Scottish Hospitals Inquiry
Witness Statement of
Dr S Chaudhury

Personal Details

1. My name is Dr Shahzya Shahrin Chaudhury. I am a Consultant in Paediatric Haematology at Glasgow Royal Hospital for Children ("RHC").

Education

2. I studied at the University of Cambridge in 2002 and gained my BA (Hons) degree, then my MBBChir followed in 2005. The next year in 2006, I received my MA from the University of Cambridge (honorary). In 2009, I achieved my MRCP UK from the Royal College of Physicians and in 2013, FRCPath from the Royal College of Pathologists. In 2017, I completed my PHD in Leukaemia at the University of Glasgow.

3. I also have the following qualifications: Advanced Life Support in 2006; Advanced Trauma Life Support in 2007; and Basic Paediatric Life Support and Recognition of a Sick Child in 2016. These qualifications were gained when I worked in previous jobs, prior to taking up my post as a consultant in the paediatric hospital. The courses are national courses (for example, through the Resuscitation Council, UK) but were delivered through the hospital board I worked at.

4. I have achieved several awards and prizes. In 2013, I received the Yorkhill Leukaemia and Lymphoma Fund research grant. In 2014 I won the Yorkhill Research Day Prize Winner – Short Communication, and the 3 Minute Thesis Heat Winner (University of Glasgow, MVLS). In 2016, I won the American Haematology Society Merit Award, University of Glasgow Conference Funding Award and the European Haematology Association Travel Award.

Professional Background

5. I qualified from medical school in 2005. Between February and August 2005, I worked as a pre-registration house officer in the West Sussex Hospital in Bury St Edmunds in Respiratory and General Medicine. I then started Foundation Training in South-East Scotland. My Foundation posts were as follows:

   FY1 Medical Combined Assessment and Cardiology at the Royal Infirmary of Edinburgh, August 2005 – February 2006.

   FY1 Surgical Combined Assessment, General Surgery and Plastic Surgery at the Royal Infirmary of Edinburgh and St John's Hospital Livingston, February 2006 – August 2006.

   FY2 Gastroenterology at the Royal Infirmary of Edinburgh, August 2006 – December 2006.

   FY2 Orthopaedic Surgery and Accident and Emergency at the Borders General Hospital, Melrose, December 2006 – April 2007.
   FY2 Paediatrics at the Royal Hospital for Sick Children, Edinburgh, April 2007 – August 2007.

6. In August 2007, I moved to the West of Scotland for Speciality Training (ST) in Medicine. My posts were as follows:

   ST1 Oncology at the Beatson West of Scotland Cancer Centre, August 2007 – December 2007.

   ST1 Respiratory Medicine at Gartnavel General Hospital, Glasgow, December 2007 – April 2008.

   ST1 Rheumatology and General Medicine at Gartnavel General Hospital, April 2008 – August 2008.

ST2 General and Stroke Medicine at the Western Infirmary, Glasgow, August 2008 – December 2008.

ST2 General Medicine at the Vale of Leven District General Hospital, Alexandria, December 2008 – April 2009.

ST2 Renal Medicine at the Western Infirmary, Glasgow, April 2009 – August 2009.

7. I commenced Specialty Training in Haematology in August 2009 in South-East Scotland. I took 3 years out of training between August 2013 and August 2016 to gain my PhD in Leukaemia from the University of Glasgow. My ST posts were as follows:

ST3 Haematology at the Royal Infirmary of Edinburgh, August 2009 – February 2010.

ST3 Haematology at the Western General Hospital, Edinburgh, February 2010 – August 2010.

ST4 Haematology at Victoria Hospital and Queen Margaret Hospital, Fife, August 2010 – February 2011.

ST4 Haematology at St John's Hospital, Livingston, February 2011 – August 2011.

ST5 Transfusion Haematology at the Scottish Blood Transfusion Service, Edinburgh, August 2011 – February 2012.

ST5 Haematology at the Western General Hospital, Edinburgh, February 2012 – April 2012.

ST5/6 Paediatric Haematology at the Royal Hospital for Sick Children, Edinburgh, April 2012 – November 2012.

ST6 Haematology at the Western General Hospital, Edinburgh, November 2012 – August 2013.

ST7 Paediatric Haematology at the Royal Hospital for Children, Glasgow, August 2016 – February 2017.

ST7 Paediatric Haematology at the Royal Hospital for Sick Children, Edinburgh, February 2017 – August 2017.

8. Since commencing Haematology training 13 years ago, I have gained extensive and broad experience in both clinical and laboratory Haematology. Towards the end of training I focused on Paediatric Haematology as I knew this was the area in Haematology I wished to pursue after completion of training. I reflect on my practice and update my knowledge through self-directed learning and attendance at local, national and international meetings. I understand the importance of integrating research into clinical practice and I plan to maintain active research during my clinical work.

9. I have completed and attended various courses and meetings, delivered presentations, prepared publications, and conducted audits and research throughout my career. I have also delivered formal teaching to undergraduate and postgraduate students.

10. My first post working at the RHC was in August 2016. I had a 6-month rotational post in my ST7 year of Haematology training, which was my final year of training. I then returned to Edinburgh which was my training Deanery, and did a further 6 months in the Royal Hospital for Sick Children, Edinburgh Sick Kids, before taking up my Consultant role at RHC Glasgow in September 2017.

Awareness of Patients/Families Evidence

11. I am aware that evidence has been given by patients and families and I have read some of the transcripts. I think it is good that the patients and families have had the opportunity to express how they feel and explain their experience of this process, as all the information regarding the ward came to light. I hope it has been cathartic and a way in which they could offload, as it was clear that families were very stressed by the whole process.

Current Role and Specialism

12. I am currently a Consultant in Paediatric Haematology at the RHC. This is a tertiary referral centre for malignant and benign Haematology and the national centre for Haematopoietic Stem Cell Transplantation (HSCT). My primary role is in the management of patients with Leukaemia, Lymphoma and undergoing HSCT. I am developing a training programme for Haematology trainees, including instigation of weekly Morphology meetings. I am based at the Schiehallion Unit which consists of the in-patient Ward 2A, day care Ward 2B and out-patient clinics for haemato-oncology and benign Haematology. There are 3 separate on-call rotas for the Schiehallion Unit in RHC, and I participate in all of them. The on-call commitment is 1 in 5 for HSCT, 1 in 4 for laboratory Haematology and 1 in 6 for ward cover, which includes Paediatric Oncology and Benign Haematology. We tend to do a week (7 days) of on-call which covers the day, overnight and the weekend. We are not resident on-call but can be called at any time and may need to come to the Hospital. The on-call week can be very varied and there is no 'typical' on-call week. As I participate in all 3 on-call rotas, my on-call commitments are often merged, so I may be on-call on all 3 rotas at once. The on-call ward consultant is responsible for all in-patients and new patients out of hours. The HSCT consultant is responsible for all HSCT patients. If on-call for the ward or HSCT the consultant comes into the Hospital at the weekend to do a ward round of the in-patients. The consultant on-call for the Haematology laboratory is responsible for Haematology advice. This can be responding to abnormal blood results highlighted by laboratory medical scientists or from other medical specialities seeking Haematology advice (but not necessarily cancer advice). The

laboratory consultant is also responsible for benign Haematology patients out of hours. The Haematology laboratory is completely separate from the Microbiology laboratory.

13. My day-to-day work involves looking after children with haematological diseases and in particular, children with malignant diseases such as Leukaemias and Lymphomas. I am also part of the HSCT team, so I also look after children who are being worked up for, are receiving or have received a HSCT. Patients can be referred for a transplant by myself or other colleagues in Glasgow. They can also be referred from other hospitals, both within and out-with Scotland. 'Work up' for a transplant includes counselling the patient and family about the indication for and risk of a HSCT and arranging standard and patient specific investigations and procedures which must take place before a child can receive a transplant. Once patients are admitted for a transplant I am part of the team that looks after them, both as an in-patient and for out-patient follow up. Whilst the Haematology consultants have named patients, we cross cover looking after patients with the same condition.

14. Whilst my day-to-day work is usually focused on malignant Haematology and HSCT patients, when on call, I would cover everything. This includes children with solid organ tumours and those with benign haematological conditions, like Sickle Cell disease. I give haematological opinions to other specialities and I also report blood films, bone marrows and cerebrospinal fluid.

15. The patients I look after are usually aged under 16 years old. If a child has been diagnosed before the age of 16 years but they are still going through treatment and have not transitioned into adult care, we will continue to look after them in the paediatric hospital. The oldest patients we have looked after have been 19 or 20 years old.

16. When I started at the RHC as a ST7 in 2016, I was a Registrar and had limited management responsibility. I did not have any responsibility over infection control management or facilities. As a Registrar I would occasionally help author Standard Operating Procedures (SOPs). In general, Registrars do not

attend quality meetings or governance meetings. They have little input into how the department is run or how procedures are implemented, save for conducting audits. As a Registrar, your experience in management is very limited.

17. As I have gained more experience in management in my consultant role I have taken on management responsibilities. One of them is being part of the Haematology Laboratory Management Team. This team assesses how the laboratory is functioning and considers whether there needs to be any changes in process. For example, we review the turnaround times for haematological blood tests and work force plan. This is completely separate from the microbiology laboratory; we do not discuss infection rates. I also participate in unit meetings, clinical governance meetings and quality meetings. Management duties can be a heavy workload at times, and are in addition to our clinical duties.

18. All Haematology laboratories must have clinical Haematology input from Consultant Haematologists. This is a prerequisite for the laboratory to be accredited. It directly benefits the Hospital as a whole because there is clinical oversight over the running of the Haematology laboratory, and any speciality that uses the Haematology laboratory (be it a hospital speciality or general practice) will have clinical Haematology input if needed. The Haematology laboratory at the Queen Elizabeth University Hospital (QEUH) processes adult and paediatric samples, both in the Hospital and from the community. Within the Haematology laboratory there is a paediatric section; should the laboratory staff require clinical input for a paediatric sample, they would contact one of the Paediatric Haematologists.

19. In terms of other management roles, like my consultant colleagues, I will be involved in unit, clinical governance and quality management meetings. I have authored SOPs. The most recent SOPs I have written are for the investigation and management for Macrophage Activation Syndrome Post-Transplant, Cytokine Release Syndrome and I have also updated the SOP on Use of Immunosuppression post-HSCT. Before SOPs are finalised a draft is

circulated to the Governance Group for review. I have reviewed SOPs that have been drafted by other colleagues.

20. The unit meetings, clinical governance and quality meetings are specific to the Haemato-oncology unit or stem cell service (Schiehallion). The Haematology laboratory meetings pertain to the running of the Haematology laboratory that serves South Glasgow – adult, paediatric, in-patient, out-patient and in the community. For example, some of the topics that we discuss in our management meetings are turnaround times for full blood counts from A&E.

