) Monitored

A. Since 2012 an electronic patient management system (ICNet) has been used in NHSGGC. This system links information from hospital systems, e.g. Virology including Lighthouse labs, microbiology, theatres and TrakCare. This ensures that results are received in real time (every 15 minutes) by the teams who in turn can act upon this promptly. A full record of the patients' diagnosis and management is included in the system which facilitates documentation audit. The system allows IPCT SMT to view the records of any patient referred via this system in any hospital across the board. ICNet (IPC surveillance software) links directly with the NHSGGC Microbiology & Virology labs.

All patients with alert organisms or conditions (AO/AC) are referred to the Infection prevention and Control Teams directly from the laboratories. These AO/AC are generally microorganisms/infections which could potentially cause harm to others, e.g. Tuberculosis, meningitis or that have the potential to be a risk to the wider public health, e.g. multi-resistant organisms (MRSA). They are referred specifically, so that additional precautions can be implemented (Transmission Based Precautions).

Patients with AO/AC are visited by an infection prevention and control nurse, who explains the condition and the precautions necessary to prevent spread, e.g. the requirement for isolation. Ward staff are given care plans or check list with the precautions required to prevent spread and they are asked to review this daily.

Triggers are in place and again are an automated process defined by ICDs but are normally two cases of the same organism in the same place in a defined timescale. This ‘triggers’ an additional review.

Statistical Process Control Charts are also used for some types of infections and this demonstrates trends over time.

(b) Investigated

A. NHS Greater Glasgow and Clyde has an Incident Management Process Framework which describes in more detail how incidents and outbreaks are managed within hospitals in GGC. This framework is informed by the following documents:
Chapter 3 HPS National Infection Prevention and Control Manual http://www.nipcm.hps.scot.nhs.uk/chapter-3-healthcare-infection-incidents-outbreaks-and-data-exceedance/Management of Public Health Incidents: Guidance on the Roles and Responsibilities of NHS Led Incident Management Teams. **(A42378956 – National National Infection Prevention and Control Manual - NIPCM - NHS NSS - Version last updated 4 October 2021 (contains references to a relaunch on 11 July 2022 and the copy being generated on 2 February 2023) Bundle 27, Volume 4, page 165)**

Scottish Health Protection Network. Scottish Guidance No12.1 (2020 edition **(A32812772 - Management of Public Health Incidents: Guidance on the Roles and Responsibilities of NHS Led IMTs SHPN – Scottish Guidance No 12.1 Interim update 2020 – Bundle 27, Volume 14, page 88)**

(c) Reacted to

A. Actions plans are included where appropriate in the papers for the IMT minutes. Actions taken are included in the Hot Debrief tool which is circulated to the IPC governance groups if the chair of the IMT has indicated that this is required. There may be occasions when this may not be done, e.g. during COVID when the actions and lessons were in the main the same over multiple IMT process.

(d) Reported, both internally and externally?

A. The Healthcare Associated Infection Reporting Template is a national reporting tool and is a Scottish Government (SG) template. Currently it goes as a full report to the AICC, PICSG, BICC, Board Clinical Governance Forum (BCGF) and the Clinical and Care Governance Committee (CCGC). A Summary of the Healthcare Associated Infection Reporting Template goes to the NHS GGC Board Meeting. The Healthcare Associated Infection Reporting Template includes a summary of any incidents which score red or amber using the Healthcare Infection Incident Assessment. There is a weekly report which is issued to the Board Executive Directors and the Service Directors. This is a contemporaneous report and includes information on current incidents or outbreaks (amber and red). All incidents/outbreak are reported to HPS via an online reporting template regardless of the HIIAT assessment.

48. What were your views on the effectiveness of the processes in place?

A. I reviewed NHS GGC processes as part of on boarding, moreover within 5 weeks we were in a global pandemic. I observed closely NHS GGC responding to the impact of Covid-19 across almost 500 wards therefore seeing the system respond at scale. Performance against the national infection targets were strong and improving across NHS GGC and sitting well against the performance of the other Health Boards across Scotland and this continues to improve. This performance, the response to incidents and the delivery progress against the objectives within the IPC annual plan was monitored through the Board Infection Control Committee (BICC) Care and Clinical Governance and onward to the NHS Board via the HAIRT.

49. Did you have any general concerns about the accuracy of reporting?

A. I did not have concerns about the accuracy of the reporting but do acknowledge that this is a large and complex board.

50. Did you have concerns about accuracy of reporting after allegations of inaccuracy were raised with you?

A. It is correct to say that the April HAIRT had reported two cases. This reflected a point in time as this was an ongoing process with IMT in place at the time. There was reporting to ARHAI onward to Scottish Government.

51. Please see **(A46157883 – Email chain from C Peters to J Copeland - LW Enterobacter aerogenes - 28 April 2020 to 02 June 2020 – Bundle 14, Volume 3, page 75).** Dr Peters contacted you on 5 May 2020 to highlight an inaccuracy in reporting an ongoing Enterobacter outbreak in the ITU to the Board as involving two patients when three patients had died and a fourth was very unwell.

A. It is correct to say that the April HAIRT reported two cases. This was an ongoing process with IMT in place and reporting to ARHAI onward to Scottish government. Queen Elizabeth University Hospital- Critical Care Unit (ITU COVID HUB). Two patients with Enterobacter aerogenes isolated from blood cultures in a two day period. HIIAT asses as amber on 17/04/20 then as green on the 20/04/2020.Two patients both Covid-19 positive were nursed in CCU in QEUH and had positive blood cultures with Enterobacter aerogenes within 48 hours of each other. One patient sadly passed away. Enterobacter was not listed as either a primary or contributory factor in this patient's death. Both isolates will be sent for typing when the national reference laboratory resumes service. This incident was assessed as green on 20/04 and closed however one of the actions was to monitor the unit for a further 14 days from the last case on the 12/4. On the 29/4 two new cases were reported to IPCT, the incident was assessed again and scored AMBER, ARHAI and Scottish Government were updated accordingly on the 30/4. There was an IMT on 7/5 where the incident was scored as GREEN and closed. In the May HAIRT there was an update on this incident as cases were occurring at the end of April into May after the first incident had been closed then re-opened (there had been no new cases for 14 days). The May update in the HAIRT as follows: Update – QEUH: ITU Enterobacter aerogenes – Four cases of HAI Enterobacter aerogenes were identified in ITU in QEUH. Two patients had the organism isolated from blood cultures the other two cases were from a line tip and/or a sputum, HIIAT identified. Two patients sadly passed away and Enterobacter did not contribute to this; the other two patients recovered.

Typing confirmed that all were the same type. An IMT met and actions were put in place. There have been no new cases since the 29th of April. **(A32812772 – HAIRT – FINAL – May 2020 – Bundle 27, Volume 14, page 214)**

This demonstrates that the local team were aware of the issues and already following due process, this was not prompted by these communications from Dr C.Peters but was already in place.

52. Please see **(A46157886 - Email from C Peters to A Wallace and others re IPC Sector Reports CONFIDENTIAL - 18 September 2020 - Bundle 14, Volume 3, page 277)**. Dr Peters wrote to you in confidence regarding concerns that the IPC Sector Report was not fully reflective of the current situation at QEUH/RHC.

A. This email was sent to me several months after the event along with the conclusions of the IMT process. Given the level of concerns from some colleagues I had ensured that ARHAI colleagues were in attendance and fully supported the process, which I had been briefed on. The sector report referred to was from 3rd of July 2020 when this process was ongoing. **(A50590012 – South Glasgow Paediatrics Sector Report – 03 July 2020 – Bundle 27, Volume 14, page 78).** The IMT was held on the 2nd of July so the sector report should be viewed in that context. **(A41890578 – 02.07.2020 – IMT Minutes Ward 6A – Bundle 1, page 431).** Again, given the level of interest and questions being raised I ensured that Dr Peters was invited to the IMT, but she was not able to attend.

The Sector report stated;
'IMT 02.07.20" HPS in attendance.
HIIORT sent to HPS.
Weak positive Cryptococcus result isolated from plasma.
CSF Cryptococcus antigen reported as negative (29/6).

Samples have been sent to Bristol Mycology reference lab for further testing.

The Family have been informed of result by clinical staff.

Clinical team will provide an update for the ward staff. Plant rooms will be inspected by microbiologist.

There is no change to current antifungal prophylaxis regime, IMT will reconvene when results from Bristol are available.

This was an accurate report of the position after the IMT had met with further investigation by the Reference laboratory required. On 7/7 the clinical expert from the reference lab was that “I do not think based on this evidence that full scale look for environmental sources is warranted at this stage. I cannot be definitive that these represent false positives although it is likely and they are less than proof of infection” **(A48304896 - Email re lab results - 13 July 2020 - Bundle 20, Document 98, page 2094)**. This was not evidence of inaccurate reporting. It was a summary based on the findings of the IMT. It would not be normal practice to list all microbiology reporting during incidents in what is a weekend handover document. With regard to the information to parents Dr Sastry’s was also included into the papers as was Dr Peters. Dr Sastry asked that his comments should be inserted into the minute even though he was not in attendance and this was done. ARHAI were sent the final conclusion of the IMT. The chair Professor Leonard approved the minute was a true reflection of the discussion held at the meeting. ARHAI colleagues were also included in this circulation and would have had oversight.

53. Please see **(A46157881 - Email chain from A Wallace to C Peters - IPC Sector Reports - 03 July 2020 to 06 July 2020 - Bundle 14, Volume 3, page 179)**, regarding an allegation that IMT minutes were inaccurate. Also at paragraphs 110 and 111.

A. Please see my response to the previous question (B).

54. What steps did you take to understand the issues of inaccuracy raised, and what did you understand the issues to be? What action was taken, if any, was taken in relation to the issues? How effective was the action?

A. I understood that Dr Peters did not agree with the contents of the minutes and conclusions of the IMT, however, as previously stated I was determined to ensure I could have the benefit of all colleagues input. Therefore, I wanted to ensure that Dr Peters had the opportunity to attend the IMT but as previously shared she was unable to. I was not in attendance but can confirm that IMT process is a multidisciplinary independent process which is documented. These are all agreed by the team managing the incident. It would be inappropriate for me to try and influence this process however I can ensure that the correct representation is included and I was satisfied that this was the case.

55. What did you do to find out, and understand, the challenges being faced by the IPCT?

A. In my role as Interim Director of Infection Prevention and Control I spent time with and was in constant contact with the Infection Control Manger, given the part time basis of my role I used the 2-3 long days a week to be present in GGC and at other times I was in contact via Microsoft teams and telephone calls. I spent significant time understanding the details of the situation and confirming the approach. These conversations were often followed up in writing and through written briefs that the IPC team would furnish me with. I also refer you to the discovery process of the 5 stage OD plan **(See A49690612 - GGC Discovery Presentation - Bundle 27, Volume 10, page 235)** which captured the significant challenges faced to support all colleagues.

56. Did you discuss the challenges with staff and IPCT? What form did the discussions take?

A. See the answer to question (50) and in addition I also had regular meetings, and was involved in different workstreams e.g Silver Command, BICC and IMT'S.

57. What did you learn from the discussions?

A. I learned that it was a complex case that required intervention from the multi-disciplinary team and external experts.

58. What do you think had been learned from the infection and bacteraemia outbreaks?

A. That reporting was robust and there was learning for all of Scotland.

59. How was the learning, if any, put into practice? By whom?

A. An action plan was created by ARHAI and they are still developing systems regarding surveillance of Gram Neg Environmental organisms.

60. What measures were put in place?

A. Additional systems that are not in place anywhere else in Scotland are used in the PICU, NICU and Ward 2A. These were based on ARHAI data methods applied to 2A.

61. Did the measures achieve what it was hoped they would achieve?

A. The aim for the measures is always reduction.

The Water Supply in General

62. With reference to dates and locations within QEUH/RHC, please answer the following: What concerns do you have about the water supply since January 2015?

A. I was not in post in the period before 2020, however since my appointment to NHSGGC I was aware that there was a constant focus on understanding the historic and current water system in QEUH and RHC. Please refer to the NHSGGC position paper from the 5th of April 2023 **(A43708013 – NHS GGC Positioning Paper on Infection, including Appendix 1 - Summary of Patient Safety Indicators by Sandra Devine - 05 April 2023 - Bundle 25, page 345)**

(a) Were you aware of concerns, and did you have your own concerns? What were they?

A. I was aware of the concerns and because of this ensured that in the IPC decision making it was always a key point for consideration. However, the corollary was also a concern as the environment, including water often became contentious with a reliance on expert opinions.

(b) How did the concerns manifest and what promoted them: e.g. instructions not to drink water, closure of rooms, investigations, use of filters etc?

A. I was not in the post at the time when the concerns were initially raised however my understanding since I have come into post is that there were reasonable mitigations in place.

(c) What were the suggested causes?

A. I was not in post at the time, therefore please refer to the ARHAI water report. **(See A49689762 - Nov 2018 HPS GGC final water report for SG - Bundle 27, Volume 10, page 278)**

(d) Were you provided with results of tests on the water and drainage? In what capacity?

A. I was not in post at the time, but my understanding was that these results were in the remit of the Board Water Safety Group and Water Technical Group.

63. Impacts from concerns with the water supply:

(a) Do you consider there to have been a risk of infection from the water supply? If so, explain.

A. Water is not sterile so will always require controls; however, I was not in post at this time so cannot comment on these specific concerns. I refer you to the NHSGGC position paper from 5th April 2023. **(See A43708013 - NHS GGC Positioning Paper on Infection, including Appendix 1 - Summary of Patient Safety Indicators by Sandra Devine - 05 April 2023 - Bundle 25, page 345)**

(b) Were there other impacts: e.g. closure of facilities, transfers of patients, restrictions in ability to wash?

A. I was not in post at this time therefore I am unable to comment.

(c) Can you comment on the suggestion from some witnesses that there was greater use of source isolation at times?

A. I was not in post at this time therefore I am unable to comment.

(d) Was there any change in the approach to hygiene and cleaning: e.g. use of deep cleaning?

A. We are always reviewing new technologies we currently use HPV but this is not supported by ARHAI.

(e) Were rooms closed and/or was access to the ward restricted? Where? When?

A. I was not in post at the time therefore cannot comment on the measures put in place.

(f) Did patients require to be admitted or decanted to other wards; did this mean that treatment protocols and facilities would vary from what patients ought to have received?

A. I was not in post at the time therefore cannot comment on the measures put in place.

(g) What were the impacts on staff and on patients overall?

A. I was not in post at this time, however since coming into post and hearing patients, families and colleagues experiences I am aware that there were concerns raised by all.

64. Remedial measures:

(a) Are you aware of remedial measures being taken: e.g. room closure and cleaning; ward closure; investigative and remedial works? What were these and when were they taken?

A. I was not in post at this time therefore not aware of the remedial actions taken.

(b) What is your understanding of whether any issues with the water system (including drainage) have been resolved; are you satisfied with this or do you still have concerns?

A. I was not in post at this time, although since taking up post my understanding is that Chlorine Dioxide plan was in place and point of use filters although there is a process to remove these.

The Ventilation System

65. With reference to dates and locations within QEUH/RHC, please answer the following: What concerns do you have about the ventilation system since January 2015:

(a) Were you aware of concerns, and did you have your own concerns? What were they?

A. I was not in post until 2020, I do not have the expertise to answer questions re ventilation.

(b) How did the concerns manifest/what promoted them: e.g. closure of rooms, investigations, use of mobile HEPA filters etc?

A. I was not in post at this time therefore please refer to IMT Minutes regarding the Cryptococcus cases in 2019.

(c) What were the suggested causes?

A. Please refer to my above responses to question (A) and (B)

66. Were you aware of any particular features of the ventilation system as follows, in particular wards? If so, when and how did you become aware, and in which wards were the features?

(a) Presence of HEPA Filters

A. I was not in post at the time but I am now aware that additional mobile HEPA filters were deployed and that in wards 6A, 4c and 4b HEPA filters were installed in the en-suite shower rooms from IMT.

(b) Air Changes Per Hour (ACH)

A. I was not in post at this time but I understand that the ACH are 2.5 but should be 6.

(c) Air Pressure Differentials

A. I do not have the professional expertise to comment on vents.

(d) Air pressure monitoring systems

A. I do not have the professional expertise to comment on vents.

(e) Ward temperature issues

A. I was not aware of ward temperature issues.

(f) Room ceilings, particularly in isolation rooms

A. I was not in post at the time that this was an issue.

(g) Rooms seals for pressure retention

A. I was not in post at the time of this issue.

(h) PPVL issues with rooms

A. I was not in post at the time of this issue.

(i) Thermal wheels

A. I was not in post at the time of this issue.

(j) The use of chilled beams in general

A. I was not in post at the time of this issue.

(k) Chilled beams, usage in rooms designed for immunocompromised patients and leakage.

A. I was not in post at the time of this issue.

(l) Any other particular features.

A. I was not in post at time of this issue.

67. Was there ever a time when you could not find out the particular features of a room or ward in the hospital that you needed to understand as part of your duties?

A. No, if I had an issue I could reference Prof Tom Steele as an expert.

68. Impacts from concerns with the ventilation system:

(a) Do you consider there to have been a risk of infection from the ventilation system? If so, please explain.

A. I do not have the professional expertise to comment on ventilation, please refer to the experts.

(b) Were there other impacts caused by the ventilation system: e.g. closure of facilities, transfer of patients?

A. I was not in post at the time therefore, please refer to IMT mins for full details.

(c) Can you comment on the suggestion from some witnesses that there was greater use of source isolation at times?

A. No, isolation is used at the point of need/assessment.

(d) Was there any change in the approach to hygiene and cleaning: e.g. use of deep cleaning?

A. I was not in post at the time, but I am now aware from IMT mins that there was a Deep cleaning standard practice using HPV but there is limited evidence to support the use of this.

(e) Were rooms closed and/or was access to the ward restricted? Where? When?

A. I was not at post at the time, therefore I am unaware which wards were closed and when.

(f) Did patients require to be admitted or decanted to other wards; did this mean that treatment protocols and facilities would vary from what patients ought to have received?

A. I was not in post at the time, therefore unable to comment on this.

(g) What were the impacts on staff and on patients overall?

A. I was not in post at the time, however since taking up my role I have become aware that throughout this time there were many concerns raised by patients and staff.

69. Remedial measures:

(a) Are you aware of remedial measures being taken: e.g. room closure and cleaning; ward closure; investigative and remedial works? What were these and when were they taken into?

A. I was not in the post at the time when this occurred, therefore I had no involvement in remedial measures.

70. What is your understanding of whether any issues with the ventilation system have been resolved; are you satisfied with this or do you still have concerns?

A. I was involved in the risk assessment process in support and approval to re-open Ward 2AB in March 2022. This decision involved a range of internal and external colleagues including with full support from ARHAI and NHS Assure.

Healthcare Associated Infection Reporting Template (HAIRT)

71. Please explain your involvement with HAIRT in your role as Interim Operational Director for IPC e.g. completion, reporting.

A. As part of the work on taking up post working with the ICM we refreshed our approach to the HAIRT benchmarking with other NHS Boards approaches and responding to our current context. This report is developed by the IPCT with the ICM leading and drawing the information together for the report in preparation for its onward travel through key governance groups to the NHS Board every 2 months thus at every Board meeting.

Incident Management Team from 2020

72. Please describe the culture at IMTs on your taking up your role, and any developments from 2020.

A. I found the IMTs well attended by IPC and the appropriate multi-disciplinary clinical leaders from the area required, as well as by senior manager colleagues from the service that they were responsible for, communications team members and any other corporate functions required such as Occupational Health as an example. It was a respectful, challenging space to ensure the correct actions were taken whilst understanding the impacts of the incident on the safe flow of patients across the system. In addition, I always where appropriate included ARHAI colleagues to further provide challenge and participate in the IMT process.

73. What happened when there was a difference of opinion amongst the IMT? Was there a process in place? How effective was the process, if any?

A. I refer you to the Greater Glasgow and Clyde Outbreak and Incident Management Plan which includes the following section: “Should any member

of the IMT be unhappy with the way the team is functioning, they are encouraged to raise this with the group or with the IMT chair in private. If their concerns cannot be resolved satisfactorily they are free to raise them with their senior manager who in turn can raise it with the chief executive of their agency. That chief executive has the option of raising it with the chief executive of the NHS Board leading the investigation who will ultimately bring it to the attention of the chair via their DPH, involving the relevant counterparts of any other agency involved in the dispute. The lead officer for the NHS Board is responsible for resolving these issues, preferably within the framework of the multi-agency IMT. **(A42362014 - Greater Glasgow and Clyde Outbreak and Incident Management Plan - February 2020 - Bundle 27, Volume 9, page 103)**

74. Where there was a difference of opinion, did NHS GGC consider instructing e.g. external peer review or a round table discussion including experts? If not, why not?

A. My understanding is that this was considered prior to me taking up post, around the time of the change of chair in the long running IMT, by the water technical group which was in place and had external experts on it, it was decided it was not required. In my time in post and with the continued challenge from some microbiology colleagues internally and playing out externally often to a colleague within SG policy group I considered a further process of a space to foster such an approach. After careful consideration and the potential impacts on the IPCT that I was supporting and who were responding extremely well my assessment was that this would undermine many colleagues and my overarching approach was to continue to improve patient care and experience and support all colleagues where I could equally.

75. What is the process and what steps are taken to end an IMT?

A. There is a multi-disciplinary process red. Actions are agreed and in place and HIAT is deescalated.

76. How do you decide that an incident is over?

A. There is a multidisciplinary decision control in place, with no new patients.

77. How do you assess that there is no longer a significant risk to public health?

A. We are advised by IMT.

78. What circumstances would merit a public statement or statement to interested parties, when an incident is over?

A. Ongoing communications as part of an agenda of the IMT and public statement is considered at every meeting, I also refer to NHS GGC Stakeholder Communication & engagement strategy found at **(A49689996 - nhsggc_board_stakeholder-comms-engagementstrategy – Bundle 27, Volume 10, page 300)**.

79. What, if any, documentation is prepared as a result of the IMT process?

A. There is a HOT (rapid) debrief for shared learning which is included on the BICC agenda for completeness. There is also an option for a full outbreak report, which is included in the incident section of the HAIRT.

80. What, if any, report is prepared as a result of the IMT process?

A. Please see answer to Question 72.

81. Who would prepare the report?

A. The chair of IMT would prepare the report.

82. What process is used to summarise the conclusions, results and lessons learned of each IMT?

A. HOT debrief and this is included in the ARHAI template.

83. What, if any, de-brief meetings take place at the end of the IMT process?

A. Please see my response to question 77 above.

84. How soon after an incident is over should a de-brief meeting take place?

A. A de-briefing should take place as soon as possible after an incident is over, but service pressures must be considered.

85. How do you evaluate how effective the IMT has been for a specific incident?

A. There is no standard methodology to do this however the chair of the IMT especially if there is an indication that there are lessons to be learned across the board will complete a hot debrief document which is shared with the IPCT governance groups and members of the IMT. In addition to this the hot debriefs are now reviewed each year with a thematic analysis completed to identify and actions that require to be taken forward in a more formal process. This year two areas were identified as requiring further exploration; a) assessment on admission for symptoms which may indicate that infection is present b) methods to support the cleaning of near patient equipment. Both of these workstreams are being progressed by the IPC Quality Improvement Network.

86. Who are reports shared with? How is the report communicated within the NHS?

A. The reports follow the NHS Board Governance route: HAIRT to BICC, AICC, PICSS, CCGG, BCCF, NHS BOARD and HOT debriefs to AICC, BICC, PICSG

87. Who, within the organisation is responsible for endorsing the conclusions of the IMT report?

A. Please see answer to Question 79 which demonstrates the governance routes and meetings where the conclusions of the IMT are presented, therefore who endorsed the conclusions of the IMT.

88. What steps are taken by the NHS following the report prepared by the IMT?

A. The report is shared with the Governance Groups that are in place and all incidents are reported to ARHAI for sharing and learning nationally.

89. Who is responsible for preparing any action plan based on the IMT report?

A. The chair is responsible, but this is normally part of the IMT process.

IMT - Gram Negative Bacteraemia in Ward 6A - 16 April 2020

Please see **(A41890585 - 16.04.2020 - IMT minutes Gram Negative Blood Ward 6A - Bundle 1, page 428).**

90. What was your understanding of the issues faced by Ward 6A, which resulted in setting up the IMT?

A. My understanding is that there were two patients with gram bacteraemia within a 2-week period. Both with different organisms i.e. Klebsiella pneumoniae, Enterobacter cloacae. One was healthcare associated and the other was to be hospital acquired.

91. What was your role at the IMT?

A. The IMT as previously stated is an independent process, but I would have received updates at the time and then ensured that this was reported within established governance frameworks. This was HIAT amber so would have required to be included in the HAIRT. This was reported on the 9th of April to ARHAI and the report to ARHAI was updated on the 16th April after the IMT. May 2020 HAIRT report **(A32812772 - HAIRT - FINAL - May 2020 - Bundle 27, Volume 14, Page 193)** noted: Royal Hospital for Children: Ward 6A (QEUH) Paediatric haemato-oncology. Two cases of bacteraemia. HIIAT assessed as Amber 09/04/20 the GREEN on 16/04/20. Two gram negative bacteraemia were reported in a two week period. One was considered to be hospital acquired and the other healthcare associated. As per agreed triggers, an IMT was convened to review the cases. Two different organisms were identified neither of which are considered to be environmental organisms. A number of actions were put in place and the cases were reported as per chapter 3 of the National Infection Prevention and Control Manual to Health Protection Scotland and the Scottish Government. Both Patients were discharged home well and here have been no further cases.

92. When and how did you first learn of the issue of Gram-negative bacteraemia in Ward 6A?

A. I was made aware in a discussion with the ICM. Following this discussion the ICM reached out to SG colleague in the HAI policy unit and I was included by

cc, into an email to colleagues in SG from S Devine on 9 April **(A49966691 - Email from S Devine to A Wallace - Gram Negative Bacteraemia - Ward 6A - Attaching "April 09.04.20", "GNB Timeline Jan - Mar - Arpil2020 (2)", "HIIORT 09.04.20" and "updated-2020_04_09_SPC charts_GNBC_Paed haem-onc" - 09 April 2020 - Bundle 27, Volume 14, Page 4)**. This email included the following:

'Hi Lesley sorry I tried to give you a bell but will try again a while. We had a gram negative bacteraemia reported last night in 6A and this was the second in 2 weeks so triggers an IMT today. I have attached the HIIORT. Updated SPC, enhanced supervision report and time line. The minutes of the IMT will be available on Tuesday. Al was the chair. I'm happy to report to any questions re the situation or information I have sent to you. Both of the children are stable and not giving cause for concern. HIIORT sent to HPS and I have spoken to Susie."

93. What steps did you take to understand the event and what actions were taken?

A. I had multiple discussions with my ICM colleague in relation to this incident and in addition attached to the email above I received a copy of the HIIORT, with the timeline of cases and the results of the enhance supervision audit. The HIIORT included actions taken and proposed by IPCT. **(A40066691 – HIORT 09.04.20 - Bundle 27, Volume 14, Page 8)**

These actions included:

Actions Completed:
Enhanced supervision visit carried out 09.04.20,

Hand Hygiene audit carried out 09.04.20

Route cause analysis has been carried out for both cases,

Parents of both cases have been advised of GNB by clinical staff.

Actions Planned;

Line audit will be carried out by RHC nurse educator

Professor Leonard will check antibiograms for any patterns,

Typing will not be carried out due to suspension of typing by PHE due to COVID,

holding press statement will be prepared,

IMT planned for Thursday 16th April.

94. What were the hypotheses around the source of the issue?

A. The hypothesis was that this was a line related infection.

95. What did you understand was happening with the issue/event?

A. Actions planned as per Question 88.

96. What steps did you take or order to have taken and why?

A. Actions were consistent with what I would have expected.

97. Did these steps achieve what you hoped they would?

A. There were no further cases after the actions were completed.

98. Was this something you would expect to find in a new hospital?

A. There are always risk factors for bacteraemia in immunocompromised patients including the use of steroids and invasive devices. This could have occurred in any hospital and does in my experience. Klebsielle pneumoniae, Enterobacter Cloacae are considered to be organisms that colonise the gut. The use of filters on outlets and regular water testing were in place.

99. A patient's family had suggested the patient's infection was linked to water. At the IMT, it is noted that the family are to be informed that the infection is not water related, how did the IMT come to the conclusion that the infection was not water related?

A. The IMT considered this as NHS GGC had two years of environmental samples (including water and drains) which were reviewed. None had isolated K.pneumonaie one sample from the kitchen on 27/09/29 had been positive for Enterobacter Cloacae, which had been approx. 7 months previously. It was

shared that children did not have access to the kitchen and this child was still in nappies.

100. Knowing what you now know, are you comfortable you did all that could be done?

A. There is always learning but in that context I would say yes.

IMT - Serratia marcescens and Gram-negative bacteraemia in NICU from 2020

Please see
(A41890585 - 16.04.2020 - IMT minutes Serratia marcescens NICU - Bundle 1, page 428)
(A41890046 - 24.05.2021 - IMT minutes Serratia marcescens NICU - Bundle 1, page 474)
(A41890054 - 02.06.2021 - IMT Minutes Serratia marcescens NICU - Bundle 1, page 487)
(A41890053 - 10.06.2021 - IMT minutes Serratia marcescens and Gram Negative Blood RHC NICU - Bundle 1, page 501)

101. What was your understanding of the issues faced by NICU, which resulted in setting up the IMT?

A. The first IMT in relation to this incident was held on the 30th April 2021 discuss a cluster of Serratia marcescens colonisation and blood cultures in Neonatal unit, Maternity. There was also a general increase in gram-negative isolates from patients in this unit. Ultimately this IMT considered cases over a 6 week period with the first case identified 29.03.21 and last case 15.05.21. Total cases were confirmed 8 and 1 possible case. With the exception of 1 blood culture all were colonisation. The majority of isolates were part of a cluster confirmed on typing. From IMT 10/06/21. *3 isolates that are type 20, 3 isolates types are type 20 but have 2 band different compared to the first band 20, 1 isolate with a 3 band different, 1 unique, 1 not typed'

102. What was your role at the IMT?

A. I had oversight as the Interim Director of IPC. This was in relation to the NICU so I am aware of the vulnerability of this patient group.

103. When and how did you first learn of the issue of Serratia marcescens, and then Gram negative bacteraemia in NICU? and in 2022, it was suggested that the source of Serratia in 2022 cases was mothers' breast milk:

A. I cannot recall from memory the exact date that I was informed but I was in constant contact with the ICM and would have been verbally briefed prior too. I was at the first IMT but was briefed verbally at the time of the PAG on the 13th April 2021.

104. What steps did you take to understand these events and what actions were taken?

A. I attended the multidisciplinary IMT with colleagues from IPCT and several consultant neonatologists and colleagues from ARHAI in order to fully appreciate the challenges and complexity of this patient group to assure myself that the actions agreed were appropriate and being led by this team. Control measures put in place included:

Enhanced cleaning of the unit including terminal cleans of affected bays.

SICPS and hand hygiene audits.

HPV attempted but due to high acuity in the ward this was postponed and completed at a later date.

Ventilation check and vent cleaning carried out in conjunction with HPV process, all fell in with verification parameters.

POUF and regular drain cleaning were already in place.

Routine water sampling continued, but further water sampling including TVC and GNB was undertaken. (no evidence of Serratia in any water samples or environmental swabs taken around the sinks).

No out of spec samples from any water samples taken in the unit. Environmental sampling took place over the incident concentrating on frequently touched surfaces, equipment and areas surrounding the sinks.

105. What were the hypotheses around the source of the issue?

A. Serratia cluster suggested an un-identified source in the unit and possible patient to patient environment to patient transmission via staff hands or contaminated equipment.