Leukaemia and Lymphoma

21. Leukaemia and Lymphoma are blood cancers. Simplistically, Leukaemia is a liquid disease and lymphoma is a solid disease, but both are cancers of the immune or blood system. In children, they are usually aggressive cancers that require aggressive, intense chemotherapy and sometimes a HSCT. The treatment often requires long in-patient admissions or frequent day admissions to receive chemotherapy and manage toxicities of treatment. The therapy is associated with a high incidence of pyrexial or infective complications and other toxicities. Regarding immunocompromise and risk of infection, both the disease itself will cause a patient to become immunocompromised because it is the blood and immune system that is disordered, as will the treatment. As the treatment is intense and associated with significant toxicity, often children need to stay in hospital, (a) because they may have to be in strict isolation to protect them, or (b) because the treatment is associated with significant toxicity that requires in-patient support.

22. Immunocompromise is the main toxicity associated with chemotherapy. However, any organ can be affected by chemotherapy and can make the child unwell.

23. The mitigation of infective risk is tailored to the patient and is dependent on disease and individual patient factors. Some low grade Leukaemias and Lymphomas may not need any or very little chemotherapy, and therefore are

associated with a low risk of infective complications. For aggressive cancers that require intensive therapy, the risk of infection is high and mitigating measures do need to be taken. One measure is the use of prophylactic antimicrobials. This is tailored to the disease, the treatment protocol and the patient themselves. For example, most children going through Lymphoma or Leukaemia treatment will receive prophylaxis against Pneumocystis Pneumonia (PCP), which is a fungal chest infection. Depending on the intensity of the chemotherapy and the types of agents used, they may require prophylaxis against other fungal infections and viral infections. For example, if the patient develops a viral infection, antivirals may be started as secondary prophylaxis. Patients are advised to avoid crowded spaces to minimise the risk of contracting an infection from other individuals and they are advised to avoid close contact with people who have infectious symptoms. For some children, if they are going through relatively intense therapy but do not require in-patient therapy, they may be advised to stay off school. The advice we give is tailored to the patient.

General views on the opening of RHC, QEUH and the Schiehallion Unit

24. I was not in post at the time of the planning and design of the RHC. My first impression of the Hospital was that it was big and looked very impressive and bright. It was clean and the majority of rooms were single rooms. The Hospital certainly looked like a ‘state-of-the-art facility’.

25. Ward 2A appeared to be a good ward to house patients who were at risk of infection. Patients could be isolated from each other as all the rooms were single rooms, and each room had a hand basin and en-suite shower room. In the HSCT rooms, there was an anteroom with a hand basin so staff could wash their hands. Hand washing is one of the keyways to prevent infection. The whole hospital is very big, and all of the wards are very long. Departments are very spread out and staff can spend a lot of time walking between departments. For example, it takes 10 minutes to walk from the office to the ward. Practically, there were never enough computers and sometimes there

was not enough space for all the doctors to be in the doctors' room. However as staff, we would always like to have more space and more computers.

Common Issues (Interior of building)

26. I have been asked if I can remember various problems in the unit after opening.

27. I cannot remember there being any problems with the temperature in the rooms, or with the window blinds.

28. Each patient room had a TV. I am aware that the TVs would sometimes break down. There was patient WI-FI, but I cannot comment on how fast or reliable it was. Some of our patients have to stay in isolation for over a month which can be boring, so not having access to TVs and WI-FI could be quite frustrating.

29. I am not aware of issues with plug points or battery packs; however, I recognise there could always be more plug points. If a child is going through intensive therapies, they could be using multiple plug points in their room and sometimes all of them can be in use to power intravenous (IV) lines and machines. The beeping of the machines can be annoying for patients.

30. I am not aware of any issues with power outages. If there were, there would be documentation in the form of a DATIX raised or it would be reported on the Facilities Management (FM) system. I also cannot remember any issues with the door entry system. The door requires a pass to enter.

31. Regarding the sewage system, toilets did sometimes block. However, over a period of about 5 years, this did not happen often. I cannot remember any details of sewage leaks. I do remember that, around 2019/2020, when we had decanted HSCTs to Ward 4B, there was an issue on that ward. I cannot remember if it was a blocked toilet or a leak. From memory, it may have occurred after inappropriate material was flushed down the toilet. I cannot recall the exact details, but I know it was not a common occurrence. There will

be documentation of the incident. I do remember that the issue was fixed quickly. Generally, any breakdowns in a ward for immunocompromised patients tend to get sorted quickly.

32. I do not remember any issues with flooding in en-suite shower rooms.

Common Issues (Exterior of building)

33. From memory, following a storm, there were some leaks from the ceiling on Ward 6A. I do not remember exactly where in Ward 6A the leaks occurred. The leaks happened over a weekend but they were resolved quite quickly. This would be documented as a DATIX or on the FM system. I do not remember any leaks from the roof in any other situation.

34. I am not aware of any issues with the play park.

Cladding Issues

35. I knew the cladding was being changed on the front of the RHC, but I cannot remember if it was changed at the front of the QEUH. There will be documentation pertaining to this. The risk of cladding works to patients who are immunocompromised is exposure to fungal spores that are released from the works. Therefore children were at greater risk of developing fungal infections. We changed the entrance/exit our patients used to access the Hospital to try and avoid them being exposed to the cladding works. There are several entrances to the Hospital, and in consultation with Infection Control (IC), we advised the patients to use the side entrance. I have been provided with briefings from the Inquiry (**A38845769 – Cladding briefing for inpatients dated 7 September 2018 – Bundle 5 – Page 101**) and (**A38845789 – Cladding briefing for Outpatients dates 7 September 2018 – Bundle 5 -Page 103**) which have reminded me that the entrance changed several times. At one point, I believe our patients entered/exited the Hospital via what was the discharge lounge opposite the main car park. At another time, I think they entered through the side entrance beside A&E; but this may

have been for all paediatric patients. We widened the cohort of patient groups that would receive fungal prophylaxis during this time.

Smell from sewage plant

36. The RHC is located quite close to a sewage plant. I could sometimes smell sewage outside the Hospital, but I could not smell sewage within the Hospital. It is not pleasant, but I think this has been looked into and deemed not to pose a risk. The presence of a smell does not mean that there is bacteria floating around in the air that is harmful. An expert in sewage work could expand on this point. To this day, the smell is sometimes present, but it is not there all the time.

Impacts of internal/external issues

37. The moving of the entrance/exit had an impact on staff and patients. The Hospital is big and the entrance by the former discharge lounge was further away from the RHC, Ward 2A (in-patient) and Ward 2A (day care). I imagine that could have been frustrating for the parents. This alternative entrance was very far away from the children's car park, however the main car park is close to it. The main complaint from parents was that there were a lot of smokers who used to stand around that entrance. Smoking is prohibited in all hospital sites, however no one policed this. It is understandable that the public would feel intimidated to ask someone to stop smoking. This issue was raised, and I believe someone was stationed at the entrance to ask people to cease smoking, but I cannot be sure that this is accurate. Those were the main complaints parents expressed to me. Whilst staff had to deal with parents' complaints, overall, the parents did not really complain much and I do not remember parents being difficult or unreasonable. Sometimes the parents would have questions around the reason for the entrance/s being moved. They had very reasonable questions and wanted clarification. At that point, a conversation between clinical staff and parents was enough to alleviate any concerns. Management were not required to speak to them. In general, it was the nurses and doctors who answered any questions that parents had.

38. If a room develops a leak or the toilet does not flush, the patient cannot stay in that room. The patient must move to a different room while the issue is investigated and fixed. We would never have work going on in a room without vacating it first. Patients would move from a single room to another single room so the room was no different in terms of suitability. There is also a rolling schedule of room maintenance which can require patients to move room. Moving rooms can be cumbersome but parents are usually very understanding about the reasons behind this. Sometimes, it can be a novelty, especially if the patient has been an in-patient for a long time. I have not had any difficult conversations with parents about their child moving rooms.

39. There is an impact on the staff when things break in patient rooms. When TVs or the WI-FI stop working, the nurses and auxiliaries probably receive more complaints than the doctors. When patients move rooms, the nurses and the auxiliary staff bear the brunt of the work of physically moving the patient and their belongings. The domestic staff will also be impacted because they have to ensure that the rooms are cleaned.

Issues with Built Hospital Environment

Water Supply

Concerns about Infection – Ward 2A

40. Initially, I did not have any concerns about the water supply in Ward 2A. Gradually, my colleagues and I noticed an increase in unusual central venous line (CVL) associated infections. Typically, CVL infections are caused by gram-positive organisms found on the skin. However, we perceived an increase in the proportion of gram-negative associated CVL infections. Sometimes multiple organisms were found in a single blood culture. In addition, unusual gram-negative organisms were being isolated, some of which we had never heard of before or had rarely come across. Some examples of these were: Elizabethkingia, Cupriavadis and unusual

Pseudomonaii, such as Pseudomonas Putida. My consultant colleagues and I thought it was strange and could not explain the perceived increase in gram-negative infections and the change in the type of organisms identified.

41. The awareness of the problem with infection rates on the ward happened very slowly. The difficulty is that infections are very common in immunocompromised patients. It is the most common side effect of cancer therapy. An infection usually manifests as a high temperature. Nearly all patients going through chemotherapy will have a high temperature at some point and usually on multiple occasions. In a proportion of them, a causative microbe is isolated. The most common microbes isolated are those that reside within the patient themselves: Streptococcus from the oral cavity, Staphylococcus from the skin or E. coli and Pseudomonas from the gut. On occasion, rarer organisms can be isolated. In previous jobs I have looked after patients in whom Stenotrophomonas and Elizabethkingia have been isolated. Therefore, whilst these bacterias are uncommon, most were recognised bacteria that we knew could infect people who are immunocompromised. This made it very difficult to ascertain if the increase in infection rates we were seeing could be explained as normal background rates of infection, or a true problem. Initially, ward staff heard about positive blood cultures during our handover meetings or from phone calls from Microbiology. Over time, both the medical and microbiology staff noticed an increase in infection rates. I cannot remember when the water system was postulated as a possible source but thereafter, Incident Management Team meetings (IMTs) were held with increasing frequency. Weekly IMTs were held at the height of the water problem.

Concerns about links to the environment

42. At the time it was very difficult to ascertain if the perceived increase in infections was due to a true problem in the environment or if what we were observing was coincidental. On one hand, we were seeing a higher proportion of gram-negative infections due to bacteria that we either had not heard of before, or had seen rarely. However, there is no data on ‘standard’

background rates of infections from specific organisms. For example, there is no data on the 'standard' incidence of Stenotrophomonas infection in a haemato-oncology population.