106. What did you understand was happening with the issue/event?

A. Unit was very busy with high occupancy and acuity. Neonatologist reported that: “this is the largest Neonatal Unit in Scotland and work to a capacity of around 50 beds with approximately 35 intensive care and high dependency care with the remainder being made up of as special care beds. The unit provides additional specialist services for babies around the country including ECMO, cardiac services and cardiac surgery, all neonatal general surgery, ENT surgery and airway surgery. The mix of patients in the unit include patients that get a severity scoring equivalent of patients PICU rather than neonatal units around the country. The workload is extremely intense with a high focus on intensive care and high dependency care. It is multi-disciplinary and works across a lot of specialities across different sites. There has been a long term focus on infection prevention due to the extreme vulnerability of the babies as many are complex babies that are extremely premature and small”. They also reported that “they try to avoid infection in these babies and reduce the incidence of multi resistant organism colonisation and have a programme of regular screening of babies. This involves screening from HDU and ITU babies of endotracheal tube secretions or airway secretions and around wound swabs. This is the only unit in Scotland that does this extensive screening which can lead to an increased number of isolates from babies which triggers scrutiny of any environmental issues in the unit and staff precautions and procedures.” **(A41890048 - 30.04.21 - IMT Minutes Serratia marcescens NICU - Bundle 1, Document 97, page 445)**

107. What steps did you take or order to have taken and why?

A. Please see actions in my response to question 98.

108. Did these steps achieve what you hoped they would?

A. There were no new cases for 26 days so the IMT was stepped down after agreed controls were in place and were effective in preventing additional cases occurring.

109. Was this something you would expect to find in a new hospital?

A. This incident took place in the maternity building not in the new RHC.

110. Knowing what you now know, are you comfortable you did all that could be done?

A. Yes.

Cryptococcus – from 2020

Please see **(A47695221 - Email chain - Tom Steele, Jennifer Rodgers, Angela Wallace and other NHS GGC staff - IMT Ward 6A Draft Notes of Meeting 2 July 2020 - Cryptococcus - 08 July to 13 August 2020 - Bundle 19, page 1412)**

111. What can you tell us about Cryptococcus at QEUH/RHC in 2020? e.g. what was the issue, when did you become aware, what action was taken, was there communication between you and your colleagues, if not, what were the issues giving rise to that?

A. In June 2020, I was made aware of a child receiving care in RHC who through routine screening, due to a temperature had tested positive for Cryptococcus infection. From the various communications occurring in the system, my assessment was that there was a concern and anxiety in relation to a Cryptococcus infection present in the hospital. Establishing how the child was and the impact of this infection on this child, I recall was my first concern and the communication with the family, to ensure openness, clarity and that the parents questions were answered. Then my roles was to ensure that we responded to this swiftly and following the correct processes to fully

investigate this infection and in doing so seek to ensure that all relevant staff were involved.

112. What was your role in relation to the paediatric patient under the care of Dr Sastry, who tested positive for Cryptococcus in July? What issues were raised with you? What actions did you instruct, if any, as a result of the issues raised?

A. My role was to ensure that the IMT process was triggered and to ensure that we were supported by the colleagues from ARHAI in order that the process was transparent and effective, I also ensured that senior NHS GGC leaders were aware and that the Scottish Government colleagues were also fully aware that this was ongoing.

113. What was your role in the events surrounding Cryptococcus e.g. IMTs, communication with staff, patients, and/or media?

A. IMT communications are approved by the IMT. However I would have had oversight of this communication.

114. What were the hypotheses?

A. The IMT on the 2nd of July considered the following hypotheses: - environmental (Community or hospital) – Testing (false positive) – Activation of previous latent infection.**(A41890578 – 02.07.2020 – IMT minutes Ward 6A – Bundle 1, page 431)**

115. What was your view on the causes?

A. The IMT process is a multidisciplinary process which is documented, proposed hypotheses actions to be undertaken and eventual outcome are all included in these. These are all agreed by the team managing the incident. This is an independent process. I was not a member of the IMT so valued the assessment made by clinical colleagues. This view was supported by ARHAI who made no further comments on the conclusion of the process.

116. Can you explain why this case from summer 2020 was not referred to in the work of the Cryptococcus Incident Management Team Expert Advisory Sub-Group and particularly the report produced by Professor Hood in April 2022?

A. Dr Hood was part of the IMT. I can only assume that he agreed with the conclusion of the national reference lab in that this case was “less than proof of infection”.

Please see **(A46157881 - Email chain from A Wallace to C Peters - IPC Sector Reports - 03 July 2020 to 06 July 2020 - Bundle 14, Volume 3, page 179)**

117. A concern was raised that the IMT minutes may not have been accurate, what are your views on that?

A. Dr Peters was not in attendance at the IMT however she was invited to participate. The chair Professor Leonard approved the minute as a true reflection of the discussion held at the meeting after consultation with the wider IMT including colleagues from ARHAI and NES J Copeland.

118. By email on 6 July 2020 at 06:25, you said you would have the IMT minute reviewed. Was the minute reviewed?

A. Yes the minutes were reviewed.

(a) If so, by whom and by what process?

A. The minute was issued on 8/7 by Ann Lang (admin) to the members of the IMT.

(b) What was the finding?

A. Members of the IMT were given the opportunity to comment and minutes would have been updated accordingly.

(c) What happened as the result of the review?

A. The Final minute was issued on 10/07/2020 with an update from the National Reference laboratory and an update on the patient (discharged home).

(d) What action was taken?

A. The Minutes were issued and I had included Jenny Copeland in the minute process to ensure links to Dr. Peters.

(e) Were any changes made because of the review?

A. IMT is an independent process. I ensured that the minutes were circulated for comment and then the final version was also circulated.

Please see **(A46157885 - Email from C Peters to A Wallace re Cryptococcus CONFIDENTIAL - 02 September 2020 to 06 September 2020 - Bundle 14, Volume 3, page 270)** Dr Peters raised eight concerns regarding the Cryptococcus incident.

119. What steps did you take to understand the issues raised by Dr Peters, and what did you understand the issues to be?

A. My understanding of the issue was that she did not agree with the findings of the IMT despite the interpretation of the result by the national reference laboratory.

120. What action was taken, if any, was taken in relation to the issues?

A. I discussed the areas of concern raised by Dr Peters with IPCT, given the difference in opinion in addition to my own independent role and challenge. I ensured colleagues from ARHAI were present and contributed to the process to ensure all staff members were able to contribute equally.

Please see **(A46157888 - Email from C Peters to T Inkster re Cryptococcus - 01 October 2020 - Bundle 14, Volume 3, page 283)** where Dr Inkster raises eight questions regarding Cryptococcus:

121. What steps did you take to understand the issues raised by Dr Inkster, and what did you understand the issues to be? To which patients was Dr Inkster referring?

A. I believe this was in relation to the work to the Cryptococcal Advisory Group and the two patients being reviewed by this group.

(a) What steps did you take to resolve the differences of opinion which had arisen?

A. The Cryptococcal advisory group was ongoing and I was aware that experts from both PH England and ARHAI were on this group and reviewing the evidence.

(b) What action was taken, if any, was taken in relation to the issues?

A. I was aware that there was an established independent process and that a report would be forthcoming.

(c) How effective were the actions taken?

A. The conclusion of the report was that the most likely cause of infection was latency although I am aware that as the process was discussed and explored that if mitigation presented themselves, they were actioned immediately – please refer to the main report for details on these actions.

(d) Did you have any concerns regarding communication with patients, both before and after receiving the email? What were your concerns? What action did you take?

A. I had no concerns around the communication with the patients families.

(e) Did you have any involvement in communication with these patients or their families? If so, please give details.

A. I was responsible for working with colleagues to ensure the families of the two patients received the Dr John Hood report. I communicated via letter offering the chance to receive the report and any further support they may require in July 2022.

(f) How effective were the actions, if any, that were taken?

A. Please see my response to question (d) above.

122. Was the Cryptococcal Advisory Group Report made available to the IMT dealing with the Cryptococcus incident?

A. From memory I am not aware if this was made available. However, several members of this IMT were also members of the CAG including colleagues from ARHAI and the Chair of the Group. The full report was circulated to BICC on 30 October 2023.

123. Was there an incident debrief? If so, please provide details. If not, why not?

A. It was the responsibility of the Chair of the IMT to decide if a hot debrief would be prepared and then to author this. I think it should be noted that this was year 1 of COVID and the significant pressures the IPCT would have been under at that time. Please also note that the decision to complete a Hot Debrief is at the direction of the IMT Chair.

124. How satisfied were you with the management of the Cryptococcus incident in 2020 by NHS GCC?

A. I was in the role of interim director of infection prevention control at the time of this incident, there were, as previously mentioned, concerns from a microbiology colleague in relation to this incident. My responsibility was to ensure that the appropriate processes were triggered and in addition I tried to ensure that we had a wide representation including ARHAI to allow the IMT to fully consider the incident, with the aim of ensuring that NHS GGC and all teams responded appropriately.

(a) What else could have been done?

A. The conclusion supported by the national Reference Laboratory that this was likely to be a false positive and certainly less than proof of infection. They did not recommend any environmental monitoring (although I was aware this was ongoing as a part to the work of the CAG) so no further actions were necessary.

(b) How could matters have been handled differently?

A. From the outset and given this was the first time a cryptococcus infection presented since I came into post, I had hoped that perhaps all colleagues could work together in responding to this case and therefore care of this child. I listened to Dr Peters concerned and ensured that she was invited to the IMT but she declined to attend. The opportunity for all colleagues to hear and listen

to challenges and also having the opportunity to hear any comments and advice from ARHAI in this forum and the results from the Bristol Laboratory could have been extremely positive moving forward.

(c) What concerns, if any, did you have about how matters were dealt with?

A. I have no concerns with regard to how matters were dealt with, however challenges in relation to this incident to ensure that all views were consider whilst maintaining the independent IMT process including ARHAI participation required significant support to manage throughout this incident.

Dr John Hood's Report

Dr John Hood prepared a Report from the Cryptococcus Incident Management Team Expert Advisory Sub-Group, regarding the Cryptococcus infections at QEUH/RHC. Please see **(A39235063 - Report prepared by Cryptococcus IMT Expert Advisory Subgroup dated 5 April 2022 - Bundle 6, page 1115)**

125. Did you read Dr John Hood's report regarding Cryptococcus?

A. Yes.

126. If so, when did you read Dr John Hood's report?

A. I first received Dr John Hood's report by email on the 07/09/20 from the ICM. The report was still in draft form and not yet fully complete at this time.

127. What observations, if any, did you make after reading Dr John Hood's report?

A. I observed that each of the hypotheses were being fully explored.

128. What actions were taken following the Dr John Hood report?

A. I refer you to Dr John Hood's report where all the actions and mitigations are detailed.

129. Are you aware of whether NSS endorsed the findings of Dr John Hood's report?

A. My understanding is that they did not endorse the report in full despite members of ARHAI being present at over 20 meetings of the CAG.

Prevalence of Cryptococcus cases at QEUH/RHC

130. Why do you think there were Cryptococcus infections in non-HIV patients at QEUH/RHC between 2015 to date?

A. I am not an expert in this area, however my reflections on the report from the group would be that the report was evidence based and we may never know the definitive answer. I note the conclusion of the report that this was most probably a latent infection.

131. What are your views about the concerns surrounding the built environment and the Cryptococcus infections at QEUH/RHC?

A. In relation to Cryptococcus, from the information that I have seen, there does not seem to be a link with the built environment established. I note that there has been extensive testing of the hypothesis, including air sampling data, undertaken by the CAG. In my limited understanding I believe this supports the hypothesis that the building was not the source.

132. Is there anything you wish to add about your knowledge of, or involvement with, Cryptococcus cases at QEUH/RHC from 2015 to date, that could be of assistance to the Inquiry?

A. No.

IMT – Gram Negative Bacteraemia in Ward 6A – 5 August 2021

Please see **(A41890404 - 5.08.21 – IMT minutes Gram Negative Blood Ward 6A - Bundle 1, page 512)**

133. What was your role at the IMT?

A. My role was to ensure that the IMT process was triggered and to ensure that we were supported by colleagues from ARHAI in order that the process was transparent and that the Scottish Government colleagues were also fully aware that this was ongoing.

134. When and how did you first learn of the issue of Serratia marcescens and Gram negative bacteraemia in NICU?

A. I was on leave until 3 August. On 4 August I had a meeting with the acting ICM S Devine who would have briefed me then and the IMT was held on 5 August which I attended and I was also included into the ARHAI summary to SG on 6 August.

135. What steps did you take to understand the event and what actions were taken?

A. I attended the multi-disciplinary IMT with colleagues from IPCT and several consultant haemato-oncologists and colleagues from ARHAI in order to fully appreciate the challenges and complexity of this patient group and to assure myself that the actions agreed were appropriate and being led by this team.

136. What were the hypotheses around the source of the issue?

A. Most likely route is endogenous for GNB (x2 gut translocation, x1 via contamination of femoral line from soiled nappy) Contamination of line cannot be ruled out for Gram positive isolate.

137. What did you understand was happening with the issue/event?

A. There were 3 Gram Negative Bacteraemia (GNB) isolates in blood cultures within the haematology/oncology ward 6A, QEUH within the last 30 days. There were also surveillance measure in place: NHSGGC continue to monitor Gram Negative blood cultures associated with Ward 6A. The trigger is set at 2 GNB in a 30 day period. The IMT noted the following; Last Enterobacter cloacae blood culture in Ward 6a>1year, Last Klebsiella pneumoniae blood culture in Ward 6a 23.04.21, Last trigger for 2 GNB blood cultures in a 30 day period for Ward 6a was 20.11.20 (Serratia Marcescens & Klebsiella pneumoniae).

138. What steps did you take or order to have taken and why?

A. Action was taken as decided by the IMT. On this occasion the following actions were undertaken; Environmental sampling carried out in ward 6a 03.08.21 – no GNB isolated. Central Venous Catheter audit carried out 03.08.21-100% (13 out of 13 care plan fully completed) Additional peer Central Venous Catheter audit of line care practice will be carried out. These are carried out routinely. Validation of theatre ventilation (where lines were

inserted was confirmed. 4 weekly enhanced supervision is ongoing, RCA completed for every patient with a positive blood culture, Routine water testing ongoing every 4 weeks – no significant findings, point on use filters remain insitu on all outlets.

139. Did these steps achieve what you hoped they would?

A. IMT 19/08/21 reported no new cases since 29/07/21 HIIAT assessed as Green and the IMT was stood down.

140. Was this something you would expect to find in a new hospital?

A. Hypothesis which was accepted by the IMT including colleagues from ARHAI was that the most likely hypothesis was that these infections were endogenous and not associated with the building.

141. Knowing what you now know, are you comfortable you did all that could be done?

A. There will always be learning but I did all I could, so yes.

<u>Aspergillus– November 2021</u>

Please see **(A48794740 - Email from C Peters to A Wallace - Press Today - 18 November 2021 - Bundle 14, Volume 3, page 337).**

142. What can you tell us about Aspergillus at QEUH/RHC in November 2021? e.g. what was the issue, when did you become aware, what action was taken, was there communication between you and your colleagues, if not, what were the issues giving rise to that?

A. <u>Background</u>

Aspergillus has been included as an alert organism on ICNET since November 2016. There are currently lab sift rules for Aspergillus enabled on ICNET which will generate a patient case to open for Infection Prevention and Control Nurse (IPCN) review. The IPCN would ensure that the ward staff are aware of the result. They would discuss the result with the ICD. The ward would be visited and the result documented in the case notes. The IPCN

would liaise with the nurse in change to ensure there had been no recent water ingress. As all specimens are imported into ICNET directly from Telepath, this means that Microbiology, including Infection Control Doctors, are aware of Aspergillus results and can provide immediate advice to clinicians on the clinical management of their patients. Application of European Organisation for Research and Treatment of Cancer (EORTC) definitions are used to accurately define cases. This is normally a clinical decision made by the patient's consultant. What should also be noted is that the incubation period can range from days to months, there is difficulty to assign the standard hospital acquired definition to this organism. This was not a IPCT referral as there were no positive microbiology results for this patient.

143. What was your role in relation to patient, Andrew Slorance in 2020? What issues were raised with you? What actions did you instruct, if any, as a result of the issues raised?

A. I did not have a direct role in the events surrounding the care of Andrew Slorance. The board instructed a full review of his case, in response to the concerns raised by the family, there were also media queries and subsequent Parliamentary Questions. There was also an external review of his case by NHS Lothian.

144. What was your role in the events surrounding Andrew Slorance?

A. Please see my response to question above (137), I did not have a direct role in the events surrounding the care of Andrew Slorance.

145. What were the hypotheses?

A. As far as I am aware there was no hypothesis were generated as this was a single case without positive microbiology.

146. What was your view on the causes?

A. I would need to refer this question to clinical staff who were looking after this patient however I know that this individual was immunosuppressed.

147. Did any meeting take place with Mrs Slorance? If not, do you know why?

A. As far as I am aware, there was eventually no meeting between Mrs Slorance and the clinical team caring for Mr Slorance.

148. Why did you write to Mrs Slorance, referring her to the NHS GGC complaints service?

A. I wrote to Mrs Slorance on the 30th of August 2022, to offer Mrs Slorance the option of sharing the questions and concerns she had in relation to the care and treatment of her husband, Andrew. By using the NHS Scotland Complaints Handling Procedure (CHP) this would, in the absence of an agreed way forward, allow the organisation and those caring for Mr Slorance the ability to respond to the concerns. This had the intention of providing the answers to the questions Mrs Slorance sought. The NHS CHP is designed to ensure that the organisation responds appropriately, it also allows the ability to support patients, or in this case their families. It requires us to be fair to patients and their loved ones but also fair to our staff. Moreover, the procedure ensures that if patients or their families are not content with our processes or responses the Scottish public ombudsman (SPSO) will externally review these cases. It was in the hope that we may respond to Mrs Slorance concerns that I suggested this approach. I am the executive lead for the CHP in NHS GGC as part of my Board Nurse Director Role.

Prophylactic medication

149. To what extent, if at all, were/are patients in QEUH/RHC prescribed prophylactic medication additionally, as a result of concerns about increased HAIs, the water system (including drainage) and/or the ventilation system?

A. My understanding is that at different points in time Dr Teresa Inkster the Lead ICD recommended the use of prophylactic medication, but I was not in post at the time suggested in the question and please see my response below to Question (a)-(g).

Please identify and describe the medications in question, and is it the case that, in contrast to the general position across UK and Scotland, the following were/are prescribed in QEUH/RHC as a matter of course: Ciprofloxacin, Posaconazole, Ambisome, Caspofungin, Septrin?

A. This question should be referred to the patient's clinicians and colleagues in microbiology IPCT.

(a) What was the reason for the prescription of these medicines?

A. Please see my response to question (a).

(b) Was the prescription of any of these linked to concerns about the environment and if so what concerns?

A. Please see my response to question (a).

(c) Which group of clinicians were responsible in an individual case for the prescription of this medication to patients: i.e. would it be treating haematologists/oncologists or somebody else?

A. Please see my response to question (a).

(d) Are you aware of any general decision being taken regarding whether this additional/different medication ought to be made available to patients; if so which bodies/individuals were involved in that?

A. Please see my response to question (a).

(e) In what way, if at all, did the way in which these treatments were used differ from the standard use of prophylactic medications (i.e. duration of use; dosage etc)

A Please see my response to question (a)

(f) What risks did patients face if they did not receive this medication?

A Please see my response to question (a)

Describe the approach to communication (a) within GGC and the hospital and (b) with patients in respect of the prescribed prophylactic medication discussed above:

(a) Were staff given any guidance or was there any discussion about their use?

A This would be the responsibility of the clinicians who would have prescribed this medication.

(b) Were staff given any guidance or was there discussion about how this matter was to be communicated with patients?

A The normal process is described as above.

(c) What approach was taken to discussing with patients?

A I would need to refer this question to clinical staff caring for these patients and their families.

(d) Are you aware of any withholding of information about the prescription of prophylactic medication or any suggestion or instruction that matters to do with the use of prophylactic medication ought not to be shared with patients?

A No

Ward 4c

150. To what extent are you aware that the ventilation system of Ward 4C does not meet the Scottish Health Technical Memorandum (SHTM 03-01) Ventilation for Healthcare Premises?

A I understand from colleagues that the air change rate in all of the general wards in QEUH is 2.5 rather than the 6 recommended in the SHTM guidance.

(a) When did you first become aware of this?

A I was not in post at this time, and I am unable to recall exactly when I became aware of this.

(b) What changes, if any, are you aware of the hospital management/NHS GGC making to the ward by bringing in additional equipment, when that took place and what equipment was brought in?

A I was not in post at this time

(c) What changes, if any, are you aware of the clinicians running the ward taking to mitigate any risk that would arise from noncompliance with SHTM 03-01?

A I was not in post at this time

(d) Do you consider that the fact that ventilation system of Ward 4C does not comply with SHTM 03-01 gives rise to any increased risk of infections in patients and why have reached that conclusion?

A I do not have the expertise to answer this question

(e) Are you aware of whether any risk assessment (including HAI Scribe) has been carried out by NHS GGC at any time about whether the ventilation system of Ward 4C – to the extent it is not in compliance with SHTM 03-01 – presents and acceptable or unavoidable risk to patients?

A I was not in post at this time

(f) Are you aware of any attempt by the Health and Safety Executive to take enforcement action against NHS GGC in respect of the ventilation system of Ward 4C, what was the basis of that action, what was the response made by NHS GGC and what was the result of any such action by HSE?

A I was not in post at this time.

Communication

Issue and Resolution Log

Please see **(A42252321 - Email from Jenny Copeland to Christine Peters, Teresa Inkster and Angela Wallace re Confidential: Draft docs from today's meeting - 03 March 2020 - 3 March 2020 - Bundle 14, Volume 3, page 63)**

151. Please tell us about the log e.g. what it is or was; what it contains; the intention behind it; who completes it; actions identified as a result; who instructs actions and who carries out actions; effectiveness of the log.

A. The issue and resolution log was my suggestion from the ongoing meetings I had with colleagues who had concerns, Dr Christine Peters and Dr Teresa Inkster. The intention was to capture the issues that colleagues felt were key to their historical concerns. On starting my role, I wanted to ensure that all my colleagues in GGC had the opportunity to share their perspective. On listening to their experience, I felt that colleagues were rooted in the issues from the past few years, I also felt that colleagues were quite disconnected from the organisation and the organisation was and had been moving forward, I was hopeful that some of the issues had progressed, but colleagues were not perhaps up to date with the situation. I further assessed that this approach

would be key to creating new ways of communication and working. Despite considerable effort to answer questions that colleagues sought I do not think that this was effective but important that this was completed as part of the work to build relationships. Please see final issues and resolution log at **(A49689383 - Appendix 9 - 15.1.21 Issue log review meeting Summary of actions.docx - Bundle 27, Volume 10, page 333)**.

152. Is the log still in place? If not, why not?

A. The log is no longer in place; it was completed with written updates by IPC and Estates and Facilities colleagues. The final version of the log was fed back to Dr Christine Peters and Dr Teresa Inkster supported by OD consultant Jenny Copeland, attended by myself and Professor Tom Steele via Microsoft teams meeting on the 15th of January 2021.

153. How effective is/was the log?

A. I think it was important to try and provide as much information to these colleagues as possible. It may have had some value, as many of the issues had been progressed and moved on during this time. However, colleagues continued to share that they were discontented with the past and the present, despite the updates and ongoing wider Organisational Development (OD) work in progress.

Communication between Infection Control and Estates and Facilities
Please see **(A32812576 - Minutes BICC meeting - 15 December 2020 para 110 - Bundle 13, page 477)**

154. You informed BICC that you met with Mary Anne Kane to discuss how to show the connection with Infection Control and Estates and Facilities. You suggested having a report to highlight the key issues, and to have a dedication section on BICC on how Infection Control and Estates and Facilities are working together and to have examples of this.

A. My assessment from taking up my role that the relationships and communication between IPC and estates were effective and positive. In this section I am indicating that on taking over as the chair of BICC in my interim

DIPD role, I wanted to ensure we have a dedicated section on the agenda for estates and facilities.

155. What was your role at the BICC?

A. On taking up my Interim role, I took over as the chair of Board Infection Control Committee.

156. What did you want to show the connection between the teams to be?

A. Strong membership from IPCT, estates and facilities, public health, H+S, occupational health, pharmacy, clinical and managerial colleagues are vital to BICC and working together to ensure IPC system is effective. NHS GGC had also patient public partner representation and this remains in place. This ethos and approach, I further developed in my approach via gold and silver command work, working with estates and facilities director Professor Tom Steele and his team under the banner of safe, clean clinical environments. **(See A49689717 - QUEH IPCG Sub Group.pptx Draft Presentation.pptx Version 9 - Bundle 27, Volume 10, page 205)**.

157. Why is communication between these teams important? e.g. communication of Estates issues within the hospital environment, of infection, and of bacteraemia.

A. Communication, close working relationships and systems/processes and adherence to standards are vital between IPCT and estates and facilities in the effort to prevent and control infection to patients in hospital and clinical settings. The importance of a clean, safe environment for all aspects of healthcare is paramount hence the key relationships required formally and informally. Estates involve IPCT in any build project to ensure IPC is fully embedded into the design and also that any finishes and materials used enable access for maintenance and cleaning. This process has been further strengthened by the requirements of NHS Assure. The cleaning regimes and maintenance of the facilities, will assist in preventing HCAI. The communication between IPC and Estates and Facilities is both proactive and reactive and both of these are paramount to provide safe provision of healthcare facilities.

158. What did you consider were the key issues?

A. On taking up the post, my observations were that there were good relationships between IPCT and Estates and Facilities. This was at strategic and operational levels. I did however understand that the recent history of the build of the QEUH and RHC, the ongoing focus of rectification, the constant external scrutiny including the media attention placed constant focus on these teams. The impact of this I could see added significant additional pressure to their teams. However, I experienced support and responsiveness from the IPC and estates teams at all times and continued to do so across all NHS GGC sites.

159. What were your views on communication between Infection Control and Estates and Facilities?

A. Please see above. I can confirm the communication between IPC and Estates and Facilities to be effective. This was tested and observed to be effective by external scrutiny across visits by NHS HIS.

160. How did the teams communicate?

A. The teams communicated formally and informally.

161. Was a report prepared, as you suggested? If so, what is the report's title? Where, when and to whom was it presented?

A. I suggested the report was developed by Estates and facilities, giving a dedicated a space on the agenda at the Board Infection Control Committee (BICC). The report provided assurance in relation to IPC with any escalations regarding either to be raised at any time and at BICC if required. (See BICC minutes – (**A32812773 - Minutes - BICC Meeting - 05 October 2020 - Bundle 13, page 468**).

162. If a report was not prepared, why not?

A. The report is scheduled on BICC on every agenda.

163. Was a dedication section set up on BICC on how the teams were working together? If not, why not?

A. The rationale of the reports on the BICC was to ensure that BICC had clear focus on cleanliness and the clinical environments. It was not about the relationships between IPC and Estates and Facilities.

164. Could communication between the teams be improved?

A. Communication and ways of working will always require to be in focus and developed but I did not at the time or currently see required improvements.

165. If so, what steps were taken to improve communication?

A. Please see above my response to question (158) above.

166. How effective were the steps?

A. Please see my response to question (158) above.

167. Can you give any examples of the teams working together?

A. The teams regularly meet and work together on committees including: The infection control and the built environment, board water safety group, board ventilation safety group, Board infection control committee and Acute Infection Control Committee. There is also ongoing partnership working in terms of the requirements of the HAISCRIBE.

168. How would you describe communication between the teams now, or at the time your role ceased?

A. In my view, communications between the teams were positive, the constant scrutiny and focus on the QEUH and RHC, was and continues to be a source of additional strain for colleagues. However, I observed and experienced that this experience enhanced the working relationships and effectiveness of their approach, work and communication.

Communication between Infection Control and Microbiology

169. What were your views on communication between Infection Control and Microbiology?

A. Communication between IPC and Microbiology across the north and Clyde sectors were positive, productive and cohesive, working towards quality of care and experience of patients and working well with a range of clinicians and managers in these sectors. Communication between IPC and Microbiology in the south had deteriorated significantly between a small number of microbiologist and IPC team members over time due to the previous and ongoing concerns of some microbiology colleagues in relation to the built environment in the QEUH and RHC. These concerns focused on infection were related to the environment and how a range of GGC colleagues including the IPC team were able to respond and manage services related to QEUH and RHC.

170. How did the teams communicate?

A. The IPC and Microbiology colleagues are required to communicate in a range of ways both informal and formal. Focused around the care of individual patient management plans, working together to provide expert advice in a range of settings and including the management of IP&C in and out of hours via on call systems. There are a range of management meetings within the diagnostics directorate at sector level including the service leads where Microbiology service leads and IPC colleagues collaborated.]

171. Could communication be improved?

A. During my time in GGC building on and developing ways of working including communication has been an ongoing focus, although the relationships with some colleagues as stated in my answer to Question 161 remains challenging and is a continued source of tension and concern. This challenge from a small number of microbiology colleagues can cause significant system disruption, increased and additional anxiety for IPC as the narrative is that there concerns are not being explored and responded to appropriately. An example

of this can be found at **(A49690229 - Appendix 10 - Email Chain Re Duty of Candour - Bundle 27, Volume 10, page 335)**.

172. If so, what steps were taken to improve communication?

A. On taking up this post and in determination to ensure all GGC colleagues had an approach to develop or reinstate new ways of working. This re-set approach [Clean Slate] was adopted as I met with GGC colleagues including IPC and Microbiology who were central to the OD plan commissioned by the CEO, and key to developing a new brand or tangible change in how we were perceived internally and externally.

173. How effective were the steps?

A. The approach had some successes, please see 5 stage OD plan and gold/silver command work plan **(A49690612 - GGC Discovery Presentation – Bundle 27, Volume 10, page 235)** but the relationships between small number of Microbiology and IPC, including communication remains challenging as described in 163.

174. Were Buzz meetings part of steps to improve communication between the teams?

A. Yes I developed the 'Buzz Meetings" as a key step to supporting or rebuilding communication and ways of working between IPC and Microbiology and the wider clinical IPC community across the system and support of the in the south sector in particular.

(a) Please describe a Buzz meeting e.g. intention behind the meetings, who is present, culture in the meeting, minute taking or recording of discussions, agreeing actions, outcomes, implementation of actions.

A. Key to the Organisational Development work was to support ways of working and re-establishing communication. I also wanted to ensure I had a space and way of hearing all contributions to the work of IPC across NHSGGC. Thus, the silver command work "infection Control is everyone's business" was designed to connect all colleagues across NHSGGC using role clarity and local approaches to improvement and IPC focus. This aspect of the wider approach

was for the key specialities therefore a weekly multi-professional meeting i.e. 'Tuesday Buzz' was developed. The aim was to facilitate cross profession collaboration and build real time ways of colleagues working together. Membership included members of the PICT, Senior Managers within Microbiology and Diagnostics, Clinical Director for Laboratory Medicine, Head of Service (Microbiology) Virology and Microbiology colleagues. This 'buzz' continues currently and is a space where we can share intelligence and mutually assist and support each other. This meeting is not recorded by a minute although it is recorded on teams.

(b) How effective were Buzz meetings?

A. The Buzz meetings were an important step to bring a wide specialty perspective across the clinical IPC area. It was important to create a space that was looking at IPC across the system, and bring colleagues together in new ways and in relationships that had suffered significant loss of trust and respect. Covid-19 happened quickly and the ability for this group to consider, and where required influence the organisation was key. I think it had some positive outcomes however at times the concerns and perspectives from some colleagues continued to dominate the space.

(c) Do Buzz meetings continue at QEUH today, or at the time your role ceased?

A. Buzz meetings continued until I left my role, it was reviewed and evaluated by the colleagues attending and evolved from this work and continues today now called the 2 Microbiology, Infection Control, Virology Teams. NB this was and is a whole system meeting, not confined to QEUH/RHC.

175. How would you describe communication between the teams now, or at the time your role ceased?

A. The communication between IPC and a small number of microbiologists remains challenging and concerning despite continued effort as colleagues provide IPC Service to the organisation whilst often experiencing significant challenges to decision making and criticisms to IPC approaches in respect to the RHC and QEUH.