43. The lack of a benchmark around what the level of infection should be made it difficult to actually define whether the perceived increase in gram-negative infections was out of proportion to what is expected or considered 'normal'. Whilst we, as a consultant group, had a feeling that the rate of infections was higher than expected, we could not back that up with published data on standards that we should be adhering to, or background rates of these sorts of infections. However, we all agreed that we had never experienced this number of unusual gram-negative infections before.

44. The gram-negative infections are most prominent in my memory. We (the consultant group) felt there was a higher number of gram-negative infections than usual and significantly more unusual organisms isolated than we had previously experienced. We did not hypothesise the source of the change in the infective landscape; we looked to our colleagues in IC and Microbiology to hypothesise the cause of the problem. It is their role to investigate spikes in infection rates. The environment/water as a potential source was postulated but I cannot recall the timeline of when this happened. I cannot remember when or if the ventilation system was considered as a contributory factor in fungal infections. Fungal infections are a recognised complication in patients who received a HSCT or patients going through intensive cancer treatment.

Remedial Actions on Ward 2A

45. Once it was recognised that there was an abnormal increase in infection rates and the environment/water supply was hypothesised as a possible source, several remedial controls were put in place. I cannot recall the exact timeline and sequence of events but it occurred in the months preceding the decant of Ward 2A/2B to 6A and 4B in September 2018. The remedial actions I remember included: Installation of point of use filters on taps in Ward 2A, 2B and other hospital areas our patients accessed; drain cleaning within the ward;

chlorine treatment and hydrogen peroxide vapour (HPV) treatment. I believe patients had to temporarily vacate their rooms for HPV treatment.

Hypotheses – water issues and infections

46. As the numbers of gram-negative and unusual infections increased, the medical and IC team all agreed that this was out-with expected infection rates in a haemato-oncology unit. From my understanding, whilst water supplied to the Hospital is not sterile, an investigation was carried out to check whether the water at source, had a higher concentration of bacteria than is normal. It was postulated that a biofilm may have developed around the internal pipework in the sinks, drains and taps that resulted in a high level of bacteria in the water coming from the taps. It was also postulated that splashback from water hitting the drains may have contaminated central lines.

47. At IMTs prior to the decant in September 2018, various hypotheses were considered as to the perceived increase in gram-negative infections on Ward 2A/2B. IC led on this, as the IC Team have the relevant expertise to identify the source of different organisms for the purposes of developing hypotheses and carrying out investigations around the same. The IC Team postulated a water source for the spike in infections. One complicating factor is that our patients are exposed to water supplies out with the Hospital. I remember one of the questions raised was whether the children could be getting these infections from home. However, the Hospital can only investigate within their remit and thus investigated the water supply to the Hospital. As not everyone on the clinical team could attend the IMTs, IC often came to the Ward to discuss their hypotheses with the senior medical and nursing staff on the Schiehallion Unit. Once the water supply and specifically the sinks and drains, were hypothesised as being a possible cause, trying to investigate that while Ward 2A/B were still working wards was very difficult. The remedial measures were very disruptive for the patients and understandably caused some anxiety in the parents.

Impact of water issues

48. Prior to the decant, I recall that all patients were asked to use bottled water for drinking and brushing their teeth. This would have been recommended by IC. This was instigated as a safeguard whilst the water was being investigated, rather than being based on results from investigations or being evidence based. Parents were temporarily asked to use wipes to clean their children rather than using the showers.

49. The biggest impact of the water issues was that Wards 2A and 2B were closed and decanted to Wards 6A and 4B.

Ventilation

50. I myself never raised nor observed issues with the ventilation systems. The ventilation systems are not visible. When Yorkhill initially moved to Ward 2A, there was a different ventilation system to the one in place now. At Yorkhill Hospital (the predecessor of RHC), the middle section of the Ward was filtered and had to be entered via two interlocking doors, that is, two doors to get into the ward in order to reduce unfiltered air getting in. This is now in place in Ward 2A following the refurbishment. I was not aware of any problems with the ventilation on Ward 2A, but I understand that when we decanted out of this ward, there were changes made to the ventilation systems. There are now interlocking doors and other modifications. We have been assured that the Ward has been upgraded and is fit for purpose. I do not recall patients mentioning any issues about the ventilation system to me.

51. I have a general understanding of the basic principles of air pressure, the different types of rooms and different air pressures within those rooms. Transplant patients and patients going through intensive chemotherapy are the most high-risk patients with the greatest risk of developing severe infection from airborne organisms. They would be nursed in a room with positive pressure ventilation i.e. air from their room would be pushed out, minimising airborne pathogens entering their room. Patients with infections that produce airborne pathogens, such as a respiratory virus, would be nursed in a room

with negative pressure ventilation i.e. air from outside the room would be pushed in, preventing airborne pathogens within the room getting out. It is helpful if a ward that undertakes HSCT has filtered air, to minimise airborne pathogens. When I first started on Ward 2A, I was not told anything about the ventilation system.

52. Once we moved into Ward 6A, we had portable High Efficiency Particulate Air (HEPA) filters, to help remedy issues with ventilation because it was not a bespoke ward for immunocompromised patients. From memory, they were there from the beginning of the decant to Ward 6A. I cannot remember HEPA filters on Ward 2A prior to the refurbishment.

Concerns about Stenotrophomonas in 2018
(A36591710 – SBAR – Review of 2017 Mortalities in which Stenotrophomonas was isolated dated 19 November prepared by Dr Alan Mathers)

53. When it was apparent there was an increased incidence of gram-negative infections, Professor Gibson wished to retrospectively review gram-negative infections that had occurred prior to 2018. Microbiology provided a list of patients who had gram-negative blood infections at the end of 2016 and 2017. Professor Gibson asked if I would provide clinical context to these incidents.

54. Professor Gibson asked me to collect the data to be used in a review of gram-negative infections in 2016 - 2017. I was asked to do this because in 2016 and for the majority of 2017, I was a trainee, based either in Glasgow or Edinburgh and not working as a consultant within the department.

55. My contribution was in data collection, not analysis. I gathered clinical data around the use of antibiotics, whether the CVL was removed and if the patient was still alive, and entered it into a table. I did not review the patient notes and I did not draw any conclusions. I provided the table to Professor Gibson (by email dated 10 July 2019) who passed it onto our Medical Director, Alan Mathers. She did not copy me into that email, and I was not involved in any

further discussions around this task. Someone else completed the review from the data I had collected.

56. I did not write the SBAR (Situation Background Assessment Recommendation) supplied to me by the Inquiry at interview. I have read the SBAR and compared it to the table I produced within an Excel spreadsheet ('Water organisms 2017'). My document contained some basic clinical and outcome data. The SBAR went into more clinical detail, drew conclusions and made recommendations. I had no input in writing the SBAR.

Communication with patients and families

57. When we were dealing with the problems caused by the increase in infections in the Wards 2A / 2B and whilst investigations were ongoing, communication for families was challenging. This was because we (the clinical staff) did not have clarity on the situation ourselves which was recognised by the parents. We were guided by the IMT and statements which were prepared by the Communications Team following an IMT.

58. Unfortunately, on occasion, it took many hours for the statement to become available. This was difficult for parents as they knew there were ongoing investigations and meetings, and they often knew when the meetings were taking place an update was going to be released. Waiting several hours for a communication increased the anxiety felt by the parents.

59. Distributing written statements to the parents was usually done by the senior ward nurses with support from the consultant staff. Sometimes the nurse in charge of Ward 2A and the Head of Department, Professor Gibson, would go around each in-patient family individually to hand out and discuss the contents of a written statement. They were sometimes joined by a representative from IC/Microbiology and Management (such as the General Manager or Nurse Manager).

60. I was less involved in distributing widespread information but rather was more involved with individuals. I might further discuss the communications

statement with one of my named patients/parents if they had questions or discuss the reason my patient had to transfer to a different hospital to receive high dosage chemotherapy when our ward was closed. I had new patients come in who had to go to a different hospital to start their treatment and I would personally discuss the reasons for that with them.

61. Written statements were a good method of communication because it ensured everyone (staff and patients/parents) received the same information and that the information was accurate. Often families wanted face to face communication with the clinical staff. At the time Jamie Redfern was a General Manager and Jennifer Rodgers was the Nurse Manager for the paediatric hospital. Both were often in the wards and were very good at coming to the Ward to help distribute information and answer patient queries. Parents often had questions that were best answered by Management rather than the clinical or IC/Microbiology Teams. More senior management were not present for the distribution of information. I do remember that members of the Senior Management Team had meetings with parents but I was not present at these.

62. We were never dictated to by Management about what we told patients and families. They would advise us if we asked it of them. At one meeting between Management and Clinical staff, clinicians asked for advice on how to answer if a parent asked whether the ward was safe. We were advised to stick to facts: that we were concerned about the safety of the ward, that investigations were ongoing but conclusions could not be drawn yet and that it was absolutely vital that their child should continue to attend the hospital for their cancer treatment or to deal with any complication such as a high temperature. Some parents had the impression that it would be safer for children to be at home than in hospital, which was challenging.

63. I do not remember being told that I could not relay information to patients or parents until receiving the written statement but it was much more helpful to do it that way rather than to give out information which later proved to be inaccurate and require to backtrack. I was not involved in the production of the written communications or statements. Although they took time to be

prepared they were helpful once they arrived. I am aware that at IMTs it was made clear that the responsibility to communicate to the patients and parents should not fall on the Ward nurses who did not attend the IMT meetings or indeed the consultants who were not experts in IC. It was unfortunate that in the absence of a written statement it was often the nurses who took the brunt of the frustrations and anxiety exhibited by the parents from time to time.

64. In terms of the specific issues, I do not remember particular communication being made to parents about the cladding being replaced, but at that time they were being asked to use a different exit and entrance. I have a recollection of seeing letters that went out to inpatients and outpatients and I have been provided with these by the Inquiry (**A38845769 – Cladding Briefing for Inpatients dated 7 September 2018 – Bundle 5 – Page 101**) and (**A38845789 – Cladding Briefing for Outpatients dated 7 September 2018 – Bundle 5 – Page 103**). The issue of the change to entrance/exit to the hospital was not a decision made by clinicians. We did not assess the risk the cladding works posed to our immuno-compromised patients in isolation, we would always take advice from IC.

Formal Communications to Patients and Parents

65. I have been shown some examples of communications provided to patients and parents by the Inquiry as follows:

    a. **A39123885 – Update for parents on ward dated 6 June 18 – Bundle 5 – Page 142.** I do not remember seeing this communication, but I remember the measures documented in the communication being instigated. I remember the Ward was being cleaned and the discussions around the use of prophylactic antibiotics. We also asked parents to use the handwashing sinks for handwashing only and not to pour anything into the sinks.