Communication and infection

176. Please explain your understanding of communication from management to clinical staff regarding infection risk where there had been, or was, a concern about links to the hospital environment.

A. I have not witnessed this scenario described in the question that I can recall.

177. As regards such concerns, please explain your understanding of:

(a) All instruction from management to clinical staff regarding what and how to communicate with patients.

A. I have no example of where management colleagues issued instructions to clinical staff regarding communication with patients.

(b) All communication from management to patients

A. I was involved in my interim role, as GGC colleagues, through the oversight arrangements, were required to share intended communication with SG; some of these communications were with patients and families.

(c) All communication from management to the media

I was involved in my interim role, as GGC colleagues, through the oversight arrangements, were required to share intended communication with SG; some of these communications were in response to the media.

(d) The pre-broadcast advice to staff regarding the BBC Disclosure programme in 2020

A. I cannot recall pre -broadcast advice to staff regarding the BBC Disclosure programme in 2020.

(e) All communication between management and external bodies such as SG, HPS and HFS.

A. I have no examples of these concerns and I did not experience such concerns and in my role positively developed these communication routes with the support of the IPCT and the senior leadership team including the CEO.

Communication and Duty of Candour

178. Please explain the key aspects of the duty to communicate effectively with patients generally.

A. The duty of candour (DOC) means that every healthcare professional must be open and honest with patients when something that goes wrong with their treatment or care causes harm or has the potential to cause harm or distress. The key aspects are: to tell the patient (or where appropriate the patients family, carer or advocate) when something has gone wrong. Apologise to the patient (where appropriate family, carer) Offer an appropriate remedy or support to, if possible, put matters right. Explain fully to the patient and/or family the short and long term effects of what has happened. It is important to distinguish our responsibilities with regards to open communication with is underpinned by the IPC HAI Communications Strategy and the duty to communicate when something has gone wrong.

179. Please explain how the duty to communicate should be approached when it comes to telling patients about an infection; about the possible causes of the infection; about the impact upon health; and upon future treatment.

A. The duty to communicate when it comes to telling the patients about an infection; about the possible causes of an infection; about the impact upon health; and upon future treatment, as described above in question 170, the clinical team members follow the procedure steps above covering the key aspects.

180. Please explain how the duty to communicate should be approached where something has gone wrong during care or treatment.

A. The duty to communicate should be approached with openness and honesty with an apology, plans to rectify (if possible) and ensuring that the patient and/or family understand the information given and their questions are answered and documented.

181. What processes and/or guidance were in place in relation to communication with patients when you took up your role at QEUH/RHC?

A. NHSGGC had implemented the Duty of Candour procedure across the board on taking up my role as required in NHS Scotland.

182. What were your views on the processes and/or guidance, and how effective did you think they were?

A. The Duty of Candour processes were in place and with the work in my role and with the IPC team, I was aware that the procedure was being used. I did not review the effectiveness but was aware if the DOC had been completed by the local team during day-to-day work of IPC.

183. Are you aware of the duty of candour and how would you explain that?

A. Following the statutory duty of candour provisions and the Health and Care (Scotland) Act 2016, the duty of candour regulations became active on the 1st of April 2018 and set out the procedure that the organisations providing health services, care and social work services in Scotland are required by law to follow when there has been unintended or unexpected incidents that result in death or harm (or additional treatment is required to prevent injury that would result in death or harm.

184. Did you have any concerns about staff being asked to withhold information from patients and/or families by senior management? If so, please explain your concerns, any action taken, and the effectiveness of any action.

A. I had no concerns about staff being asked to withhold information from patients and/or families by senior management.

183. The Inquiry is advised that Dr Teresa Inkster did some work around the duty of candour during the time you were in post.

(a) What was proposed by Dr Inkster?

A. Dr Inkster shared with me work she had undertaken on Duty of Candour. I recall that she shared her initial work by email and that this work was before I took up post.

(b) What action was taken, if any, to implement the proposals and how effective was the action?

A. I am not aware of any action taken or if this work was shared with GGC colleagues.

(c) What are your views on the effectiveness of the measures in place now, or at the time your role ceased?

A. Please see my response to question (b).

Whistleblowing at QEUH/RHC

184. Please explain your understanding of the workplace environment and culture at QEUH/RHC on taking up your role.

A. I was made aware by the CNO Fiona McQueen and the CEO Jane Grant that some GGC colleagues had raised concerns as explained in question 9. As I took up post and began to meet and listen to internal GGC colleagues and external colleagues I became quickly aware of the positive workplace environment between a range of colleagues IPC, clinical staff and Management and leadership colleagues. I looked at workplace situations across NHS GGC in relation to Microbiology and IPC and across many areas, I saw examples of excellent care, teamwork and communication and positive relationships, these were often the same colleagues, and the only challenging culture was in QEUH and RHC and could be attributed to the areas where colleagues had raised concerns.

185. Did you have concerns about working relationships and the style of management? What were your concerns, if any?

A. On taking up my role, I remained as the HAI exec lead in NHS FV and within only a few weeks the Covid-19 pandemic began and all NHS Scotland systems moved into the gold command structures to face these unprecedented times. I assessed the style and tone of leadership and relationships akin to any other system including my home board, NHS FV. The behaviours of colleagues who have raised concerns, Dr Peters and Dr Inkster, were however something I had not experienced before despite almost 40 years continuous NHS experience. The overarching desire of all colleagues appeared to be in the service of patient care and provision of quality services. However, as I began to lead in my role,

I began to create new conditions in which colleagues could move forward or reset and the largest part of this was the impact and consequences of the behaviours. The scale of trauma or moral injury I witnessed was significant. The OD plans, including individual coaching appointments and OD support in the Buzz meetings, did not have the impact I had hoped for and Dr Peters continued to challenge IPC decisions regarding the management of infection incidents in QE and RHC. This hampered new ways of working that were tentatively building. Unfortunately the pattern prevails today.

186. What steps did you take to understand whistleblowing and whistleblowing policy at QEUH/RHC?

I was aware of the NHS Scotland new Whistleblowing processes, as the executive lead in my own board in NHS FV. Across NHS Scotland we had shared our developing policies and I was aware of NHS GGC's in this context on taking up post.

187. What was your understanding of whistleblowing and whistleblowing policy at QEUH/RHC?

A. Please refer to Question 178 there was one Whistleblowing policy for NHSGGC I was aware from Microbiology colleagues that there was a whistleblow from some of their fellow Microbiology Colleagues. This was shared as part of my introduction meetings with them, and Prof Marion Bain had shared with me. I was not aware of the details of the whistle blow in relation to QEUH and RHC.

188. How did you see your role in relation to Microbiology and the Infection Control Team? Were you part of the ICT, or did you become part of that team over time? What was explained to the teams about your role, who appointed you, and who did you report to?

A. Although I did not have microbiology in my role remit, from the outset I included microbiology in the OD work and made connections with the senior leaders in the organisation who led and managed microbiology across NHS GGC including the QEUH and RHC. My role was shared across the organisation on appointment, I immediately made connection with the Infection Control Manager (ICM) and the Interim Lead Infection Control Doctor (LICD) I became

part of the CEO's Strategic Executive Group (SEG) and directed the work of ICT with the ICM in the leadership role of the ICT.

189. Did you have any specific remit in relation to whistleblowing and/or whistleblowing policy at QEUH/RHC?

A. I did not have any role in relation to Whistleblowing or Whistleblowing policy in QEUH /RHC.

190. If so, what was your remit and how did you action that? e.g. what changes were introduced? How were staff made aware of changes? Was there written guidance?

A. Not applicable.

191. Did the changes, if any, improve the whistleblowing policy. Do you think the changes would make staff more inclined to disclose concerns, wrongdoing, failures, or inadequacies?

A. Not applicable.

192. How effective were the changes, if any?

A. Not applicable.

193. Please discuss your involvement with Dr Redding, and with her whistleblow e.g. what was your involvement, what interactions took place, what action was agreed on, what action was taken and/or implemented, how effective was the action, what was the outcome of the whistleblow and when did your involvement cease? Please also see paragraph 190 below re review of culture within Infection Control and Microbiology teams.

A. I had no involvement in Dr Redding's whistleblow.

194. Please discuss your involvement with Dr Peters, and with her whistle blow e.g. what was your involvement, what interactions took place, what action was agreed on, what action was taken and/or implemented, how effective was the

action, what was the outcome of the whistleblow and when did your involvement cease?

A. I had no involvement in Dr C.Peters Whistleblow.

195. Please see **(A46157878 – Email from C Peters to A Wallace and others re Current Issues – 19 May 2020 – Bundle 14, Volume 3, page 132)** Dr Peters referred to several issues in this email. What steps did you take to understand the issues, and what did you understand the issues to be? What action was taken, if any, was taken in relation to the issues?

A. In order to answer this question, I have had to review infection prevention control data at this time. My findings are as follows:

B. 19 May 2020 NICU S. capitis PAG held 13 may with regard to 2 cases of S. capitis. **(A50589881 – PAG Minutes – Staph Capitis -13 May 2020 – Bundle 27, Volume 14, page 86)** Both were considered HAI. A timeline shows that there are no bed space connections between the 2 cases, nevertheless a PAG was held. Last SICPs audit 22.04.20 - 98%. Ward had enhanced twice daily cleaning in place. Update 05/06/20: Antibiograms are different for the two cases. Stenotrophomonas Single transmission event would not meet the definitions proposed by Dr Inkster in 2017 in terms of triggering an escalation. Decontamination Room Considered in the actions in relation to the action plan developed in 2017 in response to clinical concerns by Dr Peters and other. Reported to governance committees throughout NHSGGC. This action was reported as not technically feasible. ITU Enterobacter Please refer to paragraph 37 Surveillance was in place as per the NIPCM during this entire period. Enterobacter was reported to ARHAI as stated and included in the HAIRT twice. MRSA PAG held on 24 April 2020 re two cases of MRSA in critical care. **(A50589872 – PAG Minutes – MRSA – 24 April 2020 – Bundle 27, Volume 14, page 84)** On review 2 patients had MRSA isolated from respiratory tract samples. Both patients had been nursed in Critical Care Unit 4 and crossed over for a period of 25 days. HIIAT green and reported to ARHAI. Pseudomonas - Single case of pseudomonas would have been considered as a single referral without escalation. An ARHAI water safety check list would have been completed and this areas is routinely tested for pseudomonas as it is considered augmented care. PICU Ventilation –

please refer to PICU action plan. **(A49689717 - QUEH IPCG Sub Group.pptx Draft Presentation.pptx Version 9 – Bundle 27, Volume 10, page 205)**.
This data demonstrates the actions taken by the IPC team following due processes and outcomes of the issues raised by Dr Peters. As DIPC, I would have had oversight of these processes and sought assurance that all actions had been taken and reported appropriately.

196. Please see **(A46157894 – Email from C Peters to A Wallace re Meeting – 16 November 2021 – Bundle 14, Volume 3, page 329)** Dr Peters raised issues with you concerning Wards 6A, 4B, and NICU, as well as the culture at meetings. What steps did you take to understand the issues, and what did you understand the issues to be? What action was taken, if any, was taken in relation to the issues?

A. In November 2021, a Hot debrief was completed for this incident. It was also reported to ARHAI. At the meeting on Sunday night my understanding is that [redacted] asked members of the IMT if this required a HIIAT. The advice given in that this was not in fact an infection incident then the HIIAT in this context was not appropriate. All members of the group agreed with this at the meeting on the Sunday which included a ICD. The concerns of Dr Gibson regarding the HIIAT assessment were noted. S Devine emailed Dr Gibson with the following statement **(A50590093 – Email from Sandra Devine to Brenda Gibson and others re leaks on Level – major incident meeting required – 05 November 2021 - Bundle 27, Volume 14, page 79)** - "We have ensured that both Scottish Government and ARHAI have been informed of this incident and we will continue to monitor any patients who have been in any way impacted. Email is not a perfect way to undertake a HIIAT assessment so please accept my apologies for this, however, the majority of those who responded have agreed with the assessment." 4BAir sampling protocol was agreed and had been in place apart from a brief spell during COVID when it was felt that the risk of having additional personnel in the unit was higher than not sampling the unit. This data demonstrates the actions taken by the IPC team following due processes and outcomes of the issues raised by Dr Peters. As DIPC I would have had sight of the processes in place and in working closely

with the ICM I would have asked for assurance that all actions had been taken and reported appropriately.

197. On 9 October 2020, Dr Peters received an SBAR from you concerning aspergillus in PICU. The SBAR concluded that mould from the leak area could not have caused the patient's infection. Peters disagreed and responded with a list of actions she would expect to be taken given that there was a leak and a known case of aspergillus in a high risk unit. What steps did you take to understand the issues, and what did you understand the issues to be? What action was taken, if any, was taken in relation to the issues?

A. In order to answer this question. I have had to review the Infection Control archive data for this time. My finding are as follows:

Air sampling protocol was agreed and had been in place apart from a brief spell during COVID when it was felt that the risk of having additional personnel in the unit was higher than not sampling the unit.

ICD (Dr Bal) monitors trends over time and gives advice on actions in this unit if required. He is in communication with the ward staff and they are clear on the actions to be taken and any implications for patient placement. If water leaks occur the Water Damage to Healthcare Environment SOP is in place and implemented. Reported to service and included in monthly clinical review group report in November and December. Full review by IPCT colleagues and Estates team, no evidence mould in the ceiling space on review. Rainwater breeched flat roof membrane. Two simulated rainwater test carried out post repair with no evidence of issues. The updates on this particular issue was contained in the weekly handover report on the 12/11/21.Increase in gram negatives there were two cases reviewed in November. One was a baby who had a blood culture positive for pseudomonas; case note review undertaken and water checklist completed. Single case of Shewanella putrefaciens was reviewed by neonatologists and IPCT as this was an unusual organism. No further cases. This was not in a blood culture but a nasopharyngeal aspiration so possible colonisation.

This evidence demonstrates the actions taken to resolve the issues raised by Dr Peters and the outcomes of this. This data demonstrates the actions taken by the IPC team following due processes and outcomes of the issues raised by

Dr Peters. As DIPC I would have had sight of the processes in place and in working closely with the ICM I would have asked for assurance that all actions had been taken and reported appropriately.

198. Please discuss your involvement with Dr Inkster, and with her whistle blow e.g. what was your involvement, what interactions took place, what action was agreed on, what action was taken and/or implemented, how effective was the action, what was the outcome of the whistleblow, what did you understand to be the reasons for Dr Inkster's resignation, and when did your involvement cease?

A. I had no involvement in Dr T Inksters Whistle blow.

199. Please see **(A38378979 – Email from T Inkster to A Wallace re post-mortem cases for advice and cryptococcus – 30 April 2020 to 05 January 2022– Bundle 14, Volume 3, page 91)** – Dr Inkster referred to Serratia bacteraemia in a child which she thought should be investigated as HAI but was not. What steps did you take to understand the issues, and what did you understand the issues to be? What action was taken, if any, was taken in relation to the issues?

A. This e mail although sent in April 2020 is in reference to a child admitted to PICU in November 2019. IMT was held on 27 November 2019 where this child's case was discussed with the multidisciplinary team including paediatric intensivists. A summary of case and actions taken as a result of the meeting is found in **(A41890244 – IMT Minutes Gram Negative Ward 1A PICU – Bundle 1, Document 90, page 412)** HIIAT Assessed as AMBER and reported to ARHAI **(A41890244 – IMT Minutes Gram Negative Ward 1A PICU – Bundle 1, Document 90, page 415)**

This summary created from data found in the Infection Prevention Control Archives at this time, demonstrates the actions taken by the team to resolve the issues raised by Dr.Inkster.

200. Please see **(A38378979 – Email from T Inkster to A Wallace re post-mortem cases for advice and cryptococcus – 30 April 2020 to 05 January 2022 – Bundle 14, Volume 3, page 91) –** Dr Inkster expressed concern about management of a patient with Aspergillus. What steps did you take to

understand the issues, and what did you understand the issues to be? What action was taken, if any, was taken in relation to the issues?