This communication would have been handed to parents by the nurses. If parents had further questions then these would be directed either at the nursing staff looking after them or the doctors who reviewed them. These measures related directly to the Ward and therefore only affected in-patients so it was appropriately addressed to those on the Ward. For example, HPV cleaning was done on a particular date, so would only directly affect the parents and patients that were in-patients at that time.

I do not remember the line, "*If your child has received antibiotic prophylaxis this will be discontinued after cleaning has completed*" It may relate to Ciprofloxacin prophylaxis. The decision to use the prophylaxis was between IC and the Consultants. The reason given for using Ciprofloxacin was to minimise gram-negative CVL infections.

b. **A39123918 – CWH8 Poster – Bundle 5 – Page 143.** This was a sign installed in Ward 2A above the sinks to deter people from pouring things down the sink. This stemmed from the discovery of waste material having been found in the drains, including toys and syringes. It led to the removal of a trough sink in the treatment room.

c. **A38662234 – Update for parents on cleaning dated 13 June 2018 – Bundle 5 – Page 144.** This was a communication to families advising them that HPV cleaning was going to take place on the Ward. When providing a reason for HPV cleaning, we would be direct with patients and families. They would still ask questions to gain more information and often IC would speak to parents directly because some of the questions were not ones that the clinicians could answer.

d. **A39123933 – Parent poster dated 6 September 2018** and **A38662122 – Briefing for parents for Ward 2A and 2B patients dated 18 September 2018 – Bundle 105 – Page 147.** These communications are examples of statements written for parents following an IMT. At the IMT we would discuss the need for effective communication to the parents and the

statement would be prepared by the Communications Team. Similarly, the IMT would comment if a media statement was required.

Staff Communication

66. During the period before the decant, a lot happened in a relatively short space of time and it is difficult to recall the timeline of communications to ward staff. I do remember that there was communication from Management to staff about the water supply, updates on investigations and the effectiveness of remedial actions. When there were frequent IMTs, representatives from Senior Management attended, at least at the level of General Manager. The issues on the Ward were escalated up to the Chief Executive, Jane Grant, and the Medical Director, Jennifer Armstrong. They were aware of an unusual cluster of infections in the Unit and that the consultant body were concerned that the source of the infections was unidentified but possibly due to the building. They did not attend IMTs but did send Management representatives. They also met with the clinical team at a standalone meeting.

67. Management shared the clinicians' concerns about the infections. They had to balance investigating and fixing issues with the Ward against the disruption those remedial actions would inevitably have on patient care and delivery of treatment. The duty to cascade any information from the IMT meetings to the consultants was on the consultant representative at that particular IMT meeting and similarly, the duty to cascade any information to nursing staff was on the nursing representation at that meeting. Management held infrequent meetings to communicate discussions which had taken place at IMTs to the ward staff.

Closure of Ward 2A and 2B and the move to Ward 6A and 4B

68. In 2018, it was decided that in order to fully investigate the suspected water problem, Ward 2A/2B would be closed and decanted. We moved to the new ward/s in September 2018. I recall that in preparation for the decant, there were several IMTs and a lot of remedial measures put in place.

69. I was not involved in the decision to decant the ward. That decision came from Management. Day-to-day, I did not have much contact with Management, although they were present and reasonably accessible. I would only approach my General Manager or Service Manager (at the time, Jamie Redfern and Melanie Hutton, respectively) if an issue arose that could have an impact on service delivery. Likewise, the Clinical Director (Philip Davies) would only be approached if a situation arose that would impact operations clinically.

70. I was not involved in organising the decant. The logistics of it were considered and organised by others. The Schiehallion Unit had already moved from Yorkhill Hospital to RHC and many of the staff had been involved in that move. As such, they had experience in moving patients from one site to another and were better placed to lead on this. In the lead up to the move, equipment etc. was relocated to the new ward. The order in which patients were to be moved to the new ward was then agreed. Decisions around the order that patients were transferred was discussed at consultant level and were based on the vulnerability of the patient (for example, whether they were in strict isolation or not). Based on our experience in caring for patients with haematological and oncological diseases we are able to assess the stability of each patient's clinical condition fairly easily.

71. The patients were decanted over the course of one morning. The first patients were escorted by medical and nursing staff, some of whom then stayed in the new ward. As more patients transferred with medical and nursing escorts, some medical and nursing staff stayed in the new ward and some returned to 2A to escort the remaining patients. Slowly, both patients and staff moved to the new wards, ensuring that there was enough medical and nursing staff to guarantee that the patients were safe in transit, and in both wards. There were logistics in terms of the planning and how many staff were required. We tried to make sure nobody was on annual leave on the day because we knew we had to temporarily staff two sites.

72. My understanding of why we needed to decant was to allow a full investigation of Ward 2A/2B. Despite remedial actions having taken place, new cases of unusual bacteria were still emerging, and IC had reached the limit of the investigations that could be performed with patients still on the ward. Decanting the wards was a last resort; a decision to move a vulnerable group of patients from one ward to another is not taken lightly. IC must have felt they could not get to the bottom of what the environmental cause of the infections was without moving patients off the ward.

Communication regarding the decant

73. I have been shown a letter to parents from Professor Gibson regarding the decant **(A38662228 – ward relocation letter to parents dated 25 September 2018 – Bundle 5 – Page 154)** but I do not remember this from the time of the decant.

74. I was first made aware of the decision to decant by email from Professor Gibson to consultant staff in September 2018 which communicated the intention to move wards. I was not involved in the preparation of any risk assessments completed before the move but have no doubt these were prepared to facilitate the move.

75. When we discussed the reason for decanting the Ward with patients and families, we explained it was to investigate whether there was an environmental link to the infections. We could not be as direct as to say that the environment was the cause as we had no proof to that effect. We were very careful not to over-interpret or mix opinion with facts on the cause of the infections. We, as the consultant team, did ask IC and Management for advice on what to say if families asked certain questions, to ensure we were providing consistent information.

76. The parents recognised that decisions about the Ward and investigations being carried out were being made by Management and not by clinical staff on the wards. Parents preferred to hear about management decisions directly

from Management rather than indirectly from the staff on the ward and appreciated it when Management did speak with them directly.

77. I think most parents, once we spoke to them, understood the need to decant, but they were not happy about the move itself. However, the parents themselves were worried about Ward 2A, so many of them welcomed the idea that the ward would be intensively investigated. They were leaving a ward they had lost faith in and I do not remember parents raising concerns about the ward we were moving to, just about the move itself.

The move to Ward 6A/4B – September 2018

Suitability of Ward 6A/4B

78. We moved to two wards in the adult hospital. Ward 4B is the adult HSCT Unit and it met the required standards (e.g. HEPA filtration) required for a transplant unit. The most vulnerable paediatric patients who decanted were those receiving a HSCT. They were all nursed in Ward 4B. Ward 4B was also suitable for patients receiving intensive chemotherapy or with severe immunocompromise such as severe aplastic anaemia.

79. Ward 6A was a general adult ward, and was not designed to house immunocompromised patients. From what I recall, the ventilation system was not optimal, and as such portable HEPA filters were installed on Ward 6A. All the rooms were single rooms and point of use filters were installed on the taps. A ward for patients going through chemotherapy does not require the same specialist specifications as a HSCT unit. Ward 6A was therefore a reasonable ward to nurse patients going through chemotherapy on a temporary basis. It would not have been suitable for our HSCT patients at the time of transplant.

80. I did have some concerns about the decant to two separate wards which were on different floors (the fourth floor the sixth floor). We needed to staff two separate wards. They were not children's wards so there were no pictures on the walls and no playroom, albeit this was later rectified. We had fewer beds on both wards.

81. In Ward 4B we only had access to up to 4 beds and were limited by how many beds the adult service required as well as our ability to provide adequate nursing numbers.

82. Ward 6A was used for both in-patients and day care patients so compared to Ward 2A/2B, there were fewer in-patient and day care beds.

83. Wards 6A and 4B were also some distance from the RHC, so that put an extra strain on the workload of staff. For other paediatric specialities, it took longer to get to Ward 6A and 4B than to Ward 2A/2B and it took longer for our patients to transfer to paediatric departments in the RHC. This was due to both the increased distance and the fact that the lifts were more heavily used (they served 11 floors of wards compared to 2 in the RHC).

Concerns about infection on Ward 6A

84. On the face of it, Ward 6A seemed a reasonable alternative ward to 2A. Ward 6A had exclusively single rooms, all of which had a handwashing sink and an en-suite shower room, so it was easy to isolate patients (which is an important infection control measure). Point of use filters were installed on all taps. Ward 6A did have a different ventilation and temperature system to Ward 2A. Ward 6A had chilled beams, which is not something I had heard of before. Portable HEPA filters were brought into the ward to mitigate this. From memory, they were there from the beginning of the decant to Ward 6A. The infection control implications were not at the forefront of my mind, firstly because it was the role of IC to assess the suitability of the ward from an infection control perspective, and secondly because the presence of single rooms and multiple

handwashing sinks reassured me that we would be able to implement adequate infection control measures. As a clinician, my concerns with 6A surrounded the loss of beds, and our distance from the main RHC site, in particular, the Paediatric Intensive Care Unit (PICU).

85. I recall that there were issues with the environment on Ward 6A. It was not unusual to see work being carried out. In particular, I recall there was a problem with the staff kitchen on Ward 6A. There was leaking from the chilled beam ventilation. From memory, the leak occurred after a heavy storm.

86. On Ward 4B, there was an issue with the sewage coming from the drains but I think that was isolated and rectified very quickly. I did not see it but heard about it from other members of staff. It is natural for issues such as these (e.g. plumbing and estates issues) to arise in a hospital from time to time. It did feel like there were a lot of estates issues when we first moved, but then we were also hyper aware of issues because of what we had just experienced on Ward 2A; we had a year of issue after issue. We were not unbiased observers on the wards.

87. At the time of moving to Ward 6A, we were informed that the water supply to the QEUH was separate to the water supply to RHC. I believe that was why a ward in the adult hospital was identified as a suitable ward to decant to. Point of use filters, which had already been installed in RHC, were installed on all the taps in Ward 6A as a precaution in any event. We were already monitoring our infection rates closely and this continued after the move to 6A. I cannot recall the timeline, but my recollection is that Dr Teresa Inkster raised concerns with Management about Ward 6A, given she was monitoring infection rates very closely, resulting in Ward 6A closing to patients receiving in-patient chemotherapy. Patients who required in-patient chemotherapy either received it on Ward 4B or were transferred to other hospitals. I remember counselling a patient's family and then transferring them to a different hospital for treatment because there were no available beds on 4B.

88. Unusual infections also occurred in 6A and the ward closed for a period of time. Patients were still admitted for supportive care, such as management of neutropenic sepsis and bloods transfusion, but patients did not receive intensive chemotherapy. I remember that the clinicians were very resistant to opening Ward 6A again until we had certainty that the ward environment was safe. There were frequent IMTs to discuss the problems on Ward 6A and I understand that the IMTs could not get to the root of the problem. At some point during the closure of Ward 6A there was a change to the chair of the IMTs. Dr Emilia Crighton took over this role from Dr Inkster. There were lots of high-level investigations going on. This included reviews by Health Protection Scotland (HPS) and whole genome sequencing of bacteria isolated in blood cultures. Meetings out-with the IMT were held for the consultant group to justify opening the Ward. As clinicians, we wanted to be absolutely sure that the Ward was safe to open because of the previous disruption and difficulties caused by the decant from wards 2A/2B.

89. Root Cause Analysis (RCA) was introduced in this period. I think having a formal investigation of each infection was beneficial. Gram-negative infections are always going to be seen in our patient group but at this time, RCA helped ascertain the likely source of the infection, in particular, whether the hospital environment was a potential source.

Incident Management Team Meetings (IMTS): Ward 6A 2019

90. I would attend IMTs in my role as a consultant in order to provide guidance from a clinical and patient-anxiety perspective. I would also cascade information back to my medical colleagues who had not attended the IMT. There were usually the following attendees: a chair either from IC or Public Health (PH), representatives from Management, Estates, IC/Microbiology, Domestics, HPS, sometimes Craig White of the Scottish Government, a ward consultant (usually the on-call consultant) and a senior nurse.

91. When I attended IMTs I did not always feel I had all the information, as people referred to discussions held at previous meetings, or they would refer to

documents that I had not seen before or that had not been circulated to me. I do not think information was purposely withheld, but rather we did not always know in advance of the meeting which consultant would attend so the meeting organiser did not know which consultant to circulate the documents to. Often we just did not have time to review the documents received prior to the meeting. When you are on call the priority is completing the ward round, and seeing sick patients so there is often very little time to review documents before an IMT. Sometimes material was only handed out at the meeting itself. Often clinical need meant that the consultant could not attend the whole meeting. In addition, the same consultant did not attend every meeting. That made things difficult and I never felt fully prepared for these meetings. When we did attend, we would have to catch up on what had been discussed previously.

92. As clinicians, we wanted proof that Ward 6A was safe. We did not want to make that decision ourselves because we all recognised that we were not Microbiologists or members of IC and that assessing whether a ward posed an unacceptable infection risk was out-with our expertise. Our duty of care was to the patients and we saw directly how patients were being affected by the ward closures and the anxiety they were feeling as a result of the uncertainty around the safety of the ward. If we told patients and their families we were re-opening the ward, we had to be absolutely sure it was the right thing to do, and we could not do that when we had doubts. We raised concerns at the IMTs when we had them. I was not discouraged from raising concerns and I felt able to do so. I do not think anyone expected the clinical staff to make the final decision to re-open the Ward but there were certainly meetings where I said, “I’m not going to make that decision”, or I said that I could not agree something without discussing with my consultant colleagues. I did feel I was taken seriously. I do recognise that I did not have much experience with IMTs nor in using the HIIAT score.

93. The main difference I observed between the medical and nursing staff and the rest of the IMT was in the assessment of risk. The clinicians and the nurses tended to “up score” the HIIAT and consider the risk red or amber, when the

rest of the group would sometimes consider it amber or green. I think that is because we were on the frontline. The HIIAT score is a tool to assess the impact of the current situation and we could feel that impact keenly, because we were living it every day on the wards.

94. It was good to attend the meetings, ask questions, and hear the answers directly from Management, the Chair or the various departments conducting investigations.

95. Usually, the Head of Department would attend the IMT as the consultant representative. However, by 2019 all of the Consultants were invited to attend the IMTs so we all had some involvement. We agreed amongst ourselves who would attend each meeting. This was usually the consultant on call.

96. Overall, I take the view that IMTs are effective. However, because I was not involved in them consistently and do not have expertise in Estates and IC, I sometimes found it difficult to fully contribute on a technical level. I did express the clinical concern, the nursing concern and the patient concern. I am sure all of the clinicians who attended the IMTs raised the point that there needed to be better and timelier communication with the parents. We also reiterated time and time again that the medical and nursing staff and families needed absolute clarity that the environment was safe.

(A36591625 – Incident Management Meeting Minute, dated 19 June 2019 relating to Gram Negative Bacteraemia (GNB) – Bundle 1 – Page 320)

97. The first IMT I attended was on 19 June 2019.

98. At this meeting five gram-negative infections and two cases of Mycobacterium were discussed. I had admitted one of the patients in whom Mycobacteria had been cultured. The source of the Mycobacteria was discussed at this meeting. One of the hypotheses was that it had come from the water supply in the Hospital, and this was under investigation. No conclusions were made at this meeting; it was one of the earlier meetings and investigations were on going.

99. As investigations were ongoing, the purpose of the meeting was primarily to provide an update around the progress of the investigations being carried out by various groups such as IC and PH. We also discussed continuing the use of point of filters, and water testing pre and post filter.

100. After the IMT, I was tasked to summarise the main points of the meeting to my consultant colleagues. This was an informal meeting with the consultants. Dr Teresa Inkster, a Microbiologist/IC doctor, who was chairing the IMTs at the time, accompanied me. This was to ensure that the information relayed was accurate and to field any IC queries my colleagues had. The hypotheses, investigations and interpretation of results required specialist IC knowledge, so it was very helpful that Dr Inkster accompanied me.

(A36591622 – Incident Management Meeting Minute, dated 25 June 2019, relating to Mycobacterium chelonae in Ward 6A – Bundle 1 – Page 325)

101. I attended an IMT meeting on 25 June 2019. This meeting followed the one on 19 June 2019. It was at the time cases of Mycobacteria were being investigated. This was the first time I was informed that there was evidence of a possible link between Mycobacteria and the hospital environment. This meeting focused on speaking to the patients and their families. Everyone at the meeting knew we had a duty of candour to the patients and families, and that the patients and families were anxious about an environmental link to the infections. I said that I was happy to speak to the [redacted] patient and their family, but recognised that they may value their named consultant discussing this with them. It was agreed that the patient's named consultant and Dr Inkster would speak to the patient and their family, with support from Jamie Redfern, General Manager.

102. Whilst general updates regarding the Ward were communicated to patients and families via Communications statements and press releases, difficult information or news that affected an individual patient was always communicated face to face, usually with their named consultant. We

acknowledged that these were difficult conversations for the families to have but they deserved to hear this kind of news face to face and have an opportunity to ask questions. It is not appropriate to relay that sort of information in written form. All the clinicians are experienced in having difficult conversations and breaking bad news and we feel a duty to deliver that sort of news in person.

(A36591629 – Incident Management Meeting Minute, dated 18 September 2019 relating to Gram Negative Bacteraemia (GNB) in Ward 6A – Bundle 1 – Page 365)

103. I attended a meeting on 18 September 2019. I was not given much notice prior to the meeting being scheduled. At this point, we were still decanted off Ward 2A/2B and Ward 6A was closed to intensive chemotherapy. The main point I remember being discussed was that none of the investigations into the environment on Ward 6A had identified a problem that linked it with gram-negative infections and that the Ward was safe to re-open. I recognise that I had not attended all the IMTs leading up to this one but I was surprised that the IMT had come to the conclusion that the Ward was safe. My colleagues and I had observed what we perceived to be a higher-than-normal rate of gram-negative infections, sometimes with very unusual organisms, which we had assumed was not a chance occurrence. Extensive investigations into the cause had been ongoing for months. My understanding of what was being said at the IMT was that as the extensive investigations could not identify an environmental cause for these infections, it could be concluded that the infections were a random occurrence, and not linked to the hospital environment. I was not satisfied that this had been proved.

104. The IMT scored the HIIAT green. I had never used the HIIAT tool before and the scoring criteria had to be explained to me. I would have kept it as amber. I recall that I felt public anxiety was higher than moderate, based on the fact that I was dealing with families all the time, many of whom expressed to me how anxious they felt about the situation. I was informed that ‘public anxiety’ related to the general public, hence why the score was only moderate.

Ultimately, I was informed that the Chair decides the HIIAT score. Based on the green HIIAT score, it was concluded the Ward could re-open. I certainly did not feel that I was in a position to agree that the Ward was safe to re-open on behalf of my consultant colleagues. I felt that such a major decision needed to be discussed with all the consultants and would require 100% agreement.

105. One of the concerns we (the consultants) had, was that we were identifying new bacteria that we had never previously seen infecting our patients. Some consultants had noted that they had never experienced these bacteria in the old Yorkhill Hospital, thus raising concerns about the new hospital environment. There were two arguments refuting that these bacteria were new strains. Firstly, at this IMT data was presented that showed some of these bacterial species had been isolated in patients who had been treated at the old Yorkhill Hospital, thus concluding they were not new or unusual. Secondly, that terminology and classification for some bacterial species had evolved, so while the bacteria sounded new, they were bacteria that had been isolated in patients in Yorkhill. The nomenclature was simply different. The second point is not minuted, but is from my recollection and may well have been discussed at a different IMT. Another concern we (the consultants) had was that we were seeing a disproportionate number of gram-negative line infections. Central Line Associated Bloodstream Infection (CLABSI) data was presented at the IMT. The IMT commented that CLABSI rates were very low, and in fact the lowest they had ever been on our unit. This was used as further evidence that we did not have a problem with infection rates.

106. It was noted at the IMT that the concern was that gram-negative infection rates had increased. I recall someone commenting that the low CLABSI rates were attributable to a decrease in gram-positive CVL infections due to enhanced aseptic technique. Thus, overall CLABSI rates could not be used to as a surrogate marker of reduced gram-negative infections. I was not clear if, when CLABSI rates were being discussed, the IMT were talking about CLABSI rates as a whole, or if they were separating gram-positive and gram-negative infections. I was not confident the data had been separated, nor was I confident that everyone at the IMT was aware that the concern was with the

rate of gram-negative infections rather than overall infection rates. I felt it was crucial that we had proved that gram-negative infections had not increased, not that overall infections had reduced. We (the consultants) already knew that overall infection rates had improved because gram-positive infection rates had greatly reduced, following the excellent work undertaken by the CLABSI groups to enhance line care measures. At the IMT gram-negative data was quickly reviewed and I was told it still proved the Ward was safe.

107. This IMT was very long and I felt I was in a difficult position. I was presented with a lot of information that I did not have much time to process. I felt I was the only one who had reservations about re-opening the Ward and the majority of the IMT were satisfied it was safe. I knew my consultant colleagues would share my concerns, but as I was the only consultant present I felt outnumbered. Based on the outcome of the IMT, the Ward would have re-opened the following day. However, it was recognised that the IMT needed to justify this decision to the whole consultant body and respected my request to meet with us (the consultant group) before a decision to re-open the Ward was finalised. I now do not remember the details of that meeting but I do remember that the consultants voiced concerns around the Ward re-opening. The Ward remained closed due to those concerns from clinical staff.