A. Patient with aspergillus [redacted].

E mail alerting me to this was on the 1 September 2020. This would have been referred to IPCT on 30 August 2020. I discussed this with acting ICM and a summary of the case including extracts from e mails from Paediatric Intensivists Dr Spenceley dated 4 September 2020 is found in **(A50590311 – Case Summary – Patient with Aspergillus – 01 September 2020 – Bundle 27 Volume 14 page 81).**

I also, as noted in the email, requested a review of ventilation.

Actions

Case reviewed by IPCT and PICU consultant.

Air sampling carried out 4/9 I bed bay and theatre. No aspergillus identified in air samples.

Deep clean of area.

Single case of colonisation so reporting to ARHAI is not required.

This data demonstrates the actions taken by the infection prevention control team to resolve the issues and outcomes of this process.

201. Please see **(A38378979 – Email from T Inkster to A Wallace re post-mortem cases for advice and cryptococcus – 30 April 2020 to 05 January 2022 – Bundle 14, Volume 3, page 91)** Dr Inkster expressed concern about gentamicin resistant MSSA and difference of opinion between microbiologists. What steps did you take to understand the issues, and what did you understand the issues to be? What action was taken, if any, was taken in relation to the issues?

A. In order to answer this question I have had to review infection prevention control data archives from this time. My findings are as follows:

Gent Resistant MSSA – September 2020. **(A41890030 – PAG Minutes – NICU - Gentamycin Resistant MSSA – 25 September 2020 - Bundle 27, Volume 14, page 21)**

NB IPCT put controls in immediately and do no wait until the PAG to initiate these (please see below extract from PAG doc). They are often noted in PAG as update on actions then further actions. Please note the PAG was held

before Dr Inkster's e mail to me on the 30/9. Although referencing 2019 these cases would have occurred many months after. There is no surveillance system that reviews cases over this extended time period.
Initially two cases of colonisation on 31/7 and 3/8. This would not meet the threshold for initiating a PAG. Next cases were 31/8 and on this occasion one was a blood culture so this did trigger the PAG. Date of reporting all samples would be at least 48 hours after the sample was taken. PAG 25/09/2020 **(A41890030 – PAG Minutes – NICU – Gentamycin Resistant MSSA – 25 September 2020)**
For context please be aware that IPCT were also managing first waves of COVID during this time.
It was agreed at the PAG that if there was a further colonisation or bacteraemia with a Gentamicin resistant MSSA within a 2 week period, an IMT would be held.
This evidence demonstrates the actions taken to resolve the issues raised by Dr Peters and the outcomes of this.

202. Please see **(A47135247 - Email chain from Teresa Inkster to Christine Peter and Angela Wallace - Re: Gent R Staph aureus - 02 October 2020 to 20 October 2020 - Bundle 14, Volume 3, page 287)** Dr Inkster raised concerns regarding cases of MSSA in patients in NICU. What steps did you take to understand the issues, and what did you understand the issues to be? What action was taken, if any, was taken in relation to the issues?

A. In order to answer this question I had to review Infection Prevention Control Data archives from this time, my findings are as follows. Please see:
IMT held in relation to above on 5 October 2020. New case 28 September 2021 **(A41890031 - IMT Minutes – Gent Resistant MSSA - 05 October 2020 - Bundle 27, Volume 14, Page 15)**.
This evidence demonstrates the actions taken by the ICP team to resolve the concerns raised by Dr. Inkster and the outcomes of these actions.

203. Please see **(A42253437 – Email chain from T Inkster to A Wallace - Re: Re ESBL NICU - 11 May 2021 to 18 May 2021 – Bundle 14, Volume 3, page 303)** Dr Inkster raised concerns about the range of environmental organisms in

NICU. What steps did you take to understand the issues, and what did you understand the issues to be? What action was taken, if any, was taken in relation to the issues?

A. In order to answer this question I have had to review Infection Prevention Control Data archives from this time and my findings are as follows:

NICU 2021- Please note NICU is in the retained estate and not in RHC.
I was assured that the triggers remained in place and acted upon. SOP re environmental organism was in place at the time and these continues to be used for identifying clusters of different organisms although on reflection and after reading reports commissioned by GGC this may not be based on sound evidence. I also would like to note that to this date there continues to be no national guidance in respect to surveillance of these types of organisms despite the initial incident having occurred over six years ago.

It found that it was difficult to agree to the suggestion that a microbiologist from the South join the IMT as the IPCT indicated to me that they did not feel that they were in a psychologically safe place.

IPCT Carried out the following processes in relation to NICU Jan- May 2021
PAG held 23/04/21 re:3 *Enterobacter cloacae* colonisations in a 2 week period. HIIAT – Green, reported to ARHAI**.(A41890149 – PAG Minute dated 23 April 2021 - Enterobacter cloacae – NICU – Bundle 2, Document 78, page 192)**
PAG 22/01/2021 Gentamicin Resistant MSSA. Single isolate. **(A42001477 – PAG Minutes – NICU -Gentamycin Resistant MSSA – 22 January 2021 – Bundle 27, Volume 14, page 13)**
PAG 12/05/2021 Single HAI *Klebsiella oxytoca* bacteraemia. HIIAT AMBER reported to ARHAI**.(A41890097 – PAG Minute dated 12 May 2021 – HAI bacteraemia Klebsiella Oxytoca – NICU – Bundle 2, Document 79, page 196)**
PAG 15/01/2021 1 baby in NICU has isolated *Klebsiella oxytoca* from a blood culture (HAI NICU). HIIAT Green reported to ARHAI. **(A41890162 – PAG**

Minute dated 15 January 2021 – Gram Negative Klebsiella Oxytoca – NICU – Bundle 2, Document 75, page 186)

PAG then IMT commenced 30 April 2021 cluster of *Serratia marcescens* colonisation and GNBs. HIIAT Amber both myself and ARHAI colleagues in attendance. **(A41890048 – 30.04.2021 – IMT minutes Serratia marcescens NICU – Bundle 1, Document 97, page 445)**

Review of cases NICU E.coli Gentamicin Resistant on 10/05/21 LICD conclusion was **(A50590644 – Email chain re NICU E Coli Gentamicin Resistance (Redacted) – 07 May to 10 May 2021)** "I will have to say that GM resistance monitoring is more useful for microbiology surveillance of resistance patterns to inform appropriate AB management but not for IC purposes, unless you know the reason why would we be concerned about GM resistance in NICU? I will reply to South microbiology concerns once I get all info".

This evidence demonstrates the actions taken by the ICP team to resolve the concerns raised by Dr.Inkster and the outcomes of these actions.

204. What are your views on whistleblowing, and the whistleblowing culture at QEUH/RHC both before your appointment as IDIPC and on taking up your role?

A. Please see answer 180.

<u>Culture within Infection Control and Microbiology teams</u>

205. How would you define 'a supportive safe space' in relation to practice and where would you expect to encounter such a space?

A. I would describe a supportive safe space as the culture as a team working together to be able to focus on providing safe, effective and compassionate care for patients, families and their significant others. That being part of an organisation that we are clear that our roles, objectives and that our peers and other colleagues are kind, respectful and challenge us to improve every day and listen to us if we are unsure on their concerns or worries.

206. A review was carried out concerning the culture within Infection Control and Microbiology teams, and presented to Dr Penelope Redding by you:

(a) When was the review carried out and by whom?

A. This "review" was the discovery phase of the OD plan developed from the commission from CEO Jane Grant. The OD plan and "review" as part of that was led by myself and supported by two professional OD colleagues, one external, Mrs Jenny Copeland and one internal colleague with a background in psychology Dr Terri Hunter.

(b) When did you present the findings to Dr Redding?

A. I included colleagues across GGC including colleagues who had recently left the organisation; Dr Redding recently retired, and I wanted to include her. I presented the feedback to Dr. Redding by telephone call on Monday the 10th of May 2021.

(c) How was the review carried out? e.g. interviews, meetings, in confidence, open discussions?

A. The review had a range of approaches 1:1 interview, team meetings all were, as agreed, in confidence, and this was maintained. Open discussions were not used.

(d) What were the findings?

A. Refer to **(A49690612 - GGC Discovery Presentation – Bundle 27, Volume 10, page 235)** OD 5 stage plan feedback slides.

(e) What concerns were raised? e.g. about processes?

A. It is fair to say that the whole OD process was extremely difficult at times. This was due to the level of concerns, the differing views which remained and the depth of trauma I witnessed and experienced from the staff who were and had been involved in either microbiology or IPC. On the 11th of May 2021, P. Redding followed up from our call by email with concerns that the majority of responses to the OD discovery survey were received from the Infection Prevention Control Team and therefore may not truly represent the current

feelings from the Microbiology team. She also shared that some members of the Microbiology team felt it was too stressful to speak out and share their true opinions and worried how this may impact on patient safety. Terri Hunter and I reassured Penelope that further work had taken place to support both teams since the time of the survey findings, and that the opportunity to take part in this work was equally available to both teams. (**See A49690639 - Email Chain - Angela _ Penelope _ Terri – Bundle 27, Volume 10, page 346**).

(f) What actions were agreed on? What actions were implemented?

A. The actions from this work can be found at **(A49690612 - GGC Discovery Presentation – Bundle 27, Volume 10, page 235)** and formed part of the action plan within the silver command IPC section and monitored by the gold command chaired by the CEO.

(g) How effective were the actions?

A. Please see answer to Question (f).

(h) How would you describe the culture within the teams now, or at the time you ceased secondment?

A. There remains considerable tension between a small number of microbiology colleagues who continue to have concerns and direct these concerns to the IPC often in ways that are unacceptable and lacking in respect. The IPCT have continued their transformation work described early in the approach when I came into post, with a permanent Director of Infection Prevention and Control (DIPC) in place driving the development of the team and building effective internal and external relationships.

Reflections

207. What are your reflections from your time as IDICIP at QEUH/RHC?

A. When I joined NHSGGC, in my role as Interim Director of Infection Prevention and Control, I encountered a situation and context at a level of complexity that I have never experienced in over 40 years of service; indeed, I believe this situation is unlikely to be seen again in NHS Scotland.

In my immediate assessment and, through the discovery phase of my role, I could see that the safety and care of patients and their loved ones was at the core of this unique and complex situation.

However, the approach and impact of the external environment on a system that was focused on acting in response to concerns, and often extremely deep-seated views, added considerable adverse pressure which did not serve the process well. I could not understand some of the motivations I witnessed which seemed to be at odds with seeking the truth and being accountable to the public we served.

This may have hampered the ability to share the emerging information, which could give the family the answers they sought and be part of that process.
Furthermore, I frequently witnessed the external environment, including the Oversight arrangements and in particular the multiple stories in the media and from politicians which claimed to be in support of patients and families, add additional trauma and in some instances potentially, prolong their grief.
Although I could have chosen not to step up and taken on the responsibilities of Directing Infection Prevention and Control, I did so in the hope of supporting everyone involved. My approach was to be lead and seek to engage and build internal and external relationships to move forward.

The ability to ensure the IPC Team had the safety to practice and the support in which to provide the care we were required to deliver across NHS GGC was at the centre of my approach. Despite this focus, I continued to witness and try to manage relentless challenge, as well as a pattern of behaviours, including mistrust that drove a system at times to expend energy and often over-working when efforts should, and must, be focussed on caring for the people we serve today.

As a result, it was one of the most professionally difficult and challenging times that I have experienced. There is no doubt about the detrimental impact this has had on me professionally and personally including my family.

Despite the situation described in my reflections, being asked by SG colleagues to take on this leadership role in GGC and the way the IPC Team and the wider organisation responded to creating a way forward was incredibly rewarding. Furthermore, the support from the CEO and her team and the way they responded to someone who was essentially a colleague out with their system and structures at the most difficult times for NHS GGC was key in my decision to return to NHSGGC as the Executive Nurse Director.

I have provided my reflections and information based on my recollection of my time in NHSGGC and referred to the documents provided by the Scottish Hospitals Inquiry and on reviewing documents some of which were before my time in role in NHS GGC. In my interim role and now my substantive role I have seen and been part of the Board's continued focus on finding the answers to the questions of patients and their families and the wealth of external reports commissioned and prepared for consideration of the SHI.

208. Is there anything further that you would like to add, which might be of assistance to the Inquiry?

A. From the time I have been in the Interim Director of Infection Prevention and Control role and my current post as Executive Nurse Director in NHS GGC there has been a continuous approach to learning from the events and searching for the reasons of concerns arising from the QEUH and RHC. As part of the submissions in support of the remit of the Public Inquiry it is incumbent on me to point to the information contained within the multiple reports developed which I believe will be of assistance to the inquiry and to the families who seek answers to their questions.

Declaration

209. I believe that the facts stated in this witness statement are true. I understand that proceedings for contempt of court may be brought against anyone who makes, or causes to be made, a false statement in a document verified by a statement of truth without an honest belief in its truth.

210. The witness was provided the following Scottish Hospital Inquiry documents for reference when they completed their questionnaire statement.

Appendix A

A42909010 - Bundle of documents for the Oral hearing commencing 12 June 2023 - Bundle 1 - Incident Management Team Meeting Minutes (IMT Minutes)
A43144409 - Bundle of documents for the Oral hearing commencing 12 June 2023 – Bundle 2 – Problem Assessment Group Meeting Minutes (PAG Minutes)
A43293438 – Hearing Commencing 12 June 2023 – Bundle 6 – Miscellaneous documents
A32812773 – Hearing Commencing 19 August 2024 - Bundle 13 - Additional Minutes Bundle (AICC/BICC etc)
A49384241 - Hearing Commencing 19 August 2024 - Bundle 14 - Further Communications - Volume 1
A49529391 – Hearing Commencing 19 August 2024 - Bundle 14 - Further Communications - Volume 3
A48408984 - Hearing Commencing 19 August 2024 - Bundle 19 - Documents referred to in the Quantitative and Qualitative Infection Link expert reports of Sid Mookerjee, Sara Mumford and Linda Dempster
A50066716 - Hearing Commencing 19 August 2024 – Bundle 20 – Documents referred to in the Expert Reports by Andrew Poplett and Allan Bennett
A49553951 - Hearing Commencing 19 August 2024 - Bundle 25 - Case Note Review Expert Panel, Additional Reports, and DMA Canyon

211. The witness provided the following documents to the Scottish Hospital Inquiry for reference when they completed their questionnaire statement.

Appendix B

A50258433 - Hearing Commencing 19 August 2024 - Bundle 27 - Miscellaneous Documents - Volume 10
A50597123 - Hearing Commencing 19 August 2024 - Bundle 27 - Miscellaneous Documents - Volume 14

Appendix C

Angela Wallace CV (A49689031)

PROFESSOR ANGELA WALLACE RGN MBA FRCN

Honorary Professor : Faculty of Health, Sciences & Sport : Stirling University
Member of Scotland's Executive Nurse Directors
Fellow of the Royal College of Nursing

EXECUTIVE NURSE DIRECTOR & SENIOR NHS LEADER

Profile

An accomplished, person centred and dynamic senior Executive Director with a proven track record of success. This substantial track record stretches over a 35 years career history which is recognised with increasing levels of professional and strategic responsibility working within Health Boards and across the NHS in Scotland.

With a unique blend of skills and attributes is dedicated to improving care and services for people. That improvement focus is underpinned by workforce performance improvement and leading and sustaining change through leadership. As a motivational and inspirational leader who thrives in highly pressurised, complex and ever changing environments.

Renowned as a 'can do' credible leader and operating as an astute, insightful, strategic thinker and creative solution finder. With the ability to flexibly combine people development, continuous improvement and leadership expertise skills to design, develop, implement and sustain short and long term strategies that improve care, experience, safety and assurance for patients and the public.

Drawing upon significant experience and sustained development within the NHS to deliver transformational change with diverse groups and stakeholders locally and across NHS Scotland. Possessing excellent interpersonal communication and influencing skills plus the ability to develop and maintain positive relationships with new and existing partners.

With substantial leadership competencies which are evidenced through commitment to leading and driving key agendas to achieve significant successes in the pursuit of world class health and social care for those who need our services.