108. I do not recall what was communicated to patients and families from this meeting.

109. I note from the meeting minute that page 15 references an SBAR. The SBAR was not discussed at this meeting.

(A36591709 – Incident Management Meeting Minute, dated 5 November 2019 relating to Enterobacter sequencing – Bundle 1 – Page 392)

110. I attended part of an IMT meeting on 5 November 2019. The minute from this IMT suggests that data from whole genome sequencing of Enterobacter

isolated from patient blood cultures was presented although I am not sure whether I was present at this point. The analysis showed the Enterobacter were sporadic with no genetic commonality between patients or Enterobactor in GGC. The conclusion was these were not derived from the hospital environment. At that time Ward 6A had not re-opened due to concern from the clinical team. There was still a high clinician concern that new gram-negative infections may re-occur on opening the Ward. If they did, the clinicians wanted a strategy to work out if the new infective cases signified new concerns about the environment, or simply the usual infections seen in immunocompromised patients. Adoption of RCA on every single infection was recommended by IC to help identify any environmental concerns early.

Move back to ward 2A: March/April 2022

111. We were decanted to Wards 6A/4B for over three years. During the decant there were several meetings in which the progress of the work being carried out on Ward 2A/2B was relayed to the clinical team. These meetings were with Building and Estates, as well as with Microbiology. Updates were given on the progress of refurbishment, including the refurbishment of the ventilation system.

112. At a meeting with Microbiology I attended, data on water testing on Ward 2A/2B was presented. Serial graphs of total viable counts (TVC), which is a measure of the number of bacterial organisms in water, were shown, and they were very low which was reassuring. My recollection is that this meeting took place just prior to us moving back to Schiehallion. We did have trust that the Ward was safe at that point.

113. We moved back to the new Ward 2A in March/April 2022 although I was absent at the time of the move. I returned to work to the newly refurbished ward.

114. I am sure a lot of work went into improving the ward, making it state of the art and as safe as it could possibly be. We have been assured that the water is

safe. I have observed that all the sinks still have point of use filters that are regularly changed so they do not fail and some sinks have been removed. Overall, I think we (the consultants) were satisfied that we could return to Ward 2A/2B.

115. Since returning to Ward 2A/2B, patients still get infections manifesting as a high temperature. Some patients have positive blood cultures. However, we are not seeing the environmental-type bacterial infections very often. I think there has been the odd one or two, which can be normal phenomenon, but there does not seem to have been a cluster. There is not the same level of concerns about infections; the problem seems to have been resolved. We have been given assurances by the experts that the ward environment, the water and ventilation are safe. We continue to be vigilant about our infection rates and still perform an RCA for any gram-negative infections.

116. In terms of the current risk of infection today I do believe that the Hospital have done what they can to reduce the risk. It is difficult to know what the normal bacterial concentration in water should be. For example, the water coming from our taps at home is not sterile. It is not a problem if you do not have a line and you are not immunocompromised. A lot of work has gone into making it as safe as it can be.

117. For completeness the refurbishment was not just to the water supply. Rooms were changed or repurposed, a new playroom was made and the ventilation system was upgraded.

Infection Control

118. There are subtle differences between “hospital acquired” infections and “healthcare associated” infections. Both attempts to capture infections contracted from a healthcare setting. Hospital acquired infections are defined as infections occurring at least 48 hours after admission to hospital. The 48-hour cut off is used to exclude infections that were present or incubating at the time of admission to hospital. Healthcare associated infections are defined as infections that occur directly from a medical intervention or from contact with

any healthcare setting, be it an in-patient, outpatient or community setting. Healthcare associated infections are defined as occurring within 28 days of contact with a healthcare setting. Both hospital acquired and healthcare associated infections establish a temporal link between an infection and contact with a healthcare setting but they do not prove causality. The definitions for hospital acquired and healthcare associated infections were used to identify all cases of gram-negative infection that were temporally linked to contact with the Hospital and so potentially could have been contracted from the hospital environment. Investigation into whether the hospital environment caused the infection followed.

119. Proving that an infection has been caused by contact with the healthcare setting is more difficult than establishing it is linked in time to a healthcare encounter.

120. All patients treated in the Schiehallion Unit are at risk of developing infections. Factors contributing to that risk include the severity of a patient's immunocompromise (either due to their disease or the treatment they receive) and the presence of foreign bodies, such as indwelling catheters like central lines. There are several ways that the risk of contracting infections is minimised. General measures include hand hygiene, ensuring the environment is clean and avoiding contact with people who are symptomatic of infection. Patients are asked to limit contact with people to avoid catching an infection. Depending on the risk this may be the avoidance of crowds, staying off school or, for the most high-risk patients, admission to the ward and being nursed under strict isolation with contact limited to a few people. Another measure to reduce the risk of infection is the use of prophylactic antimicrobials. This may be antibiotics (against bacterial infections) antifungal (against fungal infections) or antivirals (against viruses). The specific prophylactic agents used are tailored to the patient's risk. Patients receiving an allogenic HSCT have the highest risk of developing infection on our unit.

121. Patients receiving treatment for leukaemia very commonly develop infections. Infections usually present as a high temperature and are treated with broad

spectrum antibiotics. Often a causative organism is not found. In my experience, all patients going through leukaemia treatment have at least one episode of a high temperature requiring antibiotics.

Isolation of Patients

122. There are two reasons why a patient requires isolation. There is strict isolation and source isolation.

123. Strict isolation is when the patient is isolated for their own protection. Our most vulnerable patients, such as those receiving a HSCT, are put into strict isolation until they have some immune recovery.

124. Source isolation is when the patient has a potentially contagious infection and they are isolated to prevent transmission of that infection to others. This is usually due to a respiratory virus, or if they have gastroenteritis and have symptoms of vomiting or diarrhoea. The main impact of being in source isolation is that the patient cannot leave the room so these children cannot go to the playroom. Some indications for source isolation also prohibit parents using the family room.

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125. Another indication for isolation is if a patient is radioactive due to their treatment.

126. All patients are nursed in single rooms so are isolated from other patients to a degree.

127. A line-associated infection and possible waterborne infections are not contagious and would not be an indication for a patient to go into isolation. The indication for source isolation was not impacted by the water issues.

Central Lines

128. Many patients who are treated on the Schiehallion Unit require central venous access and so have a central venous line (CVL) inserted. The most common indication for a CVL is to administer IV chemotherapy. Administration of chemotherapy into a large central vessel removes the risk of chemotherapy leaking into the skin, which is called extravasation. Extravasation can cause severe skin reactions. Extravasation is a risk of delivering chemotherapy via a peripheral cannula, which are small tubes inserted into vessels in the hand or arm. Some chemotherapy can only be given via a CVL. CVLs also allow regular blood sampling and administration of supportive treatments such as IV fluids, blood products and IV medication. CVLs are extremely useful and we would not be able to manage patient treatments effectively without them. However, they are associated with a risk of infection.

129. Most children with a malignant condition will get a CVL for delivery of chemotherapy, supportive measures and blood sampling. Some children with non-malignant conditions will also require a CVL. In bone marrow failure, a non-malignant condition in which the bone marrow fails to make blood cells, children will require very frequent blood sampling and administration of blood products which would not be manageable with peripheral cannulas. Patients with haemoglobinopathies on regular transfusions, or severe Haemophilia on regular IV factor replacement, may also require CVLs if their peripheral access is poor.

130. CVLs can be temporary, semi-permanent or permanent. Temporary CVLs last about a week and are not usually used in our unit as our patients require central access for longer than a week. We use Hickman lines or Port-a-caths both of which are permanent CVLs. Both of these are inserted into a vein in the neck and the tip sits at the right atrium. The other end is tunnelled under the skin of the chest which anchors the line in place and reduces infection. With a Hickman line, the distal end of the line will come out of the chest and the child will always have part of the line exposed outside the chest. With a Port-a-cath, the distal part of the line is also tunnelled under the skin of the chest but a reservoir is created at the end of the line, just under the skin of the chest. The reservoir can be accessed using a gripper needle and once

accessed blood samples can be taken and IV medication can be administered. When the Port-a-cath is not in use the gripper needle is removed. The reservoir can still be felt just under the skin but none of the line is exposed out-with the skin.

131. There are pros and cons to the different lines we use and we take this into account when choosing which line to use for a patient. Compared to Port-a-caths, Hickman lines are easier to insert and remove and can have multiple lumens. However, they are more likely to become infected. Port-a-caths are more technically difficult to insert and remove and generally only have one lumen. However, they are associated with a lower rate of infection and are less restrictive. If we anticipate a patient will require central access for a few months and is likely to need multiple lumens, we would generally favour a Hickman line. If we anticipate the patient will require central access for many months to years we would favour a Port-a-cath.

132. All children with suspected CVL infections are treated with antibiotics. The best way to treat a confirmed bacterial infection of a CVL is removal of the line, as this removes the source of infection. However, CVL removal involves a surgical procedure under general anaesthetic (GA), and a new line will usually need to be inserted under GA before on-going treatment can re-commence. For some children, insertion of a new line may be difficult, for example if they have had multiple CVLs in the past. Therefore, line salvage may be a reasonable and appropriate strategy in some situations. Line salvage is when a course of antibiotics is used to clear the CVL of infection. Certain bacterial line infections are less amenable to line salvage. Some gram-negative line infections rarely respond to line salvage. These gram-negative bacteria create a biofilm that coats the inside of the line which antibiotics cannot penetrate. Most biofilm producing gram-negative line infections are treated with immediate line removal and salvage is not attempted.

133. In general, the risks of and preventative measures for CVL associated infections are:

(a) Period of neutropenia, there is little one can do to prevent this.

(b) Translocation of bacteria from the patient to the line such as gram-positive organisms from the skin and mouth, or gram-negative organisms from the gastrointestinal tract. This is related in part to the degree of neutropenia. Prophylactic drugs can be used to prevent this, but there is little evidence to support it.

(c) Risk of infection from accessing the CVL. All those who access CVLs are trained in aseptic line care techniques to prevent CVL infections.

(d) Risk of infections from the exit site. Hickman line sites are cleaned and dressed once a week to prevent this. Port-a-caths that are in use have the gripper needle changed once a week to prevent infection.

(e) Potential transfer of environmental organisms to the line. Parents are shown how to protect lines when their child is bathing, for example.

134. When accessing CVLs, it is important that correct aseptic line technique is used. All staff who access lines are trained in correct line care. It involves hand hygiene and use of sterile equipment to prevent lines becoming infected, usually with gram-positive bacteria that reside on the skin. A lot of work has gone into improving the technique around line access. As a result, the gram-positive line infection rates on our unit are very low.

135. I am not trained to perform line care and so do not carry that out.

Monitoring and surveillance of infection

136. A lot of infection monitoring and investigation occurs in the background. Infection surveillance happens both at a ward level and a hospital wide level. Ward level surveillance is presented at the Unit meetings. This is conducted by IC. My experience of infection surveillance relates to infections usually transmitted by contact, such as rotavirus or MRSA. IC will inform the ward if a patient develops such an infection, so that infection control measures can be

immediately adopted. The investigation and management of outbreaks of such infections is led by IC.

137. The cleanliness and hygiene in the Hospital is very good. We have a Domestic service who ensure common areas and patient rooms and bathrooms are cleaned regularly. Everyone on the Ward practises good hand hygiene. I believe our ward has one of the best adherences to hospital hand hygiene policy. As with everything in the NHS we could always have more Domestic staff and resources.

138. I have not been involved in conducting infection surveillance. When RCA was introduced I would take part in RCA for my named patients. RCA was always done with IC and we would discuss potential sources for the infection.

Impacts of Infection

139. Contracting a gram-negative CVL infection (i.e. those investigated during the water incident) would impact the patient in a number of ways. Firstly, the child would require a course of antibiotics. Secondly, it is likely the child's CVL would need to be removed and potentially another CVL inserted once the infection cleared. Both are surgical procedures performed under GA. Thirdly, the child's chemotherapy may be delayed while the infection is being treated and CVLs are removed/replaced. The duration of treatment for infection differs on a case-by-case basis, but is usually about 1 or 2 weeks. If the infection occurred several weeks before the patient's next chemotherapy was due, the infection could be treated and chemotherapy continued without a delay. For example, some chemotherapy regimens cause bone marrow suppression for 4 - 6 weeks and subsequent cycles cannot commence until the bone marrow has recovered. Patients developing CVL infections during the period of bone marrow recovery may still recover their bone marrow and start subsequent cycles in the expected time frame. Mycobacterium infection is different in that it requires prolonged antibiotic treatment and so chemotherapy may be delayed beyond 2 weeks in Mycobactrium infections. Some of my named

patients had delays in chemotherapy due to infection but no one had to stop chemotherapy completely due to infection.

140. Most seriously, gram-negative CVL infections can cause severe sepsis, circulatory collapse and organ failure that require intensive support and can result in death.

141. It is difficult to quantify the overall impact the unusual infections had on patient outcomes. The organisms causing these infections were unusual but contracting an infection during cancer treatment is very common. Patients have delays in therapy for many reasons; infections are one but other causes include delays in bone marrow recovery and organ toxicities. Unfortunately, some patients will die from treatment related complications and infections, and all chemotherapy protocols have a mortality risk. The unusual infections in themselves probably impacted a patient to the same extent as any other infection or toxicity would. The difference is whether they were preventable infections.

Prophylactic Medication

142. Many of the patients that I treat will be prescribed prophylaxis during the course of their treatment. My knowledge on using prophylactic medication comes from my education and my experience.

143. The indications for prophylaxis and the drugs used are determined by the risk of infection associated with the chemotherapy protocol used, the disease associated risk of infection and patient specific factors. The decision to use prophylactic antimicrobials, the choice of prophylactic agent and cessation of prophylaxis is made by clinicians. Sometimes patient specific factors are also considered. In non-standard or unusual situations we take advice from Infectious Diseases or Microbiology.

144. In making decisions about prophylaxis we are guided by chemotherapy protocols, national and international guidelines and local policy.

Chemotherapy protocols usually stipulate when prophylaxis is needed. It is understood that different regions will have different infection risks, much of which is determined by the microbiological landscape of the local area. Different hospitals may have access to different drugs. Therefore, a protocol cannot be too prescriptive in their prophylactic guidance. For example, many haematological protocols I use will say to give Pneumocystis Pneumonia (PCP) prophylaxis, or to consider fungal prophylaxis dependent on the background risk in the local area. Prophylaxis may change over the course of a patient's treatment. Some cycles of chemotherapy may be more intensive than others and prophylaxis will change depending on the intensity of each cycle. We use international guidelines such as those which stratify patients into very low, low, high and very high risk of invasive fungal infection, based on patient factors (disease, treatment etc) and environmental factors. This risk stratification helps in deciding which patients receive fungal prophylaxis. Sometimes a patient may only have a low personal risk, but a high environmental risk (e.g. if they are exposed to building works) which may justify the use of fungal prophylaxis.

145. There is not usually any controversy or disagreement in the indication to give prophylactic antibiotics. The choice of which prophylactic agent to use is sometimes debated. How patients tolerate a medication, the method of administration (IV vs. oral) and interaction with other drugs are some of the considerations when choosing a prophylactic agent. We have local policies to guide prophylactic antibiotic use. On rare occasions I have deviated from standard local practice when it is in the best interests for my patient.

146. Prophylaxis is used to prevent infection in people who have a significant risk of developing infection. Usually the risk (for example, immunocompromise due to chemotherapy) is temporary and prophylaxis can be discontinued once the risk is gone (for example, once the immune system has recovered). In some situations people require lifelong prophylaxis. The most common indication for lifelong prophylactic antibiotics is hyposplenism (lack of a functioning spleen).

147. As with any medication, prophylactic antimicrobials can cause side effects and toxicities. General risks are rashes, allergic reactions, intolerances (such as vomiting and diarrhoea) and interactions with other drugs. Each drug will also have its own toxicity profile. Prophylactic antimicrobials can result in the emergence of resistant organisms i.e. the patient can contract infections from bacteria which are resistant to prophylactic agents/drugs (e.g. a patient receiving the drug Nitrofurantoin to prevent urinary tract infections may develop infections resistant to Nitrofurantoin). Despite the risks attached to them, we use prophylactic antimicrobials as they are effective in preventing severe infection.

148. Side effects of medication are documented in the British National Formulary and the Electronic Medicines Compendium. Most of the prophylactic drugs we use have been around for many years so there is a lot of information on their side effect profile and interactions with other medication. Our pharmacy colleagues are also very useful in highlighting potential problems in using these medications.

149. At present in our Unit, prophylactic medication beyond standard indications are not in use.

150. There were situations when we deviated from our standard practice of prophylactic antimicrobial usage.

151. There is not a lot of evidence surrounding the use of prophylaxis in preventing gram-negative infections. There have not been many trials looking at this issue. There is some evidence supporting the use of Ciprofloxacin to prevent gram-negative infections (usually arising from the patient's GI tract) in the context of allogenic HSCT, for patients with severe aplastic anaemia and children with Down's Syndrome receiving induction chemotherapy for Acute Lymphoblastic Leukaemia.

Prophylactic drugs used beyond Standard Protocols

152. From my memory, the first time there was a change to our normal practice of prescribing prophylaxis was when cladding works took place. There was an increased risk that patients entering RHC were being exposed to fungal spores in the environment as a result of the work being carried out. Antifungal prophylaxis is usually given to the most immunocompromised patients in our Unit (those categorised as having a high or very high risk of fungal infections). During the cladding works antifungal prophylaxis was extended to children who had a low risk of fungal infection (based on disease/treatment criteria) who would not ordinarily have received antifungal prophylaxis.

153. The second change to normal practice I recall was the widespread use of Ciprofloxacin prophylaxis to prevent gram-negative CVL infections. One reason Ciprofloxacin was chosen to prevent against gram-negative CVL infections was because there was a precedent for using it to prevent gram-negative infections in certain circumstances. Ciprofloxacin was given to every child who had a CVL even if they were immunocompetent or had non-malignant conditions (such as Haemophilia). This was in response to the cluster of unusual gram-negative infections we were observing. There is no evidence in the literature to support Ciprofloxacin use for this indication. This is unsurprising as it was not a situation we had encountered before. It was done in good faith to try and prevent further cases of infection. Ciprofloxacin was chosen as there is some evidence for its use in preventing gram-negative infections in specific patient groups (see above).

154. Ciprofloxacin prophylaxis for CVL gram-negative infections was adopted in good faith in response to the increasing number of unusual gram-negative infection cases. However, as time went on, we (the clinical staff), questioned the efficacy of Ciprofloxacin in preventing CVL infections and whether the benefits outweighed the risks to patients. A group consisting of clinicians, of which I was one, Microbiology and Infectious Diseases was set up to look at the evidence and make recommendations. We looked for literature to support the use of Ciprofloxacin in prevention of CVLs and there was very little. There was literature describing the side effects of Ciprofloxacin. We also looked for alternative strategies to minimise CVL infections due to gram-negative

organism infections, and CVL infections from other organisms. Ultimately, we recommended a change in policy. Ciprofloxacin prophylaxis was stopped and TauroLock line locks, which has an antiseptic effect, for CVLs was introduced.

155. The third change to normal practice I recall was in response to patients developing Cryptococcus, resulting in a change to the choice of antifungal prophylaxis agents. The first line IV antifungal agent is IV AmBisome. If a patient is allergic to AmBisome then the second line agent is Caspofungin. Caspofungin is also given IV but, unlike AmBisome, it is not active against Cryptococcus. Children who were unable to receive AmBisome would either receive Caspofungin plus a second anti-fungal agent within the Azole family (which are active against Cryptococcus) or they would receive single agent oral Posaconazole (which is active against Cryptococcus). The difficulty with Posaconazole and other Azoles is that they can interact with some chemotherapy agents, which is why they are not always our first choice.

Communication around Prophylaxis medication

156. It is my duty to speak to patients and families about the medication we give the patients and is something I have always done. During the time on ward 2A/2B when we were investigating the increased infection rate there was an increased use of prophylaxis as I have set out above.

157. I continued to be responsible for advising my patients and families about the medication but Jamie Redfern and Jennifer Rodgers from Management as well as Dr Inkster from IC also discussed the use of non-standard prophylaxis with patients and families when required. In particular they came with clinicians to speak with families about the rationale behind using treatment like Ciprofloxacin which did have some side-effects. They were there to provide reassurance about the changes to our prophylaxis policy. I generally told individual patients when I reviewed them in clinic or Day Ward. Sometimes parents would request a follow up discussion.

Communication with Patients and Families on clinical matters

158. There are key aspects of effective communication with patients and families. It is of paramount importance is to be truthful, to give accurate information within the remit of your expertise and not go beyond that thus running the risk of giving misinformation. Communication should be delivered within an appropriate time period and at an appropriate level. We have to tailor the information communicated to the person's needs, so they will take in what I tell them and absorb it, rather than be overwhelmed. If a negative event has occurred, such as an error, a deterioration in a patient's clinical condition or, in these cases, identification of a potentially environmental related infection, we have a duty to make the parent or patient aware of the event. Sometimes a short delay in communication is appropriate, for example when waiting for the most appropriate person to relay the information, or waiting for more data to become available.