Qualifications

- 1995 to 1998 Masters in Business Administration, Glasgow Caledonian University
- 1989 to 1991 Diploma in Professional Studies, National Board for Scotland

- 1983 to 1986 Registered General Nurse Training, United Kingdom Central Council
- 2008 to present Appointed Honorary Professor, University of Stirling, Faculty of Health Sciences and Sport
- July 2016 Awarded Fellowship of the Royal College of Nursing, United Kingdom

Development

- Coaching Programme – Certified Coaching Course 2021 “Personal Mastery in Coaching and Mentoring”
- Bespoke Leadership Development Programme (NES Funded) Focus on Leading and Challenging in Integrated Spaces
- Executive Patient Safety Officer Programme Institute for Healthcare Improvement (IHI) Harvard, Boston – USA
- Executive Nurse Director Board Development Burdett Trust with Kings Fund
- Executive Leadership Development - Including 360 degree feedback NHSScotland Leadership Qualities Feedback Tool
- Exceed – National Leadership Programme NHSiS & Office for Public Management
- Media Training

Elected

- Chair of Scotland’s Executive Nurse Directors (SEND) 2015 - 2017

Core Competencies

- Setting vision & strategy
- Managing change
- Taking risks & innovating
- Tactical & solution finder
- Building and maintaining relationships
- Developing others
- Valuing diversity
- Continuous improvement

Transferable Skills

- The ability to hit the ground running, working in a way that is confident and open to advice.
- Credible and expert leader who strives to build effective relationships
- Proven track record of delivery across a wide range of corporate priorities
- Adept at managing today whilst planning for the future
- The ability to lead and influence and remain effective in turbulent times

Career History Summary

2022 to Present Executive Director of Nursing, Midwifery & Allied Health Professionals and
Health Care Scientist
2004 to 2022 Executive Director of Nursing, Midwifery & Allied Health Professionals, NHS
Forth Valley - **Promotion**
(2020 to 2022) Interim Director of Infection Control and HAI Executive Lead – NHS GGC
2003 to 2004 Director of Nursing, Forth Valley Acute Operating Division - **Promotion**
2002 to 2003 Interim Director of Nursing, Forth Valley Acute Operating Division -**Promotion**
2001 to 2002 Deputy Director of Nursing, Fife Acute Hospitals NHS Trust- **Promotion**
2001 to 2002 Acting Director of Nursing, Quality, Therapies & Rehabilitation Fife Acute Hospitals NHS Trust **- Professional Development/Promotion**
1999 to 2001 Directorate Nurse Manager – Medicine, Rehabilitation & Care of the Elderly Fife Acute Hospitals NHS Trust - **Promotion**
1996 to 1999 Nursing & Quality Adviser – Senior Nurse Quality & Audit South Glasgow University Hospitals Trust -**Promotion**
1991 to 1996 Charge Nurse – Intensive Care & Coronary Care Units Victoria Infirmary, Glasgow - **Promotion**
1983 to 1991 Nurse Training & Staff Nurse Post - Victoria Infirmary, Glasgow - **Promotion**

Career Profile and Achievements

2022 to Present - Executive Director of Nursing, Midwifery & Allied Health Professionals and
Health Care Scientist

Key Responsibilities

The executive nurse director for NHS greater Glasgow and Clyde responsible for leading Nursing, Midwifery, Allied Health Professions and health care scientists in one of the largest healthcare systems in Europe. Providing strategic direction for over 18,000 nursing and midwifery staff, caring for a population of over 1.3million people, in a system with an annual budget of 4.4 billion. Executive lead for patient safety and person centred care, quality strategy public protection and lead for Health and Safe Care staffing act and Infection Prevention control.

Contributes to and delivers effectively across the full range of corporate governance for NHS GGC. Directs and manages on this diverse range of organisational priorities through small group of direct reports, Deputy Nurse Directors, Director of Midwifery and Allied Health profession, Heads of Nursing and Midwifery and Health

Care Science Strategic Lead with responsibility of total nursing budget in the range of £1 billion.

Key Achievements

- Created and implemented the first Public Protection Strategy for GGC – Safe guarding it matters to us. This was approved by the board in February 2024.
- Developed a unique approach to engage with Nurses and Midwives across NHS GGC to develop the first NHS GGGC Nursing and Midwifery Strategy. - Nursing and Midwifery in GGC 'Leading the Way'.
- Designed NHSGGC new Quality Strategy 'Quality everyone, everywhere' with significant co-production approach. Approved by the board June 2024.
- Director of Infection Prevention Control role is now fully established within NHSGGC reporting to the Executive Nursing Director and first IPC annual reports showcasing IPC developments for 22/23 developed.

2004 to 2022 - Executive Nurse Director, NHS Forth Valley

Key Responsibilities

The Executive Nurse Director for NHS Forth Valley who is responsible for leading the Nursing and Midwifery and Allied Health Professions and holds the accountability for the safe and effective practice of these professions. The principle nurse, a member of the NHS Board, providing professional advice and leadership on all matters relating to the professions. The Executive lead for Infection Control, Person Centre Care, Equality & Diversity, Whistleblowing, Mental Health, Learning Disabilities and Prisons, Children, Families and Child Protection, Safe Staffing and Health & Social Care system lead for assurance and oversight of care homes.

Appointed by NHS GGC and Scottish Government as Interim Director of Infection Control and HAI Executive Lead.
Provision of leadership, review and systematic support across NHS GGC in relation to Infection, Prevention and Control and a key role in directing and delivering infection control improvement agenda across NHS GGC and ensuring this learning influences national requirements as part of the Scottish government oversight arrangements.

Leads the delivery of a range of NHS Scotland policy initiatives including co-chair national model framework of health and care for care homes, transforming nursing care home roles. Membership of the Scottish Government Oversight Board in respect to Infection Control for NHS GGC and membership Advice Assurance Review Group (AARG) for the Scottish Government in support of Infection Control in NHS GGC. Appointed chair of Female Pathways (Forensic Mental Health) Delivered policy programmes of work including; the review of the Senior Charge Nurse and Leading Better Care, national review of learning disability nursing.

Key Achievements

- Created, developed and implemented a nursing and midwifery care assurance system that drives performance improvement in fundamental aspects of nursing care and is designed to detect changes that may prevent sub optimal care. Evidenced by the first HEI report with no recommendations or requirements and Cabinet Secretary positive press release from Older People in Acute Hospitals visit to Forth Valley Royal Hospital.

- Systematic development and implementation of progressive and ambitious nursing strategy to achieve a safe and effective nursing and midwifery service. Including consistent and dynamic use of workforce tools and the achievement of the first non case holding Senior Charge Nurse in Scotland.

- Dedicated and sustained focus on the implementation and delivery of the Scottish Patient Safety Programme (SPSP) since its inception on traction to achieve 20% reduction in Hospital Standard Mortality Rates (HSMR) and achieved and exceeded 30% reduction in adverse events significant success across all workstreams.

- Sustained focus on improving care and services by listening to patients. First to implement Patient Experience. Developed first Patient Experience Strategy in NHS Scotland. Instigated and maintained patient and public participation structures focused on improving care and achieving greatest levels of public engagement in the build of Forth Valley Royal Hospital and continues this today.

2003 to 2004 Director of Nursing, Forth Valley Acute Operating Division

Key Responsibilities

The leadership and accountability for the nursing and midwifery service across the Acute Trust then Acute Operating Division. The Lead Executive for Clinical Governance, including HAI and patient focus and quality of care.

Key Achievements

- Created and implemented a strategic and operational framework for the nursing and midwifery service to ensure synergy and integration with the corporate endeavour. This included success on the delivery of agreed objectives, changes in practice and positive effect on culture.
- Key role in the development and implementation of the Trust's Clinical Governance objectives and subsequent achievements in structure, clinical practice and patient care.
- Achieved improvement in the Trust's complaints performance in respect to both 20-day target and organisational approach and culture. Engaged the clinical units and their staff in a supportive way.

2002 to 2003 Interim Director of Nursing, Forth Valley Acute Operating Division

Key Responsibilities

For fourteen months in an interim post, contributed significantly to the development and delivery of the organisation's objectives. Commenced on a systematic approach to develop the nursing & midwifery service. A key member of the Executive and Trust Management Team delivering on an ambitious and exciting change programme which forms the cornerstone of the corporate objectives and Forth Valley Healthcare Strategy.

In addition, lead responsibility for the organisation's Clinical Governance arrangements including Patient Focus and Public Involvement.

Key Achievements

- Significant influence on the PFPI agenda across Forth Valley. Refreshed and refocused the strategic framework and objectives. Developed the first patient panel, integrated PFPI into organisation's top priorities, and achieved dedicated resource to ensure capacity to deliver.
- Modernisation and development of the Department of Nursing including the development of a practice development unit to support front line staff in conjunction with the Unit Management Team

2000 to 2002 Depute Director of Nursing including Acting Director of Nursing, Quality, Therapies & Rehabilitation - Fife Acute Hospitals NHS Trust

Deputised and supported the Director of Nursing across the full range of her responsibilities. Provided professional leadership through support and advice that enabled nursing and midwifery to deliver safe, high-quality patient-centred services. Additionally delivered on a diverse portfolio of corporate functions including nursing and midwifery practice and professional development, infection control, management of outpatient service, bed and bank service, patient involvement and quality agenda.

Key Responsibilities

Contributed as a member of the Executive Team and led, on behalf of the Chief Executive, a range of responsibilities including Clinical Governance, patient involvement initiatives and Trust complaints management. Participated in decision-making which enabled corporate decisions to be made on sound clinical information ensuring all resources allocated to the Trust were directed to meeting agreed targets.

Key Achievements

- Led the organisation through the Health Quality Service Accreditation preparation and review visit. Achieved partial accreditation with only 27 of the 4,000 criteria requiring further development.
- Recommended and secured the Trust's commitment to undertake Picker Europe patient feedback initiative. To build a baseline information for the Trust to develop this agenda further. Advised the Chief Executive on a clinical basis in the management of significant critical incidents.
- Role involved communication with patients, relatives, Scottish Executive, Health Board, Local Health Council and the media to ensure an open and transparent approach.

1999 to 2000 Directorate Nurse Manager – Medicine & Care of the Elderly-

Fife Acute Hospitals NHS Trust

Key Responsibilities

A new post which combined nurse management and professional leadership to 595 wte nursing staff. The scope of the post was across 34 wards over four sites and a budget of £13.3m. This required a significant degree of personal and professional credibility to re-establish this role in a flat structure but with a professional aim of being a part of a network and not recreate a nursing hierarchy.

Key Achievements

- Identified organisational structures and systems, which supported the efficient delivery of healthcare by the reduction in the usage of temporary nursing staff. This eradicated the Directorate's overspend of £250,000 in this area with proven improvement in the quality of patient care delivery.
- Led reorganisation of services within medicine to meet Directorate corporate objectives. This involved both investment and disinvestments of services through partnership working.
- Launched a programme of initiatives aimed at improving patient care through the development of the charge nurse role. This resulted in an inspired group that then led individual improvement initiatives in their ward. This style of leadership was recognised by the Scottish Health Advisory Team visit.

1996 to 1999 Nursing & Quality Adviser – Senior Nurse Quality & Audit South

Glasgow University Hospitals Trust

A senior nurse and direct support role to the Director of Nursing and Quality, with a focus on the development of the professional agenda

1991-1999 Senior Charge Nurse Intensive Care and Coronary Care Unit -

NHS Greater Glasgow and Clyde - Victoria Infirmary, Glasgow

[redacted]

[redacted]

[redacted]

Scottish Hospitals Inquiry
Witness Statement of
Jennifer Haynes

Introduction

1. My name is Jennifer Lynne Haynes. I am currently employed by NHS Golden Jubilee University National Hospital as Service Manager for Theatres and Decontamination. I was previously employed by NHS Greater Glasgow and Clyde ('NHS GGC').

2. I joined NHS GGC in 2007 and left in 2022. During my time I held a number of different posts:
   - 2007 to 2008 – Administration Assistant for Paediatric Managed Clinical Networks (Yorkhill Hospital);
   - 2008 to 2010 – National Graduate Management Trainee – employed by NHS National Services Scotland, but placed in NHS GGC;
   - 2010 to 2012 – Operational Support Manager for Neurosciences (Institute of Neurosciences, Southern General Hospital);
   - 2013 to 2014 – Business Manager for Chief Executive Office (JB Russell House, Gartnavel Royal Hospital);
   - 2014 to 2016 – Clinical Service Manager for Care of the Elderly and Stroke – (Gartnavel General Hospital);
   - 2016 to 2022 – Board Complaints Manager, which then transitioned into Corporate Services Manager (JB Russell House, Gartnavel Royal Hospital).

3. I left NHS GGC in February 2022 to take up my current role as Service Manager for Theatres and Decontamination at NHS Golden Jubilee Hospital.

4. I have an M.A. Honours Degree in Public Policy from the University of Glasgow and an MSc in Health and Public Leadership from the University of Birmingham.

5. The Scottish Hospitals Inquiry (the 'Inquiry') has asked me to provide a written statement in preparation for the Glasgow III hearings commencing later this year in relation to my experiences during my time at NHS GGC.

6. This statement seeks to provide that information to the best of my recollection.

NHS GGC Role

7. When I was Corporate Services Manager for Complaints from March 2016 until February 2022, my responsibility was for the strategic direction, leadership and specialist expertise in the management of complaints and monitoring of performance of complaints across the whole of NHS GGC. I was also operationally responsible for the management of the Board's complaint function, and therefore required to take senior decisions on a wide variety of complaints related issues.

8. Duty of Candour legislation was not part of my direct responsibility in any posts I held in NHS GGC, however, I do have a working knowledge of it, because of the type of work that I undertook. My understanding is that Duty of Candour means that if an adverse event happens to a patient, the organisation is required to be honest and transparent about what happened, by explaining to the patient what went wrong. The organisation should also apologise to the patient for any such incidents, and communicate effectively with them about any investigations, learning and actions.

9. I have been asked if I am aware of the duty of candour held by clinical staff towards their patients, separate to that of NHS GGC as an organisation. I am aware that there is a professional duty of candour for clinical staff towards their patients, which means clinicians should always be open and honest with patients when something has gone wrong with their care or treatment. I realise this is different to legislative Duty of Candour, which organisations require to adhere to. I am not an expert on Duty of Candour, so my knowledge of it is not detailed.

Whistleblowing Process

10. As part of my role as Corporate Service Manager for Complaints, I took over responsibility for the whistleblowing function for NHS GGC in early 2018 up until I left NHS GGC in 2022. Similar to complaints, I was responsible for the strategic direction, leadership and specialist expertise in the management of whistleblowing and monitoring of performance across the whole of NHSGGC. I was also operationally responsible for the management of the Board's whistleblowing function.

11. There was an NHS GGC whistleblowing policy in place and at that time, which was an internal, local policy. Sometime later, National Whistleblowing Standards were published, which all Boards in Scotland have to adhere to. I think this was in 2021.

12. The NHS GGC whistleblowing policy at that time consisted of:

- Stage 1 – local investigation, undertaken by line manager
- Stage 2 – more formal investigation, undertaken by a nominated Director, from a different service and with support from the NHSGGC whistleblowing function
- Stage 3 – formal investigation undertaken by a Non-Executive Board Member

13. Whistleblowers received the findings via a formal report, however, this was not possible if concerns were raised anonymously.

14. I attended a number of meetings related to whistleblowing, including meetings with whistle-blowers themselves, meetings with witnesses as part of an investigation, and meetings with investigators (nominated Directors). I also went to operational meetings regarding whistleblowing – for example, to give updates on performance, as well as national meetings regarding whistleblowing.

15. I was asked by the Inquiry if I attended ant IMT's, which I did not. IMTs are not part of whistleblowing processes.

16. In 2018, a new whistleblowing concern was raised by Dr Penelope Redding, Consultant Microbiologist, regarding ventilation in the QEUH and RHC. Dr Redding made a further whistleblowing concern after she retired. I also had some contact with Dr Christine Peters, Consultant Microbiologist, as part of whistleblowing processes, but I cannot recall the detail of that.

17. An anonymous whistleblowing concern was also submitted regarding the Initial Assessment Team (IAT) who were considering the issues in the QEUH / RHC.

18. In relation to the specific whistleblowing cases detailed above:

- Dr Redding's Stage 2 whistleblowing was investigated by Linda de Caestecker. Dr Redding asked on 21 November 2019 to progress her whistleblowing process to Stage 3, which was investigated by Ian Ritchie, supported by William Edwards. After the Stage 3 level investigation was completed and Dr Redding received the final report, she asked for a number of changes, but was advised in a detailed response why that was not possible. This was because the final report was the outcome reached by the investigators. I was Dr Redding's main point of contact for whistleblowing.

- For the anonymous whistleblowing concern raised in August 2019, this was investigated by Linda de Caestecker, supported by Barbara Anne Nelson, who was an HR Director in another Health Board at the time. This was to help give assurance of impartiality. I was involved in that case the same as I was for all other cases, in that I worked with the Directors, attended interviews and wrote the draft final report.

19. My responsibility for the whistleblowing function in NHS GGC included ensuring that all concerns were investigated via the policy, supporting whistleblowers, witnesses and investigating Directors, reporting on whistleblowing performance and representing NHS GGC at national whistleblowing meetings. On a day-to-day basis, this involved being the point of contact for all those who had raised whistleblowing concerns, supporting them, linking with departments / individuals

who had been named in whistleblowing concerns, attending interviews, reviewing evidence and writing final whistleblowing case reports.

20. Prior to the introduction of the national whistleblowing standards in 2021, there were no further options available after Stage 3. As described previously, Dr Redding wished for a range of changes to be made to the Stage 3 final report, and the Board Chair and Director of Corporate Governance both wrote to her regarding that at the time.

21. I have been referred to the whistleblow policy **(A38225430 - NHS GGC Whistleblow policy as at 2013 - Bundle 27, Volume 4, page 45)**. It has been stated to me that when Dr Redding made the Stage One Whistleblow in 2017, the policy was out of date. I have been asked given my responsibilities for whistleblowing can I explain why this was the case and who was responsible for reviewing and updating the whistleblow policy. I was not involved in whistleblowing in 2017, so I cannot explain why it was out of date. John Hamilton, the previous Head of Administration, was responsible for whistleblowing at that time. He retired in 2018.

22. I have been referred to three documents: **(A38759263 – Email chain between Penelope Redding, Tom Walsh and Jennifer Armstrong – 05 September 2017 to 03 October 2017 – Bundle 14, Volume 1, page 722); (A32452188 – SBAR RE Infection Control and Patient Safety at QEUH – Bundle 14, Volume 1, page 732); (A32353240 - NHS GGC - Infection Control Issues Meeting Minutes dated 4th October 2017 – Bundle 12, page 883); (A38759270 – Action Plan arising in response to SBAR – 3 December 2017 – Bundle 27, Volume 4, page 338).** I have been asked if I recall the Stage One Whistleblow, if I recall what actions were taken and what is my view on the adequacy of the actions taken. I was not involved in this whistleblowing; it took place before I was involved in the whistleblowing process. I was, however, involved in a subsequent Stage 3 whistleblowing which considered the handling of this Stage 1 whistleblowing. There is a detailed report from the Stage 3 whistleblowing which details the findings and outcomes.

23. I have been referred to an email chain: **(A40450652 – Email chain from R. Bajwe to J. Haynes – FW: STEP 2 – Whistleblowing Policy Ventilation at QE and RHC – 08 February 2018 to 13 April 2018 – Bundle 14, Volume 2, page 71).** I have been asked if I recall this whistleblow, what was my involvement and can I recall the outcome. Yes, I was involved in this case. I supported Linda de Caestecker, who led the investigation, by arranging and attending interviews to gain views on the concerns raised, reviewing documents and drafting the report. I cannot recall the outcome, but it will be detailed in the final report.

24. It has been stated to me that Dr Redding's Stage One whistleblow became subject to a Stage Three whistleblow due it not being recorded by NHS GGC as a whistleblow at the time. I have been asked what my view on this, should it have been treated as a whistleblow and can I recall the outcome. My recollection is that this issue was raised in a Stage 3 whistleblowing, along with a range of other issues. From memory, although the original Stage 1 submission was not labelled as a whistleblowing concern, Dr Redding later referred to escalation to Stage 2, which would suggest she considered her original submission a Stage 1. I think the Stage 1 was submitted to Dr Armstrong, the Medical Director, who had not realised that Dr Redding had intended her concerns to be considered under the whistleblowing policy, and therefore did not treat it as such.

25. With the benefit of hindsight, I think it should have been treated as a Stage 1 whistleblowing, or clarity sought if that was the intention, but I do not believe there was any ill intent in not doing so; my impression was that Dr Armstrong simply did not realise that was Dr Redding's intention. Dr Armstrong did take the concerns seriously, by convening a meeting, from which an action plan was produced and worked through.

26. From memory, I think the outcome of the Stage 3 whistleblowing, which will be detailed in the final report, was similar to what I have described above.

Communications with Patients and Families

27. I cannot recall when and how I became aware of the issues at QEUH. It was an issue that began to emerge over time, but I cannot pinpoint an exact time when I became aware.

28. I was the point of contact for all families with queries related to the QEUH/RHC issues. I think I was asked to assist with this work due to my role (and therefore skill set) with complaints, and my position within the organisation in Corporate Services, reporting to Elaine Vanhegan. For all families that required a written response to questions, I would liaise with the relevant colleagues to find out the information and draft the response letters. These would be reviewed and signed by a senior colleague, usually the Chief Executive Officer, Chief Operating Officer or Deputy Medical Director. I kept a log of all communication, and the stage we were at with it, to ensure that it was all documented, and that all enquiries received a response. This was shared regularly with colleagues such as Jonathan Best (Chief Operating Officer) and Scott Davidson (Deputy Medical Director), to ensure there was awareness and updates to senior officers.

29. My role was to be the main point of contact into NHS GGC for affected families, so they had a route into the organisation, and a named person they could go to. A large part of the role was therefore email and telephone correspondence with families, as well as investigating individual concerns and preparing response letters, liaising with the Scottish Government, and assisting with draft communications that went out to all families. There was no job description or defined role, as it was something that developed over time, and was responsive to what was required. *I did not have a role in liaising with the media.*

30. Although there was no job description or written expectations of what I would cover with this work, I very much saw my role as supporting patients / families and advocating for them. For example, investigating and getting answers to questions they had for NHS GGC was one of the biggest parts of my role, and I took my responsibility to review the information and use it to draft thorough,

honest, clear and kind response letters very seriously. Similarly, whenever I was emailing patients / families, or speaking to them on the phone, I tried very hard to ensure that I was empathetic, approachable, kind and supportive in my contact. I was always hugely conscious of how upset and worried families were, and wanted to do whatever I could to help them.

31. I did have a role with the case note review, but due to the passage of time, I cannot recall what that was.

32. Also due to the amount of time that has passed since I was involved with this work, I cannot remember details and specifics for all of the work. I do, however, recall there were concerns about approach and wording. For example, I was aware that the Scottish Government put pressure on NHS GGC to send a specific communication out to all families potentially affected by what was being reported. I cannot recall the details, but I do remember thinking that the approach was wrong, and that families (some of whom had lost children) would receive a letter out of the blue. I was worried this was insensitive, and another approach, or choice of wording, would be better. I believe NHS GGC did raise concerns about this. My name was on the letters as the contact point, and afterwards, a bereaved mother phoned me, absolutely devastated to have received the letter. She was crying and described the distress it had caused her. I remember being really upset that we had caused that distress, and it had been avoidable if a different approach had been taken.

33. In my view, it is absolutely right that public bodies, especially Health Boards, are held accountable. For this particular situation, that is even more important, given the ramifications. Working in the NHS GGC Board Headquarters and doing the type of role that I was doing, I was acutely aware of the pressure that was being put on the NHS GGC senior leadership team by the Scottish Government. I was sometimes thoughtful of whether the interactions were conducive to an effective working relationship and getting answers to the extremely important questions.

34. From a personal perspective, I found this a particularly hard chapter of my career. The subject matter was hugely emotive, and my heart went out to the patients

and families involved whom I was in regular communication with. I cannot begin to imagine how distressing it must be to have a child diagnosed with cancer, and all that happened in the QE/RHC brought even more worry to them, at an already incredibly difficult time. This was coupled with a significant amount of media stories, which seemed often to add fuel the fire, and cause more distress.

35. I have been asked my view on why patients and their families were not satisfied with the communications approach/strategy. My view was that there was a perception of NHS GGC not being open and honest with families, and that NHS GGC were covering up the truth. I recall a number of media stories at the time being negative about the NHS GGC senior leadership team. I think this must have influenced families' perceptions, and some individuals came across to me in their communications as wary, suspicious and untrusting of NHS GGC managers.

36. There were also times where it took a while to respond to concerns, whilst an investigation was underway into the issues patients and families had raised, and the various checks and approvals were taking place on draft responses, including with the Scottish Government. This sometimes meant delays in responding to families, which I think may have added to poor perception, as it may have been seen as NHS GGC taking time to try to 'cover up' the truth.

37. At the time, NHS GGC was also on special measures with the Scottish Government, which was widely publicised in the media, and I think this also added to the perception that the NHS GGC senior leadership team was dishonest.

38. I was not a senior manager in NHS GGC (in comparison to the Directors I was working with), but I have a strong moral compass, and work in the NHS because I want to make services better for patients. I would never have told patients untruths or been anything other than open, honest and kind. I recall at the time a friend telling me she was scared to take her baby to the RHC, because of all the issues being reported in the media. It made me really sad and worried that

because of media stories, the perception the public had of NHS GGC was that the QEUH and RHC were unsafe for patients. I therefore could understand why families involved in the issues had the perception they did, and I had a huge amount of empathy for them, considering how ill their children were.

39. I have been asked my view on whether patients and families were sufficiently informed and involved in respect of the issues within the QEUH and how these had/would have an impact on them. I think that every effort was made to try and do the right thing and keep patients/families informed and involved in a clear, timely, honest and transparent way. I am sure with the benefit of hindsight some things could have been done differently, but I think that the intent was right and that those involved did their best.

40. I have been asked my view on whether the approach taken by NHS GGC when communicating with patients and their families was adequate. I think NHS GGC did their best to communicate well with families. The circumstances were very difficult, due to NHS GGC's primary concern for patients/families, against a backdrop of regular negative media stories, input from the Scottish Government, staff concerns and a myriad of other factors and complexities. My impression was that the senior leadership team in NHS GGC were under a huge amount of pressure, but that they did want to do the right thing by patients / families.

41. I have been referred to the following document: **(A34259839 – List of issues raised by the families of children treated on the haemato-oncology wards at Queen Elizabeth University Hospital and Royal Hospital for Children with the Cabinet Secretary for Health and Sport, and responses by NHS GGC published 30 October 2019 – Bundle 6 (Hearing Commencing 12 June 2023), page 77).** I have been asked what is this document and what was my role in preparing this document. This is an information sheet, that was sent out to all affected patients/ families. I cannot recall the detail now, but I think I was involved in drafting and finessing it, then sending it out to all the affected patients / families. This would have been done in conjunction with numerous colleagues, and possibly with Scottish Government input too, from Professor Craig White.

42. It has been stated to me in respect of the same document that I am the noted as the point of contact for families in respect of questions relating to their child's care and treatment. I been asked how I became involved in this process and why I was allocated this role. I have been asked whether I recall receiving questions from parents or carers as a result of this document and whether this document was helpful in alleviating concerns. I became involved in this work organically; my direct line manager was Elaine Vanhegan, I worked in the Board Headquarters and with the senior leadership team for NHS GGC on a daily basis. I also had a skill set in investigations and writing letters to patients / families / staff, due to leading on Complaints and Whistleblowing for the Health Board. I do not recall a specific occasion where I was formally asked to become involved or told that my job remit would change. At the time, I was aware of a huge amount of pressure and concern within the Board Headquarters, and it was an 'all hands on deck' type of situation.

43. I do not know if the document was helpful in alleviating concerns, but I certainly hope that it was. I cannot recall if this document specifically instigated further contact from families.

Declaration

44. I believe that the facts stated in this witness statement are true to the best of my knowledge, information, and belief. I understand that this statement may form part of the evidence before the Inquiry and be published on the Inquiry's website.

Appendix A

A43293438 - Bundle 6 - Miscellaneous Documents

A47069198 - Bundle 12 - Estates Communications

A49525252 - Bundle 14, Volume 1 - Further Communications

A49541141 - Bundle 14, Volume 2 - Further Communications

A49799834 - Bundle 27, Volume 4 - Miscellaneous Documents

Scottish Hospitals Inquiry
Supplementary Witness Statement of
Sandra Bustillo

BMT Ward 4B decant communications

1. Evidence has been heard about the decision to transfer the adult Bone Marrow Transplant (BMT) Unit back to the Beatson West of Scotland Cancer Centre shortly after the opening of the Queen Elizabeth University Hospital. This supplementary statement sets out my understanding of the communications handling of that decision. Relevant documentation has previously been submitted to the Inquiry in RFI 6, Annex 1 – 2 (iii) b; (iv) h.

2. In July 2016, I was the Associate Director of Communications. I was on annual leave when the decision to transfer the adult BMT unit was made but have had sight of documents and emails on this issue including those between Ally McLaws, the then Director of Communications, and Emma Edwards, former NHS Greater Glasgow and Clyde Media Manager with managers and clinicians on communications handling.

3. The adult BMT service transferred on 6th June 2015 as part of a phased migration of services to the new QEUH. As part of routine infection control measures for BMT it was agreed to reintroduce air sampling and, on 30th June 2015, the first results showed air particle counts in excess of recommended standards in 23 of 24 rooms.

4. Significant works were carried out on the Unit's ventilation and six air changes per hour were achieved along with an improved pressure cascade differential but, according to a report prepared by Gary Jenkins, Regional Director, on 6th July 2015, "The ICD reported that whilst there had been an improvement in the particle count across 9 rooms, the remainder remained non-compliant'. Following clinical debate, it was agreed on the balance of risk to transfer patients back to the Beatson.

5. Different positions were held by the Board and by the main contractor as to whether the rooms had not been built to a stated formal specification or whether the specification itself was at fault. The lack of an agreed position on responsibility for the issues which led to the decision to move and the potential consequences of this, including future possible litigation, were key factors in consideration of communications on this matter as can be seen from an email exchange between Ally McLaws and Scottish Government Head of Press Health Suzanne Hart on 8th July 2015.

6. What was agreed between both NHS Greater Glasgow and Clyde and Brookfield Multiplex was that the unit needed work before it could be used for transplants. The air sampling results contributed to this position and also contributed to the decision to transfer the service back to the Beatson. This then was the context for the way the press release was framed, specifically the introduction explaining air sampling results as the reason for the decision to move.

7. Patients were informed of the decision to transfer by Dr Anne Parker, Consultant Haematologist and Lead Clinician, BMT Unit, and Alyson McArdle, Senior Charge Nurse on Ward 4B. The press release was agreed with Dr Parker and senior managers and issued to all media, shared with the public via the Involving People Network (an email distribution system described in detail in my principal witness statement) and shared with all NHSGGC staff through a Core Brief on 7th July 2015.

8. Drs Redding, Peters and a third infection control doctor raised the press release in October 2017 when they questioned the comment that these issues did not affect the paediatric BMT. This was, I understand, a statement of fact about the move. The paediatric BMT unit within Ward 2A was not being moved and the inclusion of this statement was to make that clear. Additionally, the situations within the paediatric Ward 2A BMT Unit and the Adult BMT Unit were profoundly different. Ward 2A/B had been designed for the patient cohort (including bone marrow transplant patients) it treated and, while immediate technical faults were noted (especially the lack of HEPA filters), these were

immediately rectified. QEUH Ward 4B in contrast had not been purpose built for the cohort of patients and was a late alteration to construction already underway. I therefore believe the proactive statement to be accurate.

Bundle of documents for Oral hearings commencing from 19 August 2024 in relation to the Queen Elizabeth University Hospital and the Royal Hospital for Children, Glasgow

Witness Statements – Week Commencing 21 October 2024 – Volume 10

A50625965