159. As I have gained experience I have modified my approach to communicating with families about infections. I have always informed families of any positive blood culture in their child, if an infection was thought to be CVL related and the rational of line removal/salvage. I would document the conversation in the notes. Previously I would not necessarily have named the organism unless specifically asked. I would call it a 'bug' or a 'bacteria'. One of the criticisms raised by some of the parents in relation to the issues in Ward 2A/2B is that they were not informed of the organism behind the infection. I have since changed my practice and I now tell parents the name of the organism and ensure I document this in the notes.

160. Different clinicians approach communication surrounding cancer diagnosis and treatment differently. I do a lot of face-to-face consultations at the point of diagnosis and at the beginning of treatment. I then give updates either in person or by telephone/video consultation at key stages of treatment depending on what is most appropriate for that particular patient or family.

Duty of Candour

161. The principles of Duty of Candour are adopted to ensure doctors are open and honest with a patient or parent, specifically when something goes wrong in their treatment or care which may lead to harm to the patient. The situation must be explained fully without hiding anything. Sometimes people feel it is a kindness to withhold distressing information and that doing so may protect a patient or parent from stress. However, it can damage the doctor/patient relationship if something untoward happens and the patient or parent finds out later that information was withheld. From my experience of the communication surrounding the water incident, we were all as open and as honest as we could be with the information that was available at the time.

162. We had a duty to inform the parents if and when there was a potential risk of infections. I do think we tried to do that, initially at a ward level, then later at a Board level. When major and visible changes to practice were adopted, such as enhanced ward cleaning, starting non-standard prophylaxis or decanting the Ward, we had to explain the rationale of these measures to parents.

Communication with staff

Core Briefs

163. The means of communication the Board uses to distribute information to staff across NHSGGC is through the Core Brief. This is an email communication that is sent regularly. The Core Brief encompasses all GGC sites.

164. I was not involved in the NHSGGC Corporate Communications team. I was not involved in any of the content put out in the Core Brief.

165. My knowledge about issues related to the building and built environment within the Hospital, has always come through the Core Brief in addition to the Communication statements issued for patients. If it affected our department or ward directly then the information would come down via the unit meetings in

the Ward, or the clinical governance meetings. We would expect Jennifer Rodgers or Jamie Redfern from Management to speak to us at these meetings but sometimes we would hear from a senior consultant or senior nursing colleague. When outbreaks occur within the Hospital, unless they affected us directly then the communication would be through the Core Brief. An example of a Core Brief about an environmental matter, i.e. the cladding, is **- A38845623 – Core Brief dated 12 July 2017 – Bundle 5 – Page 67 -** although I did not personally see this brief as it was released before I took up my consultant post at RHC. At that time I was working in Edinburgh as a ST7.

166. I understand the Core Brief is distributed to every staff member at GGC, clinical and non-clinical, on site and off site. It is received by email. I have access to emails, but I do not always have time to read the Core Brief immediately as I can receive upwards of 50 emails a day and must prioritise which I deal with first. At the bottom of the Core Brief there is a message to pass on the Core Brief to staff who do not have access to a computer. The onus is on us to read the Core Brief and to pass it on. For me the main challenge with the Core Brief is getting time to read it.

<u>Other Communication</u>

167. Other than the Core Brief, we can speak to Management directly. When there were ongoing issues with the Ward Jamie Redfern set up weekly meetings with the consultants to give updates and hear our concerns.

168. The RHC Huddle is something that only the nurses attend. I do not attend them. It is to highlight bed availability, staffing concerns and ‘watchers’ who are unwell patients on the Ward that need to be highlighted to PICU.

169. Each ward and department will run meetings differently. In our department the consultants have weekly meetings. This is about the running of the department. There are morning, lunchtime and night-time ward handover meetings. The primary aim of the handover meetings is to relay clinical patient information to the team that are taking over the care of the patients on the

Ward. I will attend the handover meetings if I am on-call or the ward consultant. Senior members of the department, including myself, attend monthly Unit meetings and clinical governance meetings which focus on the strategic running of the department.

170. In terms of the issues around the built environment, it is difficult to recall the details of communication we received and whether it was adequate at the time. I think at the time we would have appreciated more communication and visibility from Senior Management although I believe they were trying to be supportive and reflecting with the benefit of time, perhaps the information we received was enough. I would say that our direct managers (Jamie Redfern for example) were very present and approachable and I think the Board/Management tried to communicate to us in a timely fashion. Much of the dissatisfaction surrounding communications from Management was that we were not being provided answers to sometimes simple questions such as, “Is our ward safe?”. I suspect that was not due to an unwillingness to communicate, but due to lack of concrete answer.

Raising concerns

171. I am well aware I have a duty to raise any concerns I may have about the facilities we work in and the resources we have. If I wished to report failure or inadequacy within the Hospital I know where to find information about the process to be followed.

Communication from External Bodies

172. During this period of concerns around the built environment, I also received communication from external bodies. Craig White, who was from the Scottish Government rather than the NHS, was often present at the IMTs. I believe his role was to communicate and support parents and act as their liaison. I believe his appointment was as a result of criticisms from parents surrounding the lack

of communication and recognition that the clinical staff could not continue bearing the brunt of answering questions regarding the environmental concerns. Firstly, we did not have the answers, as we are not Microbiologists, IC doctors or building experts. Secondly, the time taken in fielding questions was impacting our ability to deliver clinical care. That was what I understood Craig White's role to be. I do not know whether he was involved in the closed Facebook page set up for parents, which I will go on to address below.

173. I also recall that the Chief Medical Officer came to visit the Ward once and met with the clinical team. I think the Health Secretary may have visited the ward but I never saw her. I know a Labour MSP met with families but to my knowledge he never spoke to the clinical team.

Media Communication

174. I am aware that there were press statements being issued by the Hospital on several occasions in relation to various issues and that they were similar to **A38662239 – Press Statement from NHS GGC – 13 June 2018 – Bundle 5 – Page 145.** I do not know how the media obtained information over and above what was in these press statements.

175. Overall, I had the impression that the media were given more information than patients and staff and that they got it more quickly. For example, I think the decision to decant was reported in the media before I knew about it. I can understand why patients and their families feel the media got more information more quickly because that is how it appeared to me.

176. I am also aware of the BBC documentary aired during this period. Management or one of my colleagues must have made me aware of it because I knew when it was being broadcast. We were not given any pre-broadcast advice in relation to this.

Facebook Groups

177. There is a closed hospital Facebook group run by the Hospital and an unofficial Schiehallion Facebook group that is not run by the Hospital. I am not a member of either. I am not involved in maintaining the Hospital Facebook group nor do I write the information that is posted on it. I might be shown information to be posted if it is being distributed on our behalf. Many of the parents were looking to the unofficial Facebook group for information but as there was no input from the Hospital into the content, I believe there was a lot of opinion and speculation on it, rather than fact. The Hospital Facebook group was set up so that official and accurate information could be easily accessed, in particular by families who were out-patients and did not have regular contact with the Day Care Unit or Ward.

178. I am unable to comment on how the patients and families felt about the Hospital Facebook group but I hope that it was another resource that they could use to get accurate and up to date information from the Department and Board that was free from speculation.

Impact of Communication Issues

179. One of the worst things was hearing about the issues on the Ward in the media. It was awful to continually read or see negative media stories about my place of work. I felt very demoralised as a result of it. I became anxious that the media reports were going to have a negative impact on my patients and their families. The media coverage had a significant impact on me and my consultant and nursing colleagues. Any communication we gave to families was measured and we took great pains to only relay facts and not opinion or speculation. The reports in the media could contain speculation, personal opinions and partial or alleged information. We were put on the back foot and that could come across as deceiving to the patients and their parents. I think some families felt information was being withheld from them which caused some strain in our relationships with families. These parents trust us to treat their children for cancer and other serious conditions and it is essential we can maintain their trust. I believe most families would say that their issue was never with the medical or the nursing staff.

180. Sometimes the media would report information that had not been communicated to families. Using the decant as an example, this decision should have come to the clinicians, doctors and nurses first. That information should have then been quickly communicated to all the parents, and then a press statement released. In my opinion, it should have been ensured that the patients and families, especially the in-patients who were going to be moved, had been informed about the decant before it was reported in the media. Hearing about it in the press understandably caused families a huge amount of anxiety and it was the medical and nursing team that had to manage that anxiety. This was another important but time-consuming task taking us away from clinical work. The media do not appear to realise the detrimental effect their reporting had on patient/parents' anxiety, the relationship between the families and clinical staff and the morale of the Unit as a whole.

Oversight Board / Independent Review / Case Note Review / Public Inquiry

181. I am aware of the Oversight Board Review, the Case Note Review and the Public Inquiry. I have only contributed to the Public Inquiry. My consultant colleagues and I met with the Case Note Review Team towards the end of 2019 and they informed us of the terms of reference and gave us progress updates. None of the consultants were interviewed or involved in conducting the review.

182. I have observed some positive changes as a result of these reviews. The main one is that we (the consultants) are all now very diligent in communicating to parents the presence and nature of any infection, and in documenting the communication in the patient's medical notes. We now tell parents not just that their child has a positive culture, but the name of the bacteria and it is always documented in the medical notes. Previously, my personal practice would always be to inform a parent of a positive blood culture but I may not always have named the bacteria. The Case Note Review recommended that we should tell parents the name of a cultured bacteria. I agree it is better practice and parents appreciate it.

183. Another positive change is that the number of new line infections is presented at the weekly Friday handover meeting. The Quality Manager presents the number of new infections arising in the current week and previous week. The cases are not discussed but we are notified how many gram-positive and gram-negative line infections occurred. The Quality Manager also specifically asks and documents if the parents have been informed and if that discussion is documented in the notes to ensure that best practice is followed.

Personal Impact

184. The Public Inquiry statement process has been a very stressful thing to go through. It has taken a significant chunk of time out of my normal working time, as well as that of many of my colleagues. As well as the many hours in interview with the Inquiry, the volume of documentation to be reviewed, the consideration of the themes provided in advance of the interview and the preparation of this statement has taken many days. I have either had to take time off from my normal clinical duties or work in my own time to accommodate it. Some of my consultant colleagues have also been asked to provide statements to the Inquiry, which has impacted staffing arrangements. It has been a very stressful process and morale in the Department has been low as a result. I feel the work required for these statements has had a direct impact on the level of care delivered to patients.

185. Having said that, with everything the Department, staff and patients and their families have gone through, I welcome an independent Inquiry taking place, even if it is disruptive and anxiety provoking.

Closing Statement

186. I think the time that we have had out of Wards 2A and 2B has shown that these wards were not built for purpose. I do not believe that was done intentionally but it is evident that mistakes have been made.

187. 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